



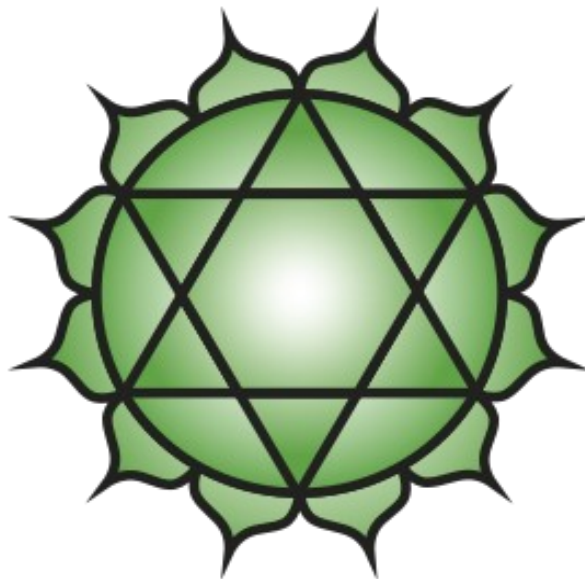
THE TAO OF COSMOGONY

The Natural Sequence of the Cosmic Septenary

The Legacy of Philip Wittmeyer – Volume 2

“NS-Partial” Preview Release — 24 May 2024

Parts, chapters, sections, and subsections marked with a number in a circle ① ② are complete. The numbers indicate batches that I wrote and that my editor reviewed. Parts, chapters, sections, and subsections marked with a check ✓ are semi-complete: they are not yet fully polished by me. The remaining parts, chapters, and sections (that have no mark) are incomplete; you should probably just ignore them. Instead, watch this space for additional releases on the way to “NS-Whole”.



① *The Tao of Cosmogony*

The Natural Sequence of the Cosmic Septenary

A book by Philip Joel Wittmeyer

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The book has been written in a way that it can be used as a manual, a manual that might lend itself to group learning such as monthly meetings and gatherings. I am not the type to lead seminars or retreats myself, but if you are, and if you have studied the system with a view to teaching it and receiving compensation, then by all means do so. If you want to rework the information in your own words and for your own purposes, I encourage that, so long as you attribute the source to me, so that others can find me. I in my turn refer the reader to the precursors to my perspective, first of all *Messages from Michael*, by Chelsea Quinn Yarbro, and subsequently other books and teachers who can be found via an internet search for "Michael Teachings". In my books I have uniquely adapted and modified the information found in the Michaelian teachings community as a whole.

>Basically and briefly, just share this PDF (as is) with interested parties and you and I and they are okay.<



① Acknowledgments

Thanks to the Michaelian teachings, a channeled system of personality traits that lead to what I now call the Process/Aspect System matrix and the Natural Sequence schema. Thanks to another channeled source of information, the Ra Material, for bolstering the Process/Aspect System matrix and the Natural Sequence schema with a foundation in logic, mathematics, and physics. Thanks to numerous other books and internet websites, mentioned in the text of this *Cosmogony* book, for supplementing the Process/Aspect System matrix and the Natural Sequence schema with an abundance of evidence and argument. Thanks to Nancy Gillpatrick Cross, who was my primary editor on this book; her comments were invaluable.

The serif and sans serif typefaces used in this document are from the Mesouran family of fonts. To the author's aesthetic sensibilities, Mesouran has just the right balance between a "masculine" (angular or spiky) and a "feminine" (rounded or smooth) appearance, with a touch of elegance that is beautiful, but not so much as to be a distraction from easy readability.

The image on the title page is of the Heart Chakra, called "Anahata" in Sanskrit; it was borrowed from the Wikipedia page on that subject. The Heart Chakra is the middle of seven major chakras; it is the bridge between a 'lower' triad and a 'higher' triad of chakras. The purple-colored image on the previous page is called the "Antah'karaṇa". This is a Sanskrit word and image for the concept of the totality of Mind. As with the Heart Chakra, the image represents the bridge between the 'lower' and the 'higher' realms; it has been adopted by Reiki practitioners as a symbol of the healing of the three levels of Being, namely body, mind, and spirit. Note the three-dimensional cube in the center, with three 'arms', representing the fundamental trichotomy of the Cosmos. The image of two hands on this page is yet another evocation of the fundamental dichotomy of the Cosmos. It is from the Sistine Chapel ceiling painting by Michelangelo: the passive hand of Adam on the left and the active hand of God on the right are extended toward each other. The Yin-Yang symbol, also on this page — also with passive and active sides — has the Chinese name "Taijitu"; its meaning is that apparent opposites define and contain each other.



① Books by Philip Joel Wittmeyer [in preparation]

The Tao of Cosmology: Tao's Template of First Principles (The Legacy of Philip Joel Wittmeyer, Volume 1)

The Tao of Cosmogony: The Natural Sequence of the Cosmic Septenary (The Legacy of PJW, Volume 2)

The Tao of Personality: The Process/Aspect System of Personality Traits (The Legacy of PJW, Volume 3)

The Tao of Relationships: The Chemistry and Alchemy of Service and Intimacy (Legacy of PJW, Volume 4)





① Back Cover Blurb for

The Tao of Cosmogony: The Natural Sequence of the Cosmic Septenary

This volume is the second in a series of four volumes — a quadrilogy or tetralogy — that present a summary of the philosophy of an obscure polymath autodidact named Philip Wittmeyer. These four books are meditations on Chapter 42 of the Tao Teh Ching, which says:

Tao produced the One; the One produced the Two; the Two produced the Three; the Three produced All things; All things carry the yin and embrace the yang; through the blending of the chi they achieve harmony.

Fans of Douglas Adams's book *Hitchhikers Guide to the Galaxy* will notice that — coincidentally — “42” is also “the meaning of life, the universe, and everything”. In this series of books, the realms of logic, mathematics, physics, biology, psychology, sociology, philosophy, religion, and theology are examined in the light of what Wittmeyer refers to as “Tao's Template”. Hence, the titles of these four books are “The Tao of”

Notice as you read the following that the first three volumes cover three subjects, which I reduce to “Tao's Template”, “The Natural Sequence”, and “The Process/Aspect System”.

The first volume is titled *The Tao of Cosmology: Tao's Template of First Principles*. It is one of Wittmeyer's meditations on the proposition that Chapter 42 of the *Tao Teh Ching* presented an algorithm for generating the logical and mathematical structure of the universe. Sciences, philosophies, and theologies are also examined.

The three subsequent Volumes are subsets of this first volume, in successively smaller subsets, which means that each prior volume provides some of the context for the content of subsequent volumes.

The second volume is titled *The Tao of Cosmogony: The Natural Sequence of the Cosmic Septenary*. This is the volume that you have in your possession now. It is about that portion of Tao's Template that refers to development or evolution over time, in seven levels or stages. Several realms of knowledge manifest the same seven stages of development. For instance, there is physical evolution, biological evolution, personality evolution, socio-cultural evolution, and spiritual evolution. In this book, Wittmeyer compares and contrasts them, analyzes and synthesizes them, into a coherent picture.

The first two volumes are rather abstract and impersonal, but the personal realm is discussed in the next book in this quadrilogy/tetralogy, a book about human personality:

The third volume is titled *The Tao of Personality: The Process/Aspect System of Personality Traits*. It is about a system of personality traits that can be derived from Tao's Template, from “first principles” — logic and mathematics. In Part One, Wittmeyer explains how the Process/Aspect System is derived from the Tao's Template algorithm. Then in Parts Two and Three, the personality traits are thoroughly described and explained. Then in Part Four the favorable and unfavorable interactions of the traits are explained and explored.

Readers of the third volume can use the information contained therein as a guide to improve themselves and their relationships, as documented in the last volume of this quadrilogy:

The fourth volume is titled *The Tao of Relationships: The Chemistry and Alchemy of Service and Intimacy*. It is about that portion of Tao's Template, the Process/Aspect System matrix, and the Natural Sequence schema, that refers to the psycho-therapeutic path and the spiritual path that some people experience during their lives. While studying the Process/Aspect System matrix and the Natural Sequence schema, Wittmeyer tumbled to the realization that there was more to his life than coming to understand Tao's Template, the Process/Aspect System matrix, and the Natural Sequence schema intellectually and conceptually; he was playing them out — via some of his personal psychologically and spiritually transformative experiences. Those insights are documented in this fourth volume.





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PRELUDE TO *THE TAO OF COSMOGONY*

This book is mostly a distant derivative of a system of personality traits revealed by a channeled entity that called itself the Michaels. In 1973 they revealed themselves to a group of people in the San Francisco Bay Area. This system of personality traits generally goes by the name of the Overleaf System, but because of my personal, idiosyncratic, expanded, and revised interpretation of the Overleaf System, I prefer to call it the Process/Aspect System to distinguish it from the Overleaf System. The personality traits of the Process/Aspect System are discussed in my book *The Tao of Personality*. However, as I understand it and explain it, the Process/Aspect System applies not only to the human personality, it applies to the ‘personality’, one might say, of the entire Cosmos. Thus, my first *Legacy* book in the *Tao* series, *The Tao of Cosmology*, is about the structure of the entire Cosmos in terms of the Process/Aspect System, and this book, *The Tao of Cosmogony*, is about the subset of the Process/Aspect System that applies to the structure of the Cosmos in terms of its development over time at various time scales.

① Context of This Book

This is the second in a series of four books — a quadrilogy — that I have written on the Process/Aspect System. It is best if you read them in numerical order, *Legacy* Volume 1, *Legacy* Volume 2, and so on, but this book actually works pretty well as a stand-alone volume.

In the terminology of the Process/Aspect System as it applies to human personality traits, I am a Scholar-Artisan-Priest. Typically, the Scholar component wants to learn *what is*, the Artisan component wants to understand *how it works*, and the Priest component wants to evangelize what is learned and understood. These four *Legacy* books comprise what I refer to as my personal “systematic cosmology project” to satisfy those Scholar-Artisan-Priest basic needs to know and to understand and to preach.

When the Michaels revealed the Overleaf System of personality traits, they *described* it but they did not *explain* it, its structure and its meaning, its derivation from first principles, and its existence as an instantiation of logic, mathematics, and physics. Apparently that task has fallen to me; that is what Volume 1 and Volume 2 of my *Legacy* books are all about. The mere human personality is a faint shadow of the primordial archetypes of all of creation, but the component of the Cosmos that is human personality also has a book.

Here is a list and a description of the four *Legacy* books.

VOLUME ONE: The first *Legacy* book, called *The Tao of Cosmology: Tao’s Template of First Principles* (referred to in what follows as *Cosmology*), demonstrates how Chapter 42 of the *Tao Teh Ching* presented an algorithm for generating the framework of the Cosmos in which we live:

Tao produced the One; the One produced the Two; the Two produced the Three; the Three produced All things; All things carry the yin and embrace the yang; through the blending of the chi they achieve harmony.

Fans of Douglas Adams’s book *Hitchhikers Guide to the Galaxy* will notice that — coincidentally — “42” is also “the meaning of life, the universe, and everything”. In my book *Cosmology*, the realms of logic, mathematics, physics, cosmology, philosophy, and theology are examined in the light of what I refer to as Tao’s Template as succinctly stated in Chapter 42. The three subsequent Volumes are conceptual extrapolations of this first volume, in successively smaller subsets, which means that each volume provides some of the context for the content of subsequent volumes. This first volume was written sporadically over about four decades, starting in 1983 with the discovery of the Ra channeling and the physics theory of

Dewey Larson (which can be correlated with the Overleaf System, thus uniting mathematics, physics, and psychology), and ending with the date of its publication. The Overleaf System is a subset of Tao's Template.

VOLUME TWO: The second *Legacy* book, called *The Tao of Cosmogony: The Natural Sequence of the Cosmic Septenary* (referred to in what follows as *Cosmogony*), the book that you are now reading, was written mostly in the first three decades of the 21st Century. Although the seeds of it were planted in 1986 and the seeds sprouted in 1991, serious work did not begin until the late 1990s. The book is about that portion of the Tao's Template that refers to development or evolution over time, in seven steps or stages. There are dozens of other realms of knowledge that discuss the same seven stages of development. In the *Cosmogony* book, I compare and contrast, analyze and synthesize them, into a coherent picture.

Concerned as they are with the structure of space and time respectively, the first two volumes in this quadrilogy are rather abstract and impersonal. However, the next two volumes in this series are concerned with the concrete and personal application of this foundational knowledge and understanding.

VOLUME THREE: The third *Legacy* book, called *The Tao of Personality: Process/Aspect System of Personality Traits* (referred to in what follows as *Personality*), was written mostly during the years 1981 to 1986. It is about the Overleaf System, a pattern of personality traits first revealed to the world in the book, *Messages from Michael*, authored by Chelsea Quinn Yarbro and published in 1979. I have made some significant advances in the understanding of the Overleaf System based on my understanding of Tao's Template and the physics theory of Dewey Larson as documented in *Cosmogony*. My elaboration and explanation of the Overleaf System, which I call the Process/Aspect System, includes its meaning and structure in terms of logic-mathematics-physics.

VOLUME FOUR: The fourth *Legacy* book, called *The Tao of Relationships: The Chemistry and Alchemy of Service and Intimacy* (referred to in what follows as *Relationships*), was written mostly during the years 1989 to 1991. In the late 1980's, after having written *Personality*, I tumbled to the realization that there was a correlation between the chakras of the body and the so-called "Centers" of personality and some of my transpersonal experiences. As I am accustomed to do, I wrote up my understanding of my experiences as yet another instantiation of the Natural Sequence schema.

Let me describe how the books have been delivered to me from the right hemisphere to the left hemisphere of my brain: not as a string of letters, words, sentences, paragraphs, sections, chapters, and books from beginning to end in a linear fashion. The way the right hemisphere of my brain works, it is as if a jigsaw picture puzzle is dumped out of its box onto the table in front of me, and it is up to me to put the pieces together to reveal the whole picture. These dumps have happened over decades. The books are not picture books; they are written as a string of letters, words, sentences, paragraphs, sections, and chapters. Therefore, the way this works for readers is that they must scan the picture that the words describe by reading from left to right and top to bottom and beginning to end. Only when readers have read all four of the books will they see the complete picture delivered by my muse.

You will notice from the dates above that I have been working on these books for more than forty years. It is my pleasure that now some others besides myself will presumably benefit from this investment in time and energy. My desire and intention is that others derive as much understanding from this gift of knowledge as I have — and that is considerable.

Contents of This Book

With that introduction to the septology behind us, let's now take a look at this particular volume in more detail. The layout of this *Cosmogony* book is as follows:

PRELUDE — This is the part that you are now reading. It provides the context of this book among my six other books, and it provides a very brief introduction to the contents of this book.

PART ONE — INTRODUCTION TO THE NATURAL SEQUENCE:

[[I might rearrange these from physical exoteric first and metaphysical esoteric second:]]

PART TWO — MODERN-DAY SPIRITUAL TEACHINGS: This is where I discuss instantiations of the cosmological septenary as found in various metaphysical, spiritual, and mystical traditions and teachings from modern times. To my way of thinking, intuition/insight is a valid way of discerning fundamental patterns in the system of inner and outer reality. In some circles, these manifestations might be considered to

be less than scientific (or more than scientific) in the modern sense of the word “scientific”. However, I want to cover the full range of the manifestations of the septenary that spiritual folk have discerned by personal experience and by revelation from transpersonal entities.

PART THREE — ANCIENT RELIGIONS AND PHILOSOPHIES: This is where I discuss instantiations of the cosmological septenary as found in various ancient religious and philosophical traditions. To my way of thinking, there are reasons to believe that it is possible to discern the same truths by subjective experience, same as in the case with objective experience; in my estimation, both types of experience are equally scientific.

PART FOUR — NATURAL EVOLUTION: This is where I discuss manifestations of the cosmological septenary as found in various branches of modern science and psychology. To my way of thinking, these modern discoveries corroborate that ancient mystics were really onto something with their “pre-scientific” intuitions and insights. The cosmic septenary is a universally-applied *developmental* sequence; development happens in all living things: in organisms, in individuals, in cultures, and in numerous other systems that experience biological and psychological evolution. These are areas that are amenable to scientific investigation and academic examination.

PART FIVE — DEVELOPMENTAL PSYCHOLOGY: In some spiritual teachings, it is said that people normally and typically develop through seven significant stages if they live a full lifetime. Something like this has been discerned by numerous clinical and academic psychologists, and the field of research actually has a name: developmental psychology. In this Part of this book, I examine the field in general, and then I examine the life’s work of more than a dozen developmental psychologists. As it so happens, the various researchers have discerned similar stages in various realms of experience, and, as it so happens, these can be correlated with the seven stages of the cosmological septenary.

PART SIX — PATHS TO ENLIGHTENMENT: Whereas Part Two covered the cosmological septenary in its abstract and impersonal aspect, Part Six covers the septenary as it can be experienced by people who are serious about facilitating and developing their consciousness toward awakening or liberation or enlightenment, which, in various spiritual traditions and teachings, is said to consist of seven steps or stages.

PART SEVEN — CONCLUSIONS:

① My Use of Wikipedia and Other Sources

Readers have every reason to be skeptical of a work as pretentious regarding a grand unified theory such as proposed in this *Cosmogony* book, especially in this case, because I am so unqualified in the sense of uncredentialed. I have no formal training in the academic realm. I am acutely aware of my defects and deficiencies as a scholar. Consequently, my approach is to read what real, authoritative, certified scholars and professional researchers with actual academic credentials have to say, and I quote from them as much as is allowed.

As sources go, my first preference is to borrow from Wikipedia, because one is allowed to use their material extensively and freely. My second preference is to borrow from other internet resources, to provide the URL link, and to refer the readers of my book to them for further study if they are so inclined. My third resource is books by experts in the subjects under discussion.

Sometimes it helps me to get my thoughts together if I put them in a bulleted or numbered list.

1. Every chapter in this book could have an entire book written about it by myself, if I were so inclined.
2. Perhaps every chapter in this book has had at least one book written about it already, by others.
3. In this book, I use Wikipedia as the primary reference source, so that readers can explore the info freely available on the internet if they are so inclined.
4. Where I find Wikipedia inadequate, I secondarily refer to other freely-available internet sources and resources, so that readers can expand their research if it suits them to do so.
5. As a last resort, I use and refer to books by people who appear to be experts on the subjects of discussion in this book; these are mostly to point the reader to in-depth resources.
6. Although the reader might not be familiar with some of the contents of this book, it is arguable whether I have come up with any original ideas. If there is any originality in what I say herein, it is that I have assembled old ideas into a coherent picture — coherent for me at least; there is no guarantee that others will find the Process/Aspect System schema to be coherent or complete for them.

In fact, it is almost assured that most readers will not find my assembly to be of value, because they have a rather different knowledge-gathering and sense-making faculty than I do.

7. Various ideas have come to me from numerous written sources over the decades of my life. Refer to the bibliography for complete publication information, but the books *Messages from Michael*, *Nothing but Motion*, *The Reflexive Universe*, *The Law of One*, *Godel-Escher-Bach*, *The Spectrum of Consciousness*, *The Reemergence of Emergence*, *The Romance of Reality*, *[list others...]* have added ‘muscle and organs’ that ‘fleshed out’ the ‘bones’ provided by the Process/Aspect System schema. My sub- and/or super-conscious mind assembled ideas derived from these various written resources that seemed to me to be instantiations of the Process/Aspect System schema.
8. However, rather than extract from those books for this *Cosmogony* book, I have chosen to extract excerpts from a readily-available, freely-quotable internet resource, namely Wikipedia. Even though the information is scattered far and wide in Wikipedia, it is conveniently hyperlinked together. I can get lost for hours following its links down various rabbit holes. Sometimes I have done just that, and the results are found in this book. When the pieces are assembled into a coherent narrative with the guidance of the Process/Aspect System schema, it is almost as if Wikipedia has written this book for me; I just provided filler comments that tie the Wikipedian parts together. This works for me in my old age because my brain ain’t what it used to be; it is simply not very facile and eloquent any more.
9. The people who contribute to Wikipedia are way smarter than I am, are way more knowledgeable than I am, are way more talented than I am, and are way more competent than I am. Therefore, it makes sense for me to avail myself of their expertise. If I have anything at all to contribute to the conversation on the topics covered in this book, then to use their work as a foundation can only serve to augment my contribution.
10. One of the things that I like about Wikipedia is that it is a methodical, organized, systematic, categorical presentation of information. It is not a ‘random walk’ through a ‘word salad’ of an interminable rambling story about its subjects. These two methods of getting a point across — systematic versus narrative — represent the two ways that brains store experiences, recall them, and make sense of the world. My brain is good at systematizing; my brain is not as good at story-telling.
11. Even so, I acknowledge that Wikipedia is not a totally reliable substitute for the mature work of original sources: academic professionals and/or trained researchers who are at the leading edge of their particular scientific and/or philosophical endeavor. If you, dear reader, are an academic scholar or scientist or philosopher, then I entreat you to please ‘cut me some slack’ for not being able to live up to your standards in your field of expertise.

It might or might not be a realistic expectation on my part that some people who are more educated, and/or more intelligent, and/or more talented, and/or more competent than I am, will nevertheless see some merit in my work, will learn from it, will incorporate components of their work, and will perhaps even extend my work with their expertise. I should be so lucky, and I would be so grateful.





PART I — INTRODUCTION TO THE TAO OF COSMOGONY

[[This Part has been cobbled together into chapters without much thought as to its sequence, just to get some of the ideas recorded here for future structuring. It is extraordinarily messy and needs to be organized and presented in a logical sequence, and connected together, one idea leading to the next. A lot of this might be moved to, and elaborated in an expanded form, in the *Tao of Cosmology* book, the first book in my quadrilogy. Somewhere at the beginning of this book, and in the *Cosmology* book, I need to have a chapter on space and time being two kinds of step-wise iteration of the notion of distinctions per George Spencer-Brown in his book *The Laws of Form*, and the notion of computational irreducibility per Stephen Wolfram where objective quantized space/time and subjective quantized time/space are the result of sequentially computing the Tao's Template algorithm.]]



Chapter I-1

INTRODUCTION TO COSMOGONY

[[There might be a better way to sequence the sections in this chapter than this.]]

① The title of Volume 1 in my septology of books is *The Tao of Cosmology*. The title of Volume 2, this book in my septology, is *The Tao of Cosmogony*. I chose these titles partly because I thought they captured and conveyed the philosophical essence of the subjects of space and time respectively, but also partly because I thought that they are catchy titles. Other books have been written with “*The Tao of ...*” this or that as their title. An internet search yielded such titles as *The Tao of the Tao Te Ching*, *The Tao of Physics*, *The Tao of Psychology*, *The Tao of Travel*, *The Tao of Painting*, *The Tao of Microservice*, and even *The Tao of [Winnie the] Pooh*. Even a brief perusal of these books reveals that they also were written in a way that was intended to capture and convey the philosophical essence of those subjects.

My two *Tao of ...* books presume and propose to capture and convey the philosophical and practical essence of space (cosmology) and time (cosmogony) — an ambitious philosophical and scientific endeavor and aspiration indeed.

So let me explain why the word Tao is used this way. And then I will explain the concept of cosmogony.

① Introduction to the Tao and Taoism

So what is this “Tao” thing anyway? And why has it assumed this exalted position in some quarters of the public awareness? Wikipedia provides an answer; the Tao is an ancient concept:

Tao or Dao is a Chinese word signifying the “way”, “path”, “route”, “road” or sometimes more loosely “doctrine”, “principle”, or “holistic beliefs”. In the context of East Asian philosophy and East Asian religions, Tao is the natural order of the universe whose character one’s human intuition must discern in order to realize the potential for individual wisdom. This intuitive knowing of “life” cannot be grasped as a concept; it is known through actual living experience of one’s everyday being.

Laozi in the *Tao Te Ching* explains that the Tao is not a “name” for a “thing” but the underlying natural order of the Universe whose ultimate essence is difficult to circumscribe due to it being non-conceptual yet evident in one’s being of aliveness. The Tao is “eternally nameless” (*Tao Te Ching*-32. Laozi) and to be distinguished from the countless “named” things which are considered to be its manifestations, the reality of life before its descriptions of it.

The Tao lends its name to the religious tradition (Wade–Giles, *Tao Chiao*; Pinyin, *Daojiao*) and [to the] philosophical tradition (Wade–Giles, *Tao chia*; Pinyin, *Daojia*) that are both referred to in English with the single term Taoism. [<https://en.wikipedia.org/wiki/Taoism> — retrieved 29 March 2024]

Taoism is another one of those ancient philosophical traditions that appear to have arisen in the so-called “Axial Age” (https://en.wikipedia.org/wiki/Axial_Age), which spanned the centuries from about 800 BCE to about 300 BCE. That remarkable historical epoch produced, among numerous others, the Greek philosophers from Pythagoras to Socrates to Plato to Aristotle; it produced the Persian sage Zoroaster, the Indian sage Siddhartha Gautama (the Buddha), the Chinese sage Confucius, and another Chinese sage named Laozi — the alleged author of the *Tao Te Ching*.

As to the *Tao Te Ching*, according to Wikipedia:

The *Tao Te Ching* ... is a Chinese classic text written around 400 BC and traditionally credited to the sage Laozi. The text’s authorship, date of composition and date of compilation are debated. The oldest excavated portion dates back to the late 4th century BC, but modern scholarship dates other parts of the text as having been written — or at least compiled — later than the earliest portions of the *Zhuangzi*.

The *Tao Te Ching*, along with the *Zhuangzi*, is a fundamental text for both philosophical and religious Taoism. It also strongly influenced other schools of Chinese philosophy and religion, including Legalism, Confucianism, and Chinese Buddhism, which was largely interpreted through the use of Taoist words and concepts when it was originally introduced to China. Many artists, including poets, painters, calligraphers, and gardeners, have used the *Tao Te Ching* as a source of inspiration. Its influence has spread widely out and it is the most translated work in world literature. [https://en.wikipedia.org/wiki/Tao_Te_Ching — retrieved 19 May 2022]

The Wikipedia article continues with a discussion of the various titles of the book, the variations of text of various manuscripts of the book, the obscure authorship of the book, the various translations of the book. More information about the alleged author and his book and its influence can be found at this Wikipedia link: <https://en.wikipedia.org/wiki/Laozi>.

The assumption of my *Cosmology* and *Cosmogony* books is that one particular chapter of the *Tao Te Ching* has ultimate cosmic significance. My endeavor is to see how far that assumption could take me toward understanding the existence and function of the Cosmos.

① Tao’s Template

The basic premise of this *Tao of Cosmogony* book (and my other books) is that the 42nd chapter of the ancient book *Tao Teh Ching* has some ultimate cosmological significance:

Tao produced the One > the One produced the Two > the Two Produced the Three > the Three produced All things. > All things carry the Yin and embrace the Yang > and through the blending of the Chi they achieve harmony.

The way my mind works — it wants to find the archetypes that underlie the variety that we see in the world — it turns words into abstract concepts and principles, such that I ended up with Tao-ness, One-ness, Two-ness, Three-ness, All-ness, and Yin-ness plus Yang-ness equals Chi-ness. I refer to this passage as “Tao’s Template” of the Cosmos — “Cosmos” referring to all phenomena. In other words, I assume Tao’s Template to be the fundamental pattern of the world, so hereinafter I refer to it as the Tao’s Template *ontology* — “ontology” meaning that I regard Tao’s Template as what is fundamentally real in the Cosmos. This *Cosmogony* book and my *Cosmology* book are a record of my comparison and contrast of the Cosmos to this Template to see how well they fit together.

Other translations render the word “produced” as “begot” and “engendered” and “gave birth to”. With the use of the word “produced”, we see that Tao’s Template is like a mathematical ‘algorithm’ that generates a pattern that contains and orders the components. Said another way, the algorithm is a cascade of distinctions between complementary components, based on the principle that everything is understood as a *ratio* between what it is and what it is not; ratios of is/isn’t are shown with the forward slash character between them. The

pattern that results from the first three iterations of the self-referential algorithm happens to be a so-called “septenary” of components: a set of seven. I refer to the resulting septenarian sequence as the Natural Sequence. This pattern is displayed graphically in the following table:

Table I-1a — TAO’S TEMPLATE in BASIC FORM						
IMMANENT TAO						
Yin/Yang			Chi	Yang/Yin		
First	Second	Third	All	Threeness	Twoness	Oneness
Seventh — Sevenness						

My comments on this table are as follows:

- There is much about this table that is not *explained* here in these comments; the components of the table are merely *described* here.
- TITLE ROW: Tao itself is a ratio: it is both outside the boundary of the table (“transcendent”) and inside the boundary of the table (“immanent”). The transcendent side of Tao is undifferentiated and insubstantial. Yin and Yang and Chi and One and Two and Three are differentiations within the substantial, immanent side of Tao.
- FIRST ROW: The transcendent Tao is outside the boundary of the table and has no distinguishing characteristics. All that can be said about it is that it is different from the immanent Tao. In mathematical terms, the Transcendent Tao can be equated with +Infinity as if it had a Positive Pole, and with –Zero as if it had a Negative Pole. The immanent Tao is inside the boundary of the table, and can be subdivided according to the pattern revealed in Chapter 42 of the Tao Te Ching. The first row is where/when the “Tao produced the One”.
- SECOND ROW: The second row is where/when the “One produced the Two”. The reason that Yin and Yang are shown as the ratios “Yin/Yang” and “Yang/Yin” on the chart is explained in the section “The Taijitu Tango Principle” further on, but it is obviously another instantiation of ratio.
- THIRD ROW: The third row is where/when the “Two produced the Three”. The three aspects of the nature of Yin/Yang are embodied in the words “First — Second — Third” on the left side of “All” in the Table. Notice that yin is *quantitative* and has its numerical components characterized as a *sequence*. The three aspects of the nature of Yang/Yin are embodied in the words ‘Threeness — Twoness — Oneness’ on the right side of “All” in the table. Notice that Yang is *qualitative* and has its numerical components characterized as *principles*.
- FOURTH ROW: The table is arranged per the Natural Sequence, which is shown in the following table, Table I-1b. The reader should regard the table below as an instantiation of the table above. The Natural Sequence septenary is the product of three iterations of the primordial Tao’s Template algorithm, the cascade of ratios.
- The formula from Tao’s Template is “Yin + Yang = Chi”. The axiomatic claim of the Tao’s Template ontology is that all things are made up of Chi, which is equivalent to the immanent, substantial side of Tao. All things — all reality systems — are built out of this numerical structure and this interplay of Yin/Yang and Yang/Yin; “all things” includes the entire phenomenal Cosmos.

Of course, I do not expect the reader to understand Tao’s Template (or its ramifications) now, but my plan is that you will understand it long before you finish this book, perhaps even by the end of this Introduction. In the Parts and Chapters within Parts that follow this Introduction, we will discuss many particular instantiations of Tao’s Template as it applies to the time-structure of the Cosmos.

① The Natural Sequence

I regard the Natural Sequence as an instantiation of Tao’s Template. For the purposes of this Introduction, I refer to the Natural Sequence as the first derivative of Tao’s Template. Please study the table below; its contents will be referred to again and again throughout this *Cosmogony* book.

Table I-1b — ATTRIBUTES of the NATURAL SEQUENCE							
RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
DIALECTIC	–ORDINAL–			=NEUTRAL=	+CARDINAL+		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
PROCESS	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION

My comments on this table are as follows:

1. There is much about this table that is not *explained* here in these comments; the components of the table are merely *named* here.
2. The names (and numbers) in headers of rows and columns are described and explained in Chapter I-x in Part One, “Structure of the Natural Sequence”.
3. ATTRIBUTES: The first five rows (Rank, Dialectic, Axial, Dimension, Direction) show the Attributes of the Natural Sequence schema. These are explained and described in Chapter I-x in Part One, “Attributes of the Natural Sequence”. The names of the Attributes are essentially just other names for the Chinese names found in Tao’s Template.
4. PROCESS: The sixth row shows the names of the so-called “Processes” of the Natural Sequence schema. These are the seven fundamental ways that the Cosmos is transforming over time.
5. This particular table is not governed by the Taijitu Tango Principle shown in the previous table, Table I-1a, but the principle does apply, and this will be explained further on.

The first derivative of the Tao’s Template ontology is said to be the Natural Sequence schema. The second derivative of Tao’s Template is what I refer to as the “Process/Aspect System” matrix.

① The Process/Aspect System

The Process/Aspect System matrix embodies all of the features of the Tao’s Template ontology and the Natural Sequence schema. It can also be shown in graphic form, as diagrammed in the Table I-1c below. Whereas in Table I-1b, the Natural Sequence is shown only on the horizontal axis, in Table I-1c below it is also shown on the vertical axis. This makes the Process/Aspect System a 7x7=49 grid or matrix of the Natural Sequence schema.

As for the words in the 49 boxes of the matrix, know that the Process/Aspect System was first applied to a system of human personality traits. If you are not already familiar with the Process/Aspect System as described and explained in my other books, then now would be a good time for you to *study* Table I-1c that follows, not just *look* at it. Read the words and think about them; think about the similarities of words in the same column and the similarity of the words in the same row. Notice that the columns are headed up with words that name so-called “Attributes” for the personality traits in the columns. It so happens that the same Attributes apply to the rows as apply to the columns, such that columns and rows are symmetrical. As I said, the Process/Aspect System is a matrix.

Even though this table shows personality traits, the claim of my *Cosmology* and *Cosmogony* books is that these human personality traits correspond to characteristics of the structure and the meaning of the Cosmos as a whole.

Table I-1c — The PROCESS/ASPECT SYSTEM MATRIX — “Time Structure”								
A T T R I B U T E S	RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
	DIALECTIC	– ORDINAL –			= NEUTRAL =	+ CARDINAL +		
	AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
	DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
	DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
	PROCESS →	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
	ASPECT ↓							
+ C A R D I N A L +	MODE FORWARD ACTION +1-D+	+Persistence PERSEVERANCE –Immutability	+Restraint REPRESSION –Inhibition	+Deliberation CAUTION –Phobia	+Clarity OBSERVATION –Surveillance	+Authority POWER –Oppression	+Enthusiasm PASSION –Extremism	+Dynamism AGGRESSION –Belligerence
	ROLE UPWARD INSPIRATION +2-D+	+Persuasion WARRIOR –Coercion	+Service SERVER –Bondage	+Creation ARTISAN –Artifice	+Knowledge SCHOLAR –Conjecture	+Exhibition SAGE –Oration	+Compassion PRIEST –Zeal	+Mastery KING –Tyranny
	CENTER INWARD EXPRESSION +3-D+	+Endurance MOTION –Activity	+Sensibility EMOTION –Sentimentality	+Thought INTELLECT –Reason	+Intuition IMPULSE –Instinct	+Integration CONCEPT –Fantasy	+Empathy SYMPATHY –Sensitivity	+Vitality EXCITATION –Arousal
N E U T R	WORLDVIEW COMPLEX ASSIMILAT’N =P-D=	+Preservation PRIMITIVISM –Security	+Propriety TRADITION’S –Conformity	+Production MATERIALISM –Exploitation	+Consensus COLLECTIVISM –Ambiguity	+Wisdom HOLISM –Speculation	+Liberation TRANSPERSON’ –Catharsis	+Revolution MESSIANISM –Provocation
– O R D I N A L –	ATTITUDE OUTWARD EXPRESSION –3-D–	+Contradiction CYNIC –Denigration	+Tranquility STOIC –Resignation	+Investigation SKEPTIC –Suspicion	+Practicality PRAGMATIST –Dogma	+Coalescence IDEALIST –Naivety	+Aspiration SPIRITUALIST –Superstition	+Perception REALIST –Supposition
	SHADOW DOWNWARD INSPIRATION –2-D–	+Selflessness MARTYRDOM –Defeatism	+Humility LOWLINESS –Abasement	+Sacrifice RENUNCIAT’N –Self-hatred	+Determination STUBBORN’ESS –Obstinacy	+Egotism GREED –Voracity	+Pride ARROGANCE –Vanity	+Audacity IMPATIENCE –Intolerance
	GOAL BACKWARD ACTION –1-D–	+Dedication SUBMISSION –Subservience	+Evaluation REDUCTION –Withdrawal	+Distinction REJECTION –Prejudice	+Suspension EQUILIBRIUM –Inertia	+Inclusion ACCEPTANCE –Ingratiation	+Development GROWTH –Confusion	+Leadership DOMINANCE –Dictatorship

My comments on this table are as follows:

1. The Attributes of this table (the left-most column and the top six rows) will be referred to repeatedly throughout this book. In this table, they are shown in their relationships to each other and nothing more, whereas in a **subsequent chapter** the Attributes are described and explained in detail. This means that you do not need to fully understand this table now, but it certainly would help your understanding of what follows if you committed the terminology to long-term memory. It is expedient for the presentation in this *Cosmogony* book as a whole that we start with the naming of the most abstract concepts, and then proceed to the description and explanation of the more concrete instantiations of the abstract concepts.
2. The “Process/Aspect” System could also be called the “Time/Space” System because Processes are time-like and Aspects are space-like. These names are appropriate when discussing the traits of the

personality of humans. My book, *The Tao of Personality*, which is Volume 3 in a quadrilogy, describes and explains the Process/Aspect System matrix in terms of human personality. However, when physicists discuss the ‘traits’ of the ‘personality’ of the Cosmos, they refer to them in terms of “space/time” — the terms are reversed.

3. The title bar of the table says that this is the “Time Structure” version of the Process/Aspect System chart. Volume 1 in my quadrilogy of books, *The Tao of Cosmology*, is focused on the “Space Structure” version of the Process/Aspect System chart. Two of the most primitive ontological components of the Cosmos that we know of are space and time. As stated in a previous section of this chapter, “Tao” is a name for the undifferentiated Source. The Tao differentiates itself in an algorithmic procedure, codified as what I refer to as Tao’s Template. The Tao produces the One, which in this case is the entire table considered as a whole. The One produces the Two, which in the case of the table is the duality of Process and Aspect, aka time and space. Another way to say this is that everything exists in space (has its noun-like being) and functions in time (has its verb-like doing) within the framework of space/time.
4. In the Cosmos everything is differentiated out of the space/time dichotomy in three so-called “Dimensions”. On this Process/Aspect System chart, those Dimensions are called Action, Inspiration, and Expression. Another name for Dimension is Axis.
5. RANK: The first row shows the rank numbers of the Natural Sequence schema, which is a system of seven archetypal components. These are numbered here, but each stage of the Natural Sequence schema gets a “Process” name and an “Aspect” name based on its “Attributes” other than its Rank number; see below.
6. PROCESS: Per the Natural Sequence schema, there are seven so-called “Processes”. These are the seven archetypal changes or transformations or doings or functions that take place over the course of time, the history of the Cosmos. On the Action Axis there is Origination and Termination; On the Inspiration Axis there is Evolution and Involution; on the Expression Axis there is Synthesis and Analysis; on the Assimilation Axis there is Combination.
7. ASPECT: Per the Natural Sequence schema, there are seven so-called “Aspects”, and these have the exact same Attributes as the Processes.
8. ATTRIBUTES: The top five rows of the chart provide names for types of Attributes to all of the personality traits in the seven columns, the columns showing the Processes. These exact same Attributes apply to the seven rows that show the seven Aspects.
9. DIALECTIC: The second row shows names for the so-called “Dialectic Attributes”, namely –Ordinal–, =Neutral=, and +Cardinal+. In terms of the correlation of Tao’s Template with the Process/Aspect System, *yin* = Ordinal, *chi* = Neutral, and *yang* = Cardinal. This row shows the stage in the step-wise successive “productions” of the Tao where the One (the Monad) produced the Two. The arithmetic signs (attached to the names), –, =, and +, are convenient shorthand for Ordinal, Neutral, and Cardinal respectively, but they were selected because they have a meaning that is relevant in the context of mathematics, as we will see further on.
10. AXIAL: The third row shows the names of the so-called “Axial Attributes”, namely Action, Inspiration, Expression, and Assimilation. This row shows the stage in the productions of the Tao where the Two produced the Three (in that each of Two produces a Three). Notice that there is a mirror symmetry between the three Ordinal and the three Cardinal Axial Attributes.
11. SEPTENARIAN: Combine the Dialectic Attributes with the Axial Attributes and we have the so-called “Septenarian Attributes”. From left to right according to Rank these are Ordinal Action, Ordinal Inspiration, Ordinal Expression, Neutral Assimilation, Cardinal Expression, Cardinal Inspiration, and Cardinal Action. As is typical of tables, a Septenarian Attribute is applied to everything in the column below it. The Septenarian Attributes have names, but they also have other characterizations, namely Dimensionality and Directionality; see below.
12. DIMENSION: The fourth row shows the so-called “Dimensionality” of each of the seven Septenarian Attributes. As we all know from geometry class in our school days, space has three perpendicular or mutually-orthogonal dimensions. What we did not learn in our physics class in our school days was that time also has three perpendicular mutually-orthogonal dimensions; more will be said about this further on. In the Natural Sequence schema, the so-called “Action” Axis is one-dimensional, the so-

called “Inspiration” Axis is two-dimensional, the so-called “Expression” Axis is three-dimensional, and the so-called “Assimilation” Axis is pan-dimensional.

13. DIRECTION: The fifth row shows the direction of the dimension when looking at a diagram of the so-called “Cartesian Coordinate System”. If you return again to your math class, you might remember that on the diagram the so-called “x” axis goes left and right; the so-called “y” axis is at right-angles to that and goes up and down; the so-called “z” axis is at right angles to those two and comes toward and goes away. If you do not remember that, it will be diagrammed and explained further on.

Of course, much more is said about the structure and meaning of Tao’s Template ontology and the Natural Sequence schema and the Process/Aspect System matrix in this book. It was decades ago, starting in 1981, that I first wanted to see how far I could go with the notion that the Cosmos is structured in space and time according to this pattern. This *Tao of Cosmogony* book is one of the products of my researches and meditations on this notion; it focuses on the Processes. It is a companion book to my Volume 1 book *The Tao of Cosmology*, which focuses on the Aspects. The Volume 1 book is about a theory of the structure of space, whereas this *Cosmogony* book is about a theory of the structure of time. It would be best for you to read the *Cosmology* book before you read this book [assuming I am able to finish it in my advancing years], because this *Cosmogony* book condenses some of what the *Cosmology* book says before branching off onto its own path of description and explanation.

① What is Cosmogony?

This section functions to make a distinction between the Cosmology discussed mainly in Volume 1 and the Cosmogony discussed mainly in Volume 2. As usual, Wikipedia has the answer:

Cosmogony is any model concerning the origin of the Cosmos or the universe.

In the humanities, the distinction between cosmogony and cosmology is blurred. For example, in theology, the cosmological argument for the existence of God (pre-cosmic cosmogonic bearer of person-hood) is an appeal to ideas concerning the origin of the universe and is thus cosmogonical. Some religious cosmogonies have an impersonal first cause (for example Taoism). However, in astronomy, cosmogony can be distinguished from cosmology, which studies the universe and its existence, but does not necessarily inquire into its origins. There is therefore a scientific distinction between cosmological and cosmogonical ideas. Physical cosmology is the science that attempts to explain all observations relevant to the development and characteristics of the universe on its largest scale. Some questions regarding the behavior of the universe have been described by some physicists and cosmologists as being extra-scientific or metaphysical. Attempted solutions to such questions may include the extrapolation of scientific theories to untested regimes (such as the Planck epoch), or the inclusion of philosophical or religious ideas. [<https://en.wikipedia.org/wiki/Cosmogony> — retrieved 13 June 2023]

My definition of the difference between cosmology and cosmogony is somewhat different from the description given by Wikipedia there. To me, “cosmology” has to do with the study of the structure of the Cosmos in ‘space’, whereas “cosmogony” has to do with the study of the structure of the Cosmos in ‘time’. Thus, my definition and usage of cosmogony expands the notion of the “origin” or *beginning* of the Cosmos to the notion of the *becoming* of the Cosmos throughout its history. In other words, the history of the Cosmos is one of continuous and pervasive creativity; the ‘creation’ is not something that only happened in the very beginning.

Note that I capitalize the word Cosmos. I do this because I want to emphasize that in these books we are exploring the greatest and the grandest realm imaginable.

As we will see throughout this *Cosmogony* book, the ‘being’ of the Cosmos appears to be in a constant state of ‘becoming’, aka development or evolution. This book compares and contrasts various theories about staged developmental sequences that I have encountered since 1981, and my claim is that there is a discernible pattern to the becoming, aka structure in time, and yet it has the same pattern as the being, aka structure in space. That notion of the correspondence of the structure of time with structure in space is what the Process/Aspect (aka Time/Space) System is based on. Now that I am retired, I have some time to kill before I die, so I might as well pass it doing something that I enjoy — finding out what *is*, and figuring out how it *works*, in terms of the Tao’s Template ontology.

① The Nature of the Cosmos

One of the most common presumptions of scientists and philosophers is that there is a simplicity underlying the apparent complexity in the world that we experience; there is an assumption that there is an orderly 'Cosmos' behind the seemingly disordered 'chaos'. So how do we get behind the complexity to the simplicity?

There are two ways to approach the situation to get to depth and breadth of understanding as much as possible. 1) There is the "bottom up" categorization of the data of scientific investigation: you start by synthesizing or cataloging the bewildering variety of appearances and drill down deeper and deeper to "get to the bottom of things" in their ultimate simplicity; this is called 'reductionism'. 2) Then there is the top-down analysis of 'first principles', which form the ultimate simplicity at the other end of the spectrum; this is called 'emanationism'. Where we humans live and move and have our being, the two meet in the middle, and this is where/when it is most complex. Because we live in so much complexity, this is why it is so difficult to get to the supposed or assumed simplicity at both extremes. We will use both approaches in this *Cosmogony* book. The former way is to fit the theory/model to the data; the other is to fit the data to the theory/model. Both are useful ways to arriving at what is happening at the 'interface' between chaos and Cosmos. This is my 'interface theory' of the universe; we are living on the 'surface' between chaos and Cosmos.

Notice that there is a clarity in the simplicity of the archetypes found in the Tao's Template ontology, whereas there is an ambiguity in the complexity of the instantiations thereof: they are far from the simplicity that is in the extremes of reduction and emanation. The fundamental pure archetypes are clearly defined in terms of their logical and mathematical structure and relationships, but the dozens of instantiations discussed in this book are rather messier and fuzzier. This is to be expected because of the fact that each instantiation exists as a mixture of instantiations and in a context of many other instantiations. Even so, we can learn about the pure archetypes by studying the instantiations, no matter how far removed from the archetypes. Also, each instantiation can be used to clarify the understanding of all the other instantiations of the Tao's Template ontology.

The Method of my Madness

[[This section needs more work.]]

It so happens that I am not a credentialed professional cosmologist or cosmogonist. Rather, I am a mere curious self-taught amateur layman. However, it so happens that was handed what appears to me to be a pattern or model — the Process/Aspect System matrix — for the structure and function of the Cosmos, as well as for the structure and function of human personality. It so happens that I feel inclined to see how far that pattern actually conforms to the Cosmos as revealed by scientific investigation and philosophical inquiry. It so happens that, over the decades since 1981, which is when I first encountered the Process/Aspect System matrix, I have found, by reading many books, that numerous other people are doing something similar to what I am doing. It so happens that internet search engines, which first came along in the late 1990s, made it so much easier to pursue my studies than it was in the 1980s and 1990s.

What I discovered in my exploration of the published literature regarding various realms of the Cosmos is that there appears to be a repeating septenarian cyclical pattern in the development or evolution of the Cosmos, just as is shown in the Natural Sequence schema. Therefore, the reason that I am calling this septenary the "Natural Sequence" is that it appears to be the structure of these various realms of nature at various time scales. There is plenty of 'soft' evidence for the validity of this correlation from psychology and sociology and spiritual teachings, but this fundamental and archetypal pattern becomes even more obvious when reviewing the 'harder' evidence of logic and mathematics and physics. People other than myself have also noticed these various septenaries and correlated them, which helps to validate their reality. I googled to find such combinations of septenaries, and I learned from people who knew more than I did. I summarize their work in my work. The best I can do is to scan internet resources for ideas that foster my thesis, and assume that it is the time-based template for all of the various developmental manifestations.

My strategy has been to first gather a fairly complete description of each developmental model within its own septenarian cycle in the greater or lesser septenarian cycles, then compare and contrast the descriptions with each other, and thereby use the information contained in each septenarian cycle to separate the 'signal' from the 'noise', thereby arriving at a clear understanding of the fundamental nature of each septenarian cycle. My aspiration in this *Cosmogony* book is to demonstrate an abstract theoretical model or framework of

the archetypal septenarian cycle, the Natural Sequence, and then fit these dozens of septenaries into it. The septenaries are the various instantiations of the abstract archetypal Processes.

What I am proposing in my books about the Natural Sequence schema is that all these septenaries now have a foundation that is based on logic, mathematics, and physics. This is a new development in the realms of atomic evolution, of chemical evolution, of biological evolution, of developmental psychology, of sociology, of philosophy, and of spirituality. My speculation about the reason that the common pattern to these various realms of nature have not previously been recognized as having a common septenarian pattern is that they have been developed empirically; that is: they had no framework within which to interpret what they were seeing; they have been attempts to interpret and make a model derived from observations without having a specific preconceived notion of a pattern or framework. In other words, the scientific endeavor has arrived at a patchwork of various theories, but it has not yet arrived at the theory of theories, a so-called “meta-theory”, or a so-called “theory of everything”.

Science often works inductively for a while until enough conclusions coalesce into a large pattern that can be studied from the new perspective. It is so difficult to see through the fog, removed as far as we are from First Principles. My approach is to compare and contrast empirical observations of nature with what I regard as the First Principles — the Tao’s Template ontology as embodied in the Natural Sequence schema — and see if the various developmental models are actually looking at the First Principles through their distorted and foggy lens.

Like so many other curious and inquisitive individuals, I want to understand how the universe works at the smallest and the largest scales, at the fastest and the slowest speeds, at the lowest and the highest levels, at the youngest and the oldest stages. The scientific enterprise is all about that very endeavor and aspiration. Scientists suspect that they will never actually arrive there: that there is no final Truth, no ultimate Synthesis — the horizon of knowledge seems to recede and expand as one approaches it — so the fulfillment and satisfaction for scientists is typically in the exploration and the discovery itself, rather than from a supposition that they have finally arrived at a destination.

The chapters of this *Cosmogony* book are the barest outlines of the subjects under discussion. Because of the brevity of my presentations, and the number of septenaries under consideration, the chapter are unavoidably preliminary and incomplete and distorted. Entire books have been written on many of these septenaries, books that I have not read and in which I claim no depth of expertise, for any of the fields reviewed herein. I provide some references to some books that I know of. Entire websites are dedicated to many of these subjects; I provide URL links when I know of them. The reader is invited to explore the references, and other resources that they find, to the satisfaction of their own curiosity. The Septenary is a “rabbit hole” into a “wonderland” that is fractal and infinitely deep and broad. We, who live and move and have our being within the septenarian spectrum, cannot possibly plumb the entire depth and breadth in ultimate detail; we can only skim the surface. However, if the reader has a curiosity that extends beyond my brief exposition, they can certainly explore internet links and books to their heart’s content, until their curiosity is satisfied, if ever.

As usual, the purpose of each chapter is to show that the subject follows the Tao’s Template ontology, in other words, that the people who developed the subject were seeing, sometimes clearly and sometimes not, what is clearly shown in the Tao’s Template ontology.

One wonders, now that the structure of the PAS and the Natural Sequence is available — what with its logical and mathematical foundations — if the present work will continue the convergence of variously-sourced systems into one system.

Over the decades that I have been exploring the Tao’s Template ontology, many times the thought occurred to me that someone else, someone more qualified than myself (smarter, more knowledgeable, more talented, more competent) should have already written the book that was formulating itself in my mind. As I was researching and writing this book, I kept thinking that I might find that book. But I never did. So here it is, warts and all. Defective and deficient as the book is, it might teach you something, and/or at least lead you to a better source or sources. This book is just the beginning of academic research that could be done on the subjects and issues addressed in this book.

My approach therefore has been to interpret all other septenaries within the structural framework of the Natural Sequence, because the Natural Sequence has this logical, mathematical, and physical foundation, whereas I have not (yet) found such underpinnings in the descriptions given by others to the septenaries that they have uncovered. Yes, they came from revelation, insight, intuition, or empirical observation by informed

and perceptive individuals and groups, but those people did not know the logical and mathematical structure of the septenaries that they discovered. For the first time, the underlying structure is revealed in this *Cosmogony* book.

There is so much to know, and so much disagreement about the subjects under discussion in this book, which any one person can hardly claim to have the last word on it, least of all a cranky crackpot like me. The best I can do is to take what I have from a few seminal books in the development of my own understanding – and put them together into my own understanding, offer it to others and see if it works for them. I will “cherry pick” statements, borrowed from numerous books, that seem to fit within the framework that I was given to me — and that still makes sense to me — by the mystical experiences which I had in early 1992, which were a commentary on Chapter 42 of the *Tao Te Ching*.

Septenaries from various sources have developed over the millennia, centuries, decades, and years, and that upon examination seem to resolve into the Natural Sequence. My contribution in this study is to reveal and explain the logical and mathematical derivation of the Natural Sequence, from ‘first principles’ as it were. One can hardly get more fundamental than logic and mathematics. So how is it that so many sources see the same pattern as revealed in the Natural Sequence? They did not all have mystical experiences, as I did. Whatever their source of inspiration and labor of exploration, they have converged on the Natural Sequence, which has a logical and mathematical derivation. Because the Natural Sequence has so much corroboration from so many independent sources in both ‘hard’ and ‘soft’ sciences, this book is not the product of wishful thinking on my part. Myself and all these other people are discerning an archetypal signal amid all the noise of daily experiences.

There are top-down ‘revelations’ of the structure of the Cosmos by philosophers, mystics, shamans, channels, and intuitives. These are ‘subjective’ ways of knowing. There are bottom-up empirical theories in physics, chemistry, biology, psychology, and sociology. These are ‘objective’ ways of knowing. In this book I cover them both, and in this book I propose that science and spirituality, physics and metaphysics, natural and supernatural, objective and subjective, are seen to meet each other – the whole truth. The top-down and the bottom-up are two ways of looking at one fractal septenary that repeats itself at different time scales in the objective and the subjective realms.

Exoteric cosmology is what physicalist scientists study; esoteric cosmology is what holistic mystics study. One of the conclusions that I have come to is that the scientific enterprise and the mystical enterprise have arrived at the same general understanding whether they know it or not, and that that common understanding is embodied in the Natural Sequence.

Many septenarian systems have been proposed by esotericists and scientists over the millennia, as we will see. In this book I examine dozens septenaries. And many people other than myself, who, like myself, have a penchant for comparing and contrasting archetypal systems, have noticed the similarities among some of the systems, and attempted to correlate and synthesize them. To some extent, I rely on their insights because they have likely studied some of the systems more than I have. When I know of them and their work, I refer to them, I acknowledge them, and I thank them.

There are about two dozen Septenaries examined in the book, Parts Two and Three. My procedure was to read about most of them from many internet sources; then boil down, extract what seemed relevant to the Canonical Septenary. Any intrigued reader can check the linked web pages, and/or do their own internet search on the key words, and thereby expand their knowledge and understanding even further. Many of these Septenaries have entire books written about them, many have organizations dedicated to researching and applying and promoting them.





Chapter I-2

① THE SCIENCE AND PHILOSOPHY OF SYSTEMATIZATION

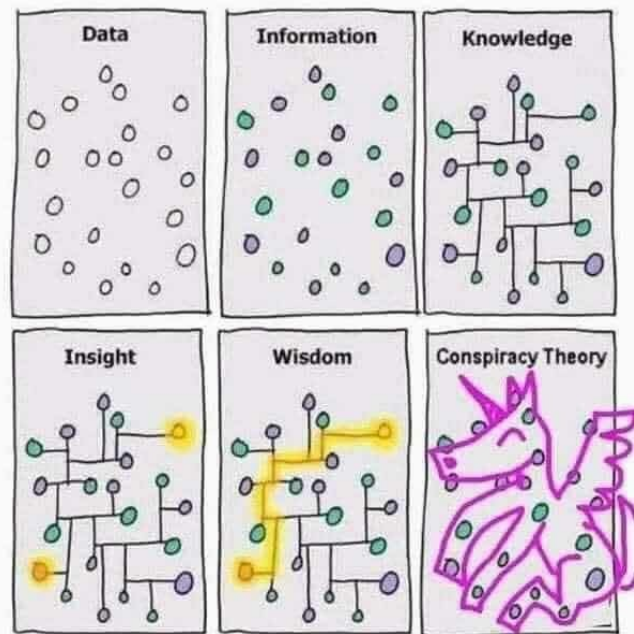
[[Consider if this chapter should go elsewhere in the sequence of chapters in this Part. Or perhaps this chapter should move to the Cosmology book when it is ready for release.]]

There is a certain personality type that is naturally attracted to the notion that the known universe is orderly, systematic, integrated, and beautiful. These are called scientists and philosophers, and they are notorious for their aspiration and endeavor to discover the simple order that they suspect underlies the apparent complexity of the natural world. By nature and by nurture, I am one of those kinds of people, a scientist and a philosopher at heart, and an engineer by career occupation: I want to know what is, and I want to know how it works.

The challenge for me, and for scientists and philosophers in general, is to distinguish between legitimate means and methods for arriving at a grand synthesis of a deep understanding, versus illegitimate means and methods for getting “to the bottom of things”. In this chapter, I discuss the scientific and philosophical endeavor to understand nature in a systematic way, and I discuss the means and methods that lead to legitimate results.

I am reminded of a graphic that I saw on the internet somewhere, inserted at right. My aspiration in this book and my other books is to follow the path from Data to Information to Knowledge to Insight to Wisdom — and stop there, before going on to Conspiracy Theory. Some if not many readers of this book might not have pursued with the level of focus that I have, sophistication in matters of science and philosophy. This chapter is an attempt to bring them up to speed, or at least point them in the direction of further study on the philosophy of science.

As usual, in this chapter as in many other chapters, I refer to Wikipedia as my go-to source of information; I quote from it extensively; I underline words that I believe the reader should pay attention to; I provide explanatory words or phrases in [brackets] within the quotations; I provide commentary after paragraphs of quotations.



[[Consider if the following sections should be arranged in some other sequence.]]

① Principles

Before we get into a discussion of the means and methods of following the thread that leads from Data to Wisdom while stopping before going down the ‘rabbit hole’ of Conspiracy Theory, I want to emphasize that I see the journey of Data > Wisdom as one of always being on the lookout for the basic or fundamental *principles* that underlie the reality system in which we find our consciousness embedded. So what do I mean by “principles”?

A principle is a fundamental truth or proposition that serves as the foundation for a system of beliefs or behavior or a chain of reasoning. That is a guide for behavior or evaluation. In law, it is a rule that has to be or usually is to be followed. It can be desirably followed, or it can be an inevitable consequence of something, such as the laws observed in nature or the way that a system is constructed. The principles of such a system are understood by its users as the essential characteristics of the system, or reflecting the system's designed purpose, and the effective operation or use of which would be impossible if any one of the principles was to be ignored. A system may be explicitly based on and implemented from a document of principles

Examples of principles are, entropy in a number of fields, least action in physics, those in descriptive comprehensive and fundamental law: doctrines or assumptions forming normative rules of conduct, separation of church and state in statecraft, the central dogma of molecular biology, fairness in ethics, etc.

In common English, it is a substantive and collective term referring to rule governance, the absence of which, being “unprincipled”, is considered a character defect. It may also be used to declare that a reality has diverged from some ideal or norm as when something is said to be true only “in principle” but not in fact.

[><https://en.wikipedia.org/wiki/Principle>< — retrieved 29 June 2023]

The reason that I mention this at the beginning of this chapter is that I have noticed that the vast majority of people are not inclined to dig down to get to the rock bottom of things, the principles at the foundation; they are mostly content to ‘skate around on the surface’. I am not one of those people. My claim is that the Tao’s Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix reveal the pattern of the principles, and Part One of this *Cosmogony* book is the explanation thereof, and the other Parts are the exploration thereof.

So what are the means to pursue the discovery of principles? Two methods that have stood the test of time for thousands of years are science and philosophy. The following two sections are an introduction to them.

① The Scientific Methodology

In terms of the Process/Aspect System matrix of personality traits, my deep nature is that of a “Scholar”. Another name for that is “Scientist”. On that basis, naturally I would want my belief system to be scientific. Not everyone who reads this book will be grounded in the scientific endeavor, which involves discovering the deep truths of how the Cosmos exists and functions, so it behooves me to provide an introduction, so that readers know what is important to me, and so they know that I have done my scientific ‘homework’. As usual, I turn to Wikipedia:

THE SCIENTIFIC METHOD

Scientific research involves using the scientific method, which seeks to objectively explain the events of nature in a reproducible way. Scientists usually take for granted a set of basic assumptions that are needed to justify the scientific method: there is an objective reality shared by all rational observers; this objective reality is governed by natural laws; these laws were discovered by means of systematic observation and experimentation. Mathematics is essential in the formation of hypotheses, theories, and laws, because it is used extensively in quantitative modeling, observing, and collecting measurements. Statistics is used to summarize and analyze data, which allows scientists to assess the reliability of experimental results.

In the scientific method, an explanatory thought experiment or hypothesis is put forward as an explanation using parsimony principles and is expected to seek consilience — fitting with other accepted facts related to an observation or scientific question. This tentative explanation is used to make falsifiable predictions, which are typically posted before being tested by experimentation. Disproof of a prediction is evidence of progress. Experimentation is especially important in science to help establish causal relationships to avoid the correlation fallacy, though in some sciences such as astronomy or geology, a predicted observation might be more appropriate.

More is said about consilience in a subsequent section.

When a hypothesis proves unsatisfactory, it is modified or discarded. If the hypothesis survived testing, it may become adopted into the framework of a scientific theory, a logically reasoned, self-consistent model or framework for describing the behavior of certain natural events. A theory typically describes the behavior of much broader sets of observations than a hypothesis; commonly, a large number of hypotheses can be logically bound together by a single theory. Thus a theory is a hypothesis explaining various other hypotheses. In that vein, theories are formulated according to most of the same scientific principles as hypotheses. Scientists may generate

a model, an attempt to describe or depict an observation in terms of a logical, physical or mathematical representation and to generate new hypotheses that can be tested by experimentation.

More is said about consistency in a subsequent section. More is said about the difference between an hypothesis and a theory in a subsequent section. More is said about logic and mathematics and modeling in subsequent sections.

While performing experiments to test hypotheses, scientists may have a preference for one outcome over another. Eliminating the bias can be achieved by transparency, careful experimental design, and a thorough peer review process of the experimental results and conclusions. After the results of an experiment are announced or published, it is normal practice for independent researchers to double-check how the research was performed, and to follow up by performing similar experiments to determine how dependable the results might be. Taken in its entirety, the scientific method allows for highly creative problem solving while minimizing the effects of subjective and confirmation bias. Intersubjective verifiability, the ability to reach a consensus and reproduce results, is fundamental to the creation of all scientific knowledge. [<https://en.wikipedia.org/wiki/Science> — retrieved 25 May 2023]

Some scientists argue that they do not need philosophy to do their job, but others argue that philosophy is useful to the scientific endeavor (e.g. <https://arxiv.org/pdf/1805.10602.pdf>). My position is that both endeavors are attempting to find provisional conceptual schemes for making sense of the Cosmos, but via two paths: the external or objective road of science, and the internal or subjective road of philosophy. To modify an aphorism attributed to Einstein: Science without philosophy is blind, and philosophy without science is lame. We just had a brief look at the scientific method; so now let's take a brief look at what may be called the philosophical method.

② Scientific Modeling

In their quest for find the 'bottom' (or the 'top', depending on how you look at it) of this reality system in which we find our consciousness embedded, it is necessary to simplify what superficially looks like a chaotic and bewildering mess of phenomena. One way to do this is to build, either in reality or in metaphor, a simplified "model", as stated in a Wikipedia article on the subject:

Scientific modeling is an activity that produces models representing empirical objects, phenomena, and physical processes, to make a particular part or feature of the world easier to understand, define, quantify, visualize, or simulate. It requires selecting and identifying relevant aspects of a situation in the real world and then developing a model to replicate a system with those features. Different types of models may be used for different purposes, such as conceptual models to better understand, operational models to operationalize, mathematical models to quantify, computational models to simulate, and graphical models to visualize the subject.

This *Cosmogony* book and my other books make use of tables and graphs and images for the purpose of modeling systems, and for conveying to readers the understanding provided by the models.

Modeling is an essential and inseparable part of many scientific disciplines, each of which has its own ideas about specific types of modeling. The following was said by [mathematician] John von Neumann.

... the sciences do not try to explain, they hardly even try to interpret, they mainly make models. By a model is meant a mathematical construct which, with the addition of certain verbal interpretations, describes observed phenomena. The justification of such a mathematical construct is solely and precisely that it is expected to work — that is, correctly to describe phenomena from a reasonably wide area.

One of my pretensions and presumptions is to go beyond model-making — to explain and interpret certain phenomena in nature and in consciousness.

There is also an increasing attention to scientific modeling in fields such as science education, philosophy of science, systems theory, and knowledge visualization. There is a growing collection of methods, techniques and meta-theory about all kinds of specialized scientific modeling.

[https://en.wikipedia.org/wiki/Scientific_modeling — retrieved 16 May 2024]

It is my aspiration that my model of the Cosmos (the Tao's Template ontology, the Natural Sequence schema, the Process/Aspect System matrix) aids the scientific and philosophical endeavor to understand.

① The Philosophical Methodology

I suspect that few people who read this book will have a significant philosophical sophistication because the subject is not taught in primary school, and one might not get much of it even in secondary school. Few people gravitate to the subject after formal education. If you are one of those people who has given little attention to philosophical thinking, then I would like to believe that this section of this chapter will provide you with some rudimentary and introductory education on the subject. Whatever your level of philosophical competence may be as you go into this book, it seems expedient to me to present some specific relevant philosophical notions before I build before your eyes an elaborate cosmological and cosmogonical system, the Tao's Template ontology, on top of it.

PHILOSOPHY

Philosophy (from Greek: *philosophia*, 'love of wisdom') is the study of general and fundamental questions, such as those about existence [Process and Aspect], reason [Ordinal Expression], knowledge [Neutral Assimilation], values [Inspiration Axis], mind, and language [Expression Axis]. Such questions are often posed as problems to be studied or resolved. Some sources claim the term was coined by Pythagoras (c. 570 – c. 495 BCE); others dispute this story, arguing that Pythagoreans merely claimed use of a preexisting term. Philosophical methods include questioning, critical discussion, rational argument, and systematic presentation.

This *Cosmogony* book uses all of these philosophical methods to advance its premise, the Natural Sequence schema.

Historically, philosophy encompassed all bodies of knowledge, and a practitioner was known as a philosopher. From the time of Ancient Greek philosopher Aristotle to the 19th century, "natural philosophy" encompassed astronomy, medicine, and physics [and botany and zoology and geology]. For example, Newton's 1687 [book] *Mathematical Principles of Natural Philosophy* later became classified as a book of physics. In the 19th century, the growth of modern research universities led academic philosophy and other disciplines to professionalize and specialize. Since then, various areas of investigation that were traditionally part of philosophy have become separate academic disciplines, and namely the social sciences such as psychology, sociology, linguistics [Expression Axis], and economics [Ordinal Action].

Today, major subfields of academic philosophy include metaphysics, which is concerned with the fundamental nature of existence and reality [aka ontology]; epistemology, which studies the nature of knowledge and belief; ethics [Cardinal Inspiration], which is concerned with moral value; and logic [Ordinal Expression], which studies the rules of inference that allow one to derive conclusions from true premises. Other notable subfields include philosophy of religion [Ordinal Inspiration], philosophy of science [Neutral Assimilation], political philosophy [Cardinal Action], aesthetics [Cardinal Expression], philosophy of language [Expression Axis], and philosophy of mind [Expression Axis].

Note that the major realms studied by philosophers (as well as scientists) can be correlated with the Septenarian Attributes of the Tao's Template ontology, as shown by the phrases enclosed in brackets. I do not think that it is a coincidence that this correspondence exists, because the Tao's Template ontology is the system of the fundamental ultimate archetypes, and philosophers are by nature prone to study archetypes.

METHODS OF PHILOSOPHY

Methods of philosophy are ways of conducting philosophical inquiry. They include techniques for arriving at philosophical knowledge and justifying philosophical claims as well as principles used for choosing between competing theories. A great variety of methods has been employed throughout the history of philosophy. Many of them differ significantly from the methods used in the natural sciences in that they do not use experimental data obtained through measuring equipment. The choice of one's method usually has important implications both for how philosophical theories are constructed and for the arguments cited for or against them. This choice is often guided by epistemological considerations about what constitutes philosophical evidence, how much support it offers, and how to acquire it. Various disagreements on the level of philosophical theories have their source in methodological disagreements and the discovery of new methods has often had important consequences both for how philosophers conduct their research and for what claims they defend. Some philosophers engage in most of their theorizing using one particular method while others employ a wider range of methods based on which one fits the specific problem investigated best.

Methodological skepticism is a prominent method of philosophy. It aims to arrive at absolutely certain first principles by using systematic doubt to determine which principles of philosophy are indubitable. The geometrical method tries to build a comprehensive philosophical system based on a small set of such axioms. It

does so with the help of deductive reasoning to expand the certainty of its axioms to the system as a whole. Phenomenologists seek certain knowledge about the realm of appearances. They do so by suspending their judgments about the external world in order to focus on how things appear independent of their underlying reality, a technique known as epoché. Conceptual analysis is a well-known method in analytic philosophy. It aims to clarify the meaning of concepts by analyzing them into their fundamental constituents. Another method often employed in analytic philosophy is based on common sense. It starts with commonly accepted beliefs and tries to draw interesting conclusions from them, which it often employs in a negative sense to criticize philosophical theories that are too far removed from how the average person sees the issue. It is very similar to how ordinary language philosophy tackles philosophical questions by investigating how ordinary language is used.

Various methods in philosophy give particular importance to intuitions, i.e. non-inferential impressions about the correctness of specific claims or general principles. For example, they play an important role in thought experiments, which employ counterfactual thinking to evaluate the possible consequences of an imagined situation. These anticipated consequences can then be used to confirm or refute philosophical theories. The method of reflective equilibrium also employs intuitions. It seeks to form a coherent position on a certain issue by examining all the relevant beliefs and intuitions, some of which often have to be deemphasized or reformulated in order to arrive at a coherent perspective. Pragmatists stress the significance of concrete practical consequences for assessing whether a philosophical theory is true or false. Experimental philosophy is of rather recent origin. Its methods differ from most other methods of philosophy in that it tries to answer philosophical questions by gathering empirical data in ways similar to social psychology and the cognitive sciences.

[><https://en.wikipedia.org/wiki/Philosophy>< — retrieved 17 May 2022]

Read the underlined words again. In various places in this *Cosmogony* book, these philosophical methods will be used and noted.

Perhaps it can be said that the basic difference between science and philosophy is this: scientists are mostly extroverted in that they do experiments on the objective world and observe deeply and repeatedly, whereas philosophers are mostly introverted in that they do experiments on the subjective world and observe deeply and repeatedly. Both approaches are useful for discovering and understanding the world as it purports to be modeled in the Tao's Template ontology, because it is a map of the outer Cosmos as much as it is of the inner Cosmos, and my claim is that the two Cosmoses are congruent.

Another way to frame the difference between the scientific and the philosophical methods is to say that science tends to work from the specific to the general, whereas the philosophical method tends to work from the general to the specific. Even this can be related to the Tao's Template ontology: doing science is a quantitative or Ordinal process and doing philosophy is a qualitative or Cardinal process. (The distinction between quantitative and qualitative will be elaborated considerably further on.) My approach is to use both methods to validate the Tao's Template ontology. Part One presents the philosophical evidence and argument; the Parts Two, Three, Four, Five, and Six present the scientific evidence and argument.

Perhaps many people have the impression that philosophy is a dry and abstract endeavor. However, I suggest to the reader that the Tao's Template ontology provides a very practical belief/value/behavior — aka philosophical — system, something to live by that enriches one's philosophy (and science) of, and experience of, life.

① Logic: Deduction and Induction and Abduction

[[This section might prove to be irrelevant to this book, and therefore deleted. Or maybe it will fit in the Cosmology book]]

One formal branch of philosophy has to do with logic, some of which is relevant to the understanding of the Tao's Template ontology. There are three words used by logicians that cover three ways to do logical operations: deduction, induction, and abduction. For the description and explanation, this time I refer to a resource that is not Wikipedia.

'DEDUCTION' VERSUS 'INDUCTION' VERSUS 'ABDUCTION'

Learn the differences between these three types of reasoning

WHAT TO KNOW

Deductive reasoning, or deduction, is making an inference based on widely accepted facts or premises. If a beverage is defined as "drinkable through a straw", one could use deduction to determine soup to be a

beverage. Inductive reasoning, or induction, is making an inference based on an observation, often of a sample. You can induce that the soup is tasty if you observe all of your friends consuming it. Abductive reasoning, or abduction, is making a probable conclusion from what you know. If you see an abandoned bowl of hot soup on the table, you can use abduction to conclude the owner of the soup is likely returning soon.

Do you have to figure out what time you need to leave your house for an appointment? Or are you trying to decide the best choice for lunch? Or are you baffled about why a half-eaten sandwich is on the counter? These situations call for some method of reasoning, and there are three that we use daily: deduction, induction, and abduction.

In abductive reasoning, the major premise is evident, but the minor premise and therefore the conclusion are only probable. For example, if you find a half-eaten sandwich in your home, you might use probability to reason that your teenage son made the sandwich, realized he was late for work, and abandoned it before he could finish it.

DEDUCTIVE REASONING

Deduction is generally defined as “the deriving of a conclusion by reasoning.” Its specific meaning in logic is “inference in which the conclusion about particulars follows necessarily from general or universal premises.” Simply put, deduction — or the process of deducing — is the formation of a conclusion based on generally accepted statements or facts. It occurs when you are planning out trips, for instance. Say you have a 10 o’clock appointment with the dentist and you know that it takes 30 minutes to drive from your house to the dentist’s. From those two facts, you deduce that you will have to leave your house at 9:30, at the latest, to be at the dentist’s on time.

Deductive reasoning always follows necessarily from general or universal premises. If a sandwich is defined as “two or more slices of bread or a split roll having a filling in between,” and a hot dog is defined as “a frankfurter; especially: a frankfurter heated and served in a long split roll” then one must deduce that any hot dog served in a split roll is a sandwich.

INDUCTIVE REASONING

Whereas in deduction the truth of the conclusion is guaranteed by the truth of the statements or facts considered (the hot dog is served in a split roll and a split roll with a filling in the middle is a sandwich), induction is a method of reasoning involving an element of probability. In logic, induction refers specifically to “inference of a generalized conclusion from particular instances.” In other words, it means forming a generalization based on what is known or observed. For example, at lunch you observe 4 of your 6 coworkers ordering the same sandwich. From your observation, you then induce that the sandwich is probably good — and you decide to try it yourself. Induction is at play here since your reasoning is based on an observation of a small group, as opposed to universal premises.

ABDUCTIVE REASONING

The third method of reasoning, abduction, is defined as “a syllogism in which the major premise is evident but the minor premise and therefore the conclusion only probable.” Basically, it involves forming a conclusion from the information that is known. A familiar example of abduction is a detective’s identification of a criminal by piecing together evidence at a crime scene. In an everyday scenario, you may be puzzled by a half-eaten sandwich on the kitchen counter. Abduction will lead you to the best explanation. Your reasoning might be that your teenage son made the sandwich and then saw that he was late for work. In a rush, he put the sandwich on the counter and left.

If you have trouble differentiating deduction, induction, and abduction, thinking about their roots might help. All three words are based on Latin *ducere*, meaning “to lead”. The prefix *de-* means “from”, and deduction derives from generally accepted statements or facts. The prefix *in-* means “to” or “toward”, and induction leads you to a generalization. The prefix *ab-* means “away”, and you take away the best explanation in abduction.

[><https://www.merriam-webster.com/words-at-play/deduction-vs-induction-vs-abduction>< — retrieved 17 May 2022]

So why is this distinction between types of logical inference relevant to an understanding of the nature of the evidence for or against the Tao's Template ontology? One answer is that some types of reasoning are “better” than others in the sense that their results are more firmly established. Another answer is that we naturally attempt to make sense of the world that we perceive with our senses via these three types of reasoning, so it is a good idea to become consciously aware of why and how we interpret the world of sense experience as we do, so that we are less likely to be misled by a lesser method, or by faulty rational processing. There is an entire

branch of philosophy that studies how it is that we come to know what we know — epistemology — and epistemology includes the reasoning faculty.

① Ontology and Epistemology

In addition to logic, ontology and epistemology are two other main branches of philosophy that have relevance to this *Cosmogony* book. If you are not familiar with those fancy academic words, let me provide definitions and descriptions, from Wikipedia as usual.

ONTOLOGY

Ontology is the branch of philosophy that studies concepts such as existence, being, becoming, and reality. It includes the questions of how entities are grouped into basic categories and which of these entities exist on the most fundamental level. Ontology is sometimes referred to as the science of being, and belongs to the major branch of philosophy known as metaphysics.

My *Tao of Cosmology* book is more about the basic fundamental structure of entities in space (being), and my *Tao of Cosmogony* book is more about the basic fundamental structure of entities in time (becoming).

Ontologists often try to determine what the categories or highest kinds are and how they form a system of categories that provides an encompassing classification of all entities. Commonly proposed categories include substances, properties, relations, states of affairs, and events. These categories are characterized by fundamental ontological concepts, like particularity and universality [Inspiration Axis], abstractness and concreteness [Expression Axis], or possibility and necessity [Action Axis]. Of special interest is the concept of ontological dependence, which determines whether the entities of a category exist on the most fundamental level. Disagreements within ontology are often about whether entities belonging to a certain category exist and, if so, how they are related to other entities.

When used as a countable noun, the terms “ontology” and “ontologies” refer not to the science of being but to theories within the science of being. Ontological theories can be divided into various types according to their theoretical commitments. Monocategorical ontologies hold that there is only one basic category, which is rejected by polycategorical ontologies. Hierarchical ontologies assert that some entities exist on a more fundamental level and that other entities depend on them. Flat ontologies, on the other hand, deny such a privileged status to any entity. [<https://en.wikipedia.org/wiki/Ontology> — retrieved 17 May 2022]

The Wikipedia article continues by elaborating on that introduction, but I **did not see enough** therein to continue my quotation thereof and commentary thereon.

My claim is that the Tao’s Template ontology is a graphical representation of polycategorical ontological primitives and their hierarchical relation to each other.

So how do we know what the ontological primitives *are* — in fact, in truth, in reality? We apply the philosophical and scientific methods, which are studied in the branch of philosophy known as epistemology:

EPISTEMOLOGY

Epistemology is the branch of philosophy that studies knowledge. Epistemologists examine putative sources of knowledge, including perceptual experience, reason, memory, and testimony. They also investigate questions about the nature of truth, belief, justification, and rationality.

Philosophical skepticism, which raises doubts about some or all claims to knowledge, has been a topic of interest throughout the history of philosophy....

In the PAS matrix, the Skeptic Attitude has been given the Positive Pole of +Investigation and the Negative Pole of –Suspicion; the former is constructive curiosity that drives learning forward, whereas the latter is destructive lack of curiosity or nihilism that blocks all progress. In a Cosmos understood as a learning system such as espoused in this *Cosmogony* book, knowledge is never an absolute — the Skeptics are right about that — but rather, the accumulation of provisional knowledge is a never-ending quest; it is cumulative, but it is never settled for certain to the extent that time is an eternal phenomenon.

One of the most notable epistemological debates is between empiricism and rationalism. Empiricism places emphasis on observational evidence via sensory experience as the source of knowledge. Empiricism is associated with a *posteriori* knowledge, which is obtained through experience (such as scientific knowledge). Rationalism places emphasis on reason as a source of knowledge. Rationalism is associated with a *a priori* knowledge, which is independent of experience (such as logic and mathematics).

That paragraph is framed from the premise that *a posteriori* (“after”) and *a priori* (“before”) knowledge both exist all at once and always have, as if they were arrayed in a space-like way. However, I would say that the terms can also be understood as time-like, *a posteriori* coming after *a priori*. It is axiomatic in this *Cosmogony* book that the Cosmos is basically a learning system, meaning that it has the goal of transforming the unknown into the known. Therefore, when the Cosmic system, or a subsystem thereof, has learned something empirically–experientially–*a posteriori*, then that becomes *a priori* knowledge upon which to learn more stuff. It might solve the “debate” if it were realized that both empiricism and rationalism are equally true when viewed from the notion of the ever-learning Cosmos, which, it is claimed, did not start out with logic–mathematics as a given, but as something that congealed over time; refer to *Chapter I-X*, “Live and Learn”. Basically and briefly, all Being is also all Becoming and *vice versa*; all phenomena interdependently arise, as oriental philosophy likes to opine.

One central debate in contemporary epistemology is about the conditions required for a belief to constitute knowledge, which might include truth and justification. This debate was largely the result of attempts to solve the Gettier problem [q.v.]. Another common subject of contemporary debates is the regress problem, which occurs when trying to offer proof or justification for any belief, statement, or proposition. The problem is that whatever the source of justification may be, that source must either be without justification (in which case it must be treated as an arbitrary foundation for belief), or it must have some further justification (in which case justification must either be the result of circular reasoning, as in *coherentism*, or the result of an infinite regress, as in *infinitism*). [<https://en.wikipedia.org/wiki/Philosophy> — retrieved 17 May 2022]

As we will see during the course of this *Cosmogony* book, my claim is that the Tao's Template ontology approaches knowledge of the real world, both inner and outer, meaning that my epistemology includes many consilient sources of evidence and argument from both philosophy and science. *Other sections* are dedicated to explaining the notion that the Cosmos exists and functions as the product of a primordial “circular reasoning”, an “infinite regress”, a paradox in Tao's Consciousness as it experiences Itself *as if* it were not Itself.

It is a scientific and philosophical principle that mere humans can only approach the truth of reality, and can probably never achieve it. This is consistent with the Tao's Template ontology, which claims to encompass the realm of time/space, while also allowing that there is a vast unknown outside the boundary of space/time. The premise here is that the function of the known is to eternally expand into the unknown.

When I say that Epistemology + Ontology = Learning, I mean that the Cosmos is composed of conscious systems that are always learning stuff over their lifetime, such that knowledge is turned into reality. Think of it this way: the known expands into the unknown, what was formerly an *episteme* becomes an *onto* as pieces of Tao remember what was forgotten, and Tao becomes more than before.

During the process of becoming all that they can be, philosophers and scientists engage in hypothesizing and theorizing.

① Hypothesis and Theory

Many sections and subsections of this *Cosmogony* book are dedicated to providing definitions of words and descriptions of concepts and explanations of frameworks. In this section, I want to make clear the distinction between two words, hypothesis and theory, as the terms are used in this book. This is useful because some readers might have a different understanding of the terms — there is the common use of the terms, and then there is the scientific use of the terms, and this book prefers the latter usage. The Natural Sequence first appeared in my thoughts as an hypothesis, but now I can say with some confidence that, after decades of research, it is presentable to the world as a proposed scientific theory.

As usual, in defining these terms I will let Wikipedia do most of the heavy lifting for me.

HYPOTHESIS

A hypothesis (plural hypotheses) is a proposed explanation for a phenomenon. For a hypothesis to be a scientific hypothesis, the scientific method requires that one can test it. Scientists generally base scientific hypotheses on previous observations that cannot satisfactorily be explained with the available scientific theories. Even though the words “hypothesis” and “theory” are often used interchangeably, a scientific hypothesis is not the same as a scientific theory. A working hypothesis is a provisionally accepted hypothesis proposed for further research, in a process beginning with an educated guess or thought....

People refer to a trial solution to a problem as a hypothesis, often called an “educated guess” because it provides a suggested outcome based on the evidence. However, some scientists reject the term “educated guess” as incorrect. Experimenters may test and reject several hypotheses before solving the problem.

According to Schick and Vaughn, researchers weighing up alternative hypotheses may take into consideration:

- Testability (compare falsifiability as discussed above)
- Parsimony (as in the application of “Occam’s razor”, discouraging the postulation of excessive numbers of entities)
- Scope — the apparent application of the hypothesis to multiple cases of phenomena
- Fruitfulness — the prospect that a hypothesis may explain further phenomena in the future
- Conservatism — the degree of “fit” with existing recognized knowledge-systems.

Hypotheses, Concepts, and Measurement

Concepts in Hempel’s deductive-nomological model play a key role in the development and testing of hypotheses. Most formal hypotheses connect concepts by specifying the expected relationships between propositions. When a set of hypotheses are grouped together they become a type of conceptual framework. When a conceptual framework is complex and incorporates causality or explanation it is generally referred to as a theory. According to noted philosopher of science Carl Gustav Hempel “An adequate empirical interpretation turns a theoretical system into a testable theory: The hypothesis whose constituent terms have been interpreted become capable of test by reference to observable phenomena. Frequently the interpreted hypothesis will be derivative hypotheses of the theory; but their confirmation or disconfirmation by empirical data will then immediately strengthen or weaken also the primitive hypotheses from which they were derived.”

Hempel provides a useful metaphor that describes the relationship between a conceptual framework and the framework as it is observed and perhaps tested (interpreted framework). “The whole system floats, as it were, above the plane of observation and is anchored to it by rules of interpretation. These might be viewed as strings which are not part of the network but link certain points of the latter with specific places in the plane of observation. By virtue of those interpretative connections, the network can function as a scientific theory.”

Hypotheses with concepts anchored in the plane of observation are ready to be tested. In “actual scientific practice the process of framing a theoretical structure and of interpreting it are not always sharply separated, since the intended interpretation usually guides the construction of the theoretician.” It is, however, “possible and indeed desirable, for the purposes of logical clarification, to separate the two steps conceptually.”

[><https://en.wikipedia.org/wiki/Hypothesis>< — retrieved 17 May 2022]

There is a point in the development of a scientific investigation that the depth and breadth of understanding of a phenomenon passes from hypothetical to theoretical. Many people understand and use that term, theory, as if it were mere speculation and conjecture, little different from the definition of hypothesis given above, but that is not the way that scientists and philosophers use it:

THEORY

A theory is a rational type of abstract thinking about a phenomenon, or the results of such thinking. The process of contemplative and rational thinking is often associated with such processes as observational study or research. Theories may be scientific, belong to a non-scientific discipline, or no discipline at all. Depending on the context, a theory’s assertions might, for example, include generalized explanations of how nature works. The word has its roots in ancient Greek, but in modern use it has taken on several related meanings.

In modern science, the term “theory” refers to scientific theories, a well-confirmed type of explanation of nature, made in a way consistent with the scientific method, and fulfilling the criteria required by modern science. Such theories are described in such a way that scientific tests should be able to provide empirical support for it, or empirical contradiction (“falsify”) of it. Scientific theories are the most reliable, rigorous, and comprehensive form of scientific knowledge, in contrast to more common uses of the word “theory” that imply that something is unproven or speculative (which in formal terms is better characterized by the word hypothesis). Scientific theories are distinguished from hypotheses, which are individual empirically testable conjectures, and from scientific laws, which are descriptive accounts of the way nature behaves under certain conditions.

Theories guide the enterprise of finding facts rather than of reaching goals, and are neutral concerning alternatives among values. A theory can be a body of knowledge, which may or may not be associated with particular explanatory models. To theorize is to develop this body of knowledge.

The word theory or “in theory” is sometimes used erroneously by people to explain something which they individually did not experience or test before. In those instances, semantically, it is being substituted for another concept, a hypothesis. Instead of using the word “hypothetically”, it is replaced by a phrase: “in theory”. In some instances the theory’s credibility could be contested by calling it “just a theory” (implying that the idea has not even been tested). Hence, that word “theory” is very often contrasted to “practice” (from Greek *praxis*, πράξις) a Greek term for doing, which is opposed to theory. A “classical example” of the distinction between “theoretical” and “practical” uses the discipline of medicine: medical theory involves trying to understand the causes and nature of health and sickness, while the practical side of medicine is trying to make people healthy. These two things are related but can be independent, because it is possible to research health and sickness without curing specific patients, and it is possible to cure a patient without knowing how the cure worked.
[><https://en.wikipedia.org/wiki/Theory> — retrieved 17 May 2022]

When the notion of the Natural Sequence first popped into my head in February 1986, it was a mere hypothesis, since at that time I had not yet accumulated any evidence for it. Over the next couple of decades, in my more-or-less random investigations into the workings of the Cosmos, I kept encountering instantiations of it in various realms of science and philosophy and spirituality, and I wrote what I found into a very crude manuscript in the early 2000s. A couple of decades after that, I set about to finish this book, I began to research it systematically, and I found many additional instantiations of the Natural Sequence. Now I am prepared to assert and defend the notion that the Natural Sequence is not a mere hypothesis; rather, it is a *bona fide* scientific and philosophical theory of the structure and function of the Cosmos.

One of the factors in my epistemology of ontology of the Natural Sequence theory is to gather data from a wide variety of fields and look for patterns. This procedure and practice has its own name, namely “consilience”.

① Consilience Theory of Truth

It is not claimed in this *Cosmogony* book that the Natural Sequence can be proven “beyond a reasonable doubt”, as lawyers might say, or as scientists like to say about their theory being verified beyond their arbitrary threshold of proof, namely 5 sigma, a “sigma” being a measure of probability that the phenomenon under investigation is not a random fluctuation in the data produced by repeating the experiment umpteen bazillion times. (5 sigma is a level of confidence at 99.99994%.) However, it is claimed in this *Cosmogony* book that the “preponderance of evidence” presented herein indicates that the Tao’s Template ontology is more than a speculative *hypothesis* or groundless assertion. Rather, I say that the evidence presented herein indicates that we can have a reasonable confidence that the Tao’s Template ontology is an actual *theory*, on the basis of what is called “consilience”:

CONSILIENCE

In science and history, consilience (also convergence of evidence or concordance of evidence) is the principle that evidence from independent, unrelated sources can “converge” on strong conclusions. That is, when multiple sources of evidence are in agreement, the conclusion can be very strong even when none of the individual sources of evidence is significantly so on its own. Most established scientific knowledge is supported by a convergence of evidence: if not, the evidence is comparatively weak, and there will not likely be a strong scientific consensus.

The principle is based on the unity of knowledge; measuring the same result by several different methods should lead to the same answer. For example, it should not matter whether one measures distances within the Giza pyramid complex by laser range-finding, by satellite imaging, or with a meter stick — in all three cases, the answer should be approximately the same. For the same reason, different dating methods in geochronology should concur, a result in chemistry should not contradict a result in geology, etc.

The word consilience was originally coined as the phrase “consilience of inductions” by William Whewell (consilience refers to a “jumping together” of knowledge). The word comes from Latin *com-* “together” and *-siliens* “jumping” (as in resilience). [><https://en.wikipedia.org/wiki/Consilience> — retrieved 11 February 2022]

My claim for the likely, probable validity of the Tao’s Template ontology is therefore scientific in the sense of its consilience across many domains of knowledge, not so much as absolute incontrovertible proof, but in the sense that the data of evidence has convergence, concordance, consensus, and concurrence in many realms of inquiry.

As required for any good theory, the Tao’s Template ontology also has “coherence”.

① Coherence Theory of Truth

One of the claims that I make for the Tao's Template ontology is that it offers and provides a *coherent* framework or system for understanding the structure and function of the orderly Cosmos. So what do I mean by coherence? Let's check a dictionary:

1: the quality or state of cohering: such as

1a: systematic or logical connection or consistency [as in] "The essay as a whole lacks coherence."

1b: integration of diverse elements, relationships, or values [as in] "The various parts of this house — discrete in color, in shape, in placement — join together with remarkable coherence." [<https://www.merriam-webster.com/dictionary/coherence> — retrieved 10 June 2023]

The aspiration for coherence is important in the scientific and philosophical endeavors discussed above. The whole notions of theory and consilience, also discussed above, are predicated on the notion that there is coherence throughout the entirety of nature: internal and external, from top to bottom, and from beginning to end. In other words, even though the Cosmos also contains some chaos, as also discussed elsewhere, the Cosmos is understandable as a "systematic, logical, integrated" interconnected pattern. The more you learn about it, the more you understand that the Tao's Template ontology is the very epitome of coherence.

As you might already have guessed, Wikipedia has somewhat to say on the subject of coherence.

Coherence theories of truth characterize truth as a property of whole systems of propositions that can be ascribed to individual propositions only derivatively according to their coherence with the whole. While modern coherence theorists hold that there are many possible systems to which the determination of truth may be based upon coherence, others, particularly those with strong religious beliefs, hold that the truth only applies to a single absolute system. In general, truth requires a proper fit of elements within the whole system. Very often, though, coherence is taken to imply something more than simple formal coherence. For example, the coherence of the underlying set of concepts is considered to be a critical factor in judging validity for the whole system. In other words, the set of base concepts in a universe of discourse must first be seen to form an intelligible paradigm before many theorists will consider that the coherence theory of truth is applicable.

History

In modern philosophy, the coherence theory of truth was defended by Baruch Spinoza, Immanuel Kant, Johann Gottlieb Fichte, Karl Wilhelm Friedrich Schlegel, Georg Wilhelm Friedrich Hegel, and Harold Henry Joachim (who is credited with the definitive formulation of the theory). However, Spinoza and Kant have also been interpreted as defenders of the correspondence theory of truth [see next section]. In contemporary philosophy, several epistemologists have significantly contributed to and defended the theory, primarily Brand Blanshard (who gave the earliest characterization of the theory in contemporary times) and Nicholas Rescher.

Varieties

According to one view, the coherence theory of truth regards truth as coherence within some specified set of sentences, propositions or beliefs. It is the "theory of knowledge which maintains that truth is a property primarily applicable to any extensive body of consistent propositions, and derivatively applicable to any one proposition in such a system by virtue of its part in the system". Ideas like this are a part of the philosophical perspective known as confirmation holism. Coherence theories of truth claim that coherence and consistency are important features of a theoretical system, and that these properties are sufficient to its truth. To state it in the reverse, that "truth" exists only within a system, and doesn't exist outside of a system.

According to another version by H. H. Joachim (the philosopher credited with the definitive formulation of the theory, in his book *The Nature of Truth*, published in 1906), truth is a systematic coherence that involves more than logical consistency. In this view, a proposition is true to the extent that it is a necessary constituent of a systematically coherent whole. Others of this school of thought, for example, Brand Blanshard, hold that this whole must be so interdependent that every element in it necessitates and even entails every other element. Exponents of this view infer that the most complete truth is a property solely of a unique coherent system, called the absolute, and that humanly knowable propositions and systems have a degree of truth that is proportionate to how fully they approximate this ideal.

Criticism

Perhaps the best-known objection to a coherence theory of truth is Bertrand Russell's. He maintained that since both a belief and its negation will, individually, cohere with at least one set of beliefs, this means that contradictory beliefs can be shown to be true according to coherence theory, and therefore that the theory

cannot work. However, what most coherence theorists are concerned with is not all possible beliefs, but the set of beliefs that people actually hold. The main problem for a coherence theory of truth, then, is how to specify just this particular set, given that the truth of which beliefs are actually held can only be determined by means of coherence. [https://en.wikipedia.org/wiki/Coherence_theory_of_truth] — retrieved 10 June 2023]

My perception is that the Tao's Template ontology assumes or presumes the Absolute and the Ideal as their axiomatic ontology, and deduces the structure of the Cosmos from there, then finds epistemological scientific evidence and philosophical argument downstream of the foundational axioms.

Notice that coherentism is a notion in epistemology. Recall that epistemology is the branch of philosophy that deals with how it is that we know if something is real and/or true. As such, for a theory to discern coherence in many of the systems and subsystems of the Cosmos is a big plus.

But consilience and coherence are not the only criteria for discerning what is the case. In addition to those, we also look to “correspondence”.

① Correspondence Theory of Truth

As discussed in previous sections, the methods of science and philosophy are aimed at discerning what is actually the case in the Cosmos, as distinct from unfounded notions, no matter how “coherent” (see previous section) the notion may be. This is where the so-called “correspondence theory of truth” ‘picks up’ the scientific and philosophical endeavor and ‘runs with it’. People typically take for granted the notion that a claim that something is true must agree with reality. However, philosophers and scientists, people who tend to go deeper and broader than others, have given it a lot of thought over the millennia.

Yet again, I turn to Wikipedia for the description and the explanation of the:

CORRESPONDENCE THEORY OF TRUTH

In metaphysics and philosophy of language, the correspondence theory of truth states that the truth or falsity of a statement is determined only by how it relates to the world and whether it accurately describes (i.e., corresponds with) that world. Correspondence theories claim that true beliefs and true statements correspond to the actual state of affairs. This type of theory attempts to posit a relationship between thoughts or statements on one hand, and things or facts on the other.

History

Correspondence theory is a traditional model which goes back at least to some of the ancient Greek philosophers such as Plato and Aristotle. This class of theories holds that the truth or the falsity of a representation is determined solely by how it relates to a reality; that is, by whether it accurately describes that reality. As Aristotle claims in his [book] *Metaphysics*: “To say that that which is, is not, and that which is not, is, is a falsehood; therefore, to say that which is, is, and that which is not, is not, is true”.

A classic example of correspondence theory is the statement by the medieval philosopher and theologian Thomas Aquinas: “*Veritas est adaequatio rei et intellectus*” (“Truth is the adequation of things and intellect”, which Aquinas attributed to the ninth-century Neoplatonist Isaac Israeli.

Correspondence theory was either explicitly or implicitly embraced by most of the early modern thinkers, including René Descartes, Baruch Spinoza, John Locke, Gottfried Wilhelm Leibniz, David Hume, and Immanuel Kant. (However, Spinoza and Kant have also been [mis]interpreted as defenders of the coherence theory of truth.) Correspondence theory has also been attributed to Thomas Reid. In late modern philosophy, Friedrich Wilhelm Joseph Schelling espoused the correspondence theory. According to Bhikhu Parekh, Karl Marx also subscribed to a version of the correspondence theory. In contemporary Continental philosophy, Edmund Husserl defended the correspondence theory. In contemporary analytic philosophy, Bertrand Russell, Ludwig Wittgenstein (at least in his early period), J. L. Austin, and Karl Popper defended the correspondence theory.

Correspondence as congruence

Bertrand Russell and Ludwig Wittgenstein have in different ways suggested that a statement, to be true, must have some kind of structural isomorphism with the state of affairs in the world that makes it true. For example, “A cat is on a mat” is true if, and only if, there is in the world a cat and a mat and the cat is related to the mat by virtue of being on it. If any of the three pieces (the cat, the mat, and the relation between them which correspond respectively to the subject, object, and verb of the statement) is missing, the statement is false. Some sentences pose difficulties for this model, however. As just one example, adjectives such as “counterfeit”,

“alleged”, or “false” do not have the usual simple meaning of restricting the meaning of the noun they modify: a “tall lawyer” is a kind of lawyer, but an “alleged lawyer” may not be.

Correspondence as correlation

J. L. Austin theorized that there need not be any structural parallelism between a true statement and the state of affairs that makes it true. It is only necessary that the semantics of the language in which the statement is expressed are such as to correlate whole-for-whole the statement with the state of affairs. A false statement, for Austin, is one that is correlated by the language to a state of affairs that does not exist.

Relation to ontology

Historically, most advocates of correspondence theories have been metaphysical realists; that is, they believe that there is a world external to the minds of all humans. This is in contrast to metaphysical idealists who hold that everything that exists, exists as a substantial metaphysical entity independently of the individual thing of which it is predicated, and also to conceptualists who hold that everything that exists is, in the end, just an idea in some mind. However, it is not strictly necessary that a correspondence theory be married to metaphysical realism. It is possible to hold, for example, that the facts of the world determine which statements are true and to also hold that the world (and its facts) is but a collection of ideas in the mind of some supreme being.

It is axiomatic in the Tao's Template ontology that the Tao is the “supreme being”, in the ‘mind’ of Which there is a belief system, a value system, and a behavior system. This primary notion forms the basis for the secondary notion that there is a consilience, a coherence, a correspondence, a congruence, a correlation of components throughout the Cosmic system and its subsystems, which include belief and value and behavioral components.

Objections

One attack on the theory claims that the correspondence theory succeeds in its appeal to the real world only in so far as the real world is reachable by us.

The direct realist believes that we directly know objects as they are. Such a person can wholeheartedly adopt a correspondence theory of truth.

The rigorous idealist believes that there are no real, mind-independent objects. The correspondence theory appeals to imaginary undefined entities, so it is incoherent.

Other positions hold that we have some type of awareness, perception, *et cetera* of real-world objects which in some way falls short of direct knowledge of them. But such an indirect awareness or perception is itself an idea in one's mind, so that the correspondence theory of truth reduces to a correspondence between ideas about truth and ideas of the world, whereupon it becomes a coherence theory of truth.

Vagueness or circularity

Either the defender of the correspondence theory of truth offers some accompanying theory of the world, or they do not. If no theory of the world is offered, the argument is so vague as to be useless or even unintelligible: truth would then be supposed to be correspondence to some undefined, unknown or ineffable world. It would in this case be difficult to see how a candid truth could be more certain than the world we are to judge its degree of correspondence against.

On the other hand, as soon as the defender of the correspondence theory of truth offers a theory of the world, they are operating in some specific ontological or scientific theory, which stands in need of justification. But, the only way to support the truth of this world-theory that is allowed by the correspondence theory of truth, is correspondence to the real world. Hence the argument is inescapably circular.

[>https://en.wikipedia.org/wiki/Correspondence_theory_of_truth< — retrieved 11 June 2023]

Regarding the claim that vagueness argues against the utility of the correspondence theory of truth, my claim is that the Tao's Template ontology is not vague because it is built on the least vague foundations that we know of, namely logic and mathematics and physics. The history of science and philosophy indicates a gradual lessening of vagueness, and my claim is that the Tao's Template ontology moves with them in that direction. Regarding the claim that circularity argues against the utility of the correspondence theory of truth, my claim is that the Tao's Template ontology is indeed circular because the paradox of self-reference is fundamental to the existence and function of the Cosmos, so the Tao's Template ontology should reflect that observation of reality.

The **five** Parts of this book after this introduction attempt to demonstrate the correspondence of the Tao's Template ontology with nature to the extent that science and philosophy have been able to discern it.

① Aspiration to Systematize

As we saw in previous sections, one of the major aspirations of science is to gain knowledge about what is fundamentally true and real, and one of the major aspirations of philosophers is to categorize knowledge into a coherent system. To some extent, researching and writing this section is self-indulgent: no people that I know personally have a penchant for categorizing and systematizing knowledge to the extent that I have, so the purpose of writing about it is because it helps me to understand my unusual impulse. If readers come to appreciate my books better for having read this section, then so much the better.

Wikipedia has somewhat to say, in various articles, about the systematic approach to gaining and organizing fundamental knowledge.

① *Principles Thinking*

A previous section introduced the reader to the philosophical category called ontology, which is about getting to “the bottom of things”. What is basic? What is fundamental? What is archetypal? My *Cosmology* and *Cosmogony* books aspire to explore those questions. Where does one start? Recall that my claim is that Tao’s Template is the start:

Tao produced the One, the One Produced the Two, the Two produced the Three. The Three produced All things. All things carry the Yin and embrace the Yang; through the blending of the Chi they achieve Harmony.

I regard Tao’s Template as a list of the fundamental principles, which I have underlined. My books are my attempt to see how far those assumed basic principles can explain the Cosmos that we live in. Wikipedia has somewhat to say on the subject of “first principles”.

FIRST PRINCIPLES

A first principle is a basic proposition or assumption that cannot be deduced from any other proposition or assumption. In philosophy, first principles are from First Cause attitudes and taught by Aristotelians, and nuanced versions of first principles are referred to as postulates by Kantians. In mathematics, first principles are referred to as axioms or postulates. In physics and other sciences, theoretical work is said to be from first principles, or *ab initio*, if it starts directly at the level of established science and does not make assumptions such as empirical model and parameter fitting. First principles thinking consists of deriving things to their fundamental proven axioms in the given arena, before reasoning up by asking which ones are relevant to the question at hand, then cross referencing conclusions based on chosen axioms and making sure conclusions don’t violate any fundamental laws. Physicists include counterintuitive concepts with reiteration.

In trying to make sense of that last sentence within the understanding provided by the Tao’s Template ontology, I propose that the Cosmos emerges from a primordial “counterintuitive” fact, namely a paradox (the Tao experiencing itself *as if* it were not itself), and then proceeds to develop in space and time as an infinite regress, or recursion, or “reiteration” of paradoxes. Paradox means that the Cosmos is self-contradictory, but it also means that the reverse is also true, namely that the universe is self-consistent. (The contradiction of contradiction is consistency.) The infinite regress of consistency and inconsistency drives the Cosmos ever onward and upward; refer to the **Chapter I-X**, “Chaos + Cosmos = Complexity”. That is probably not what the author of the article had in mind, but it is what the statement evoked in my perverse mind.

In formal logic

In a formal logical system, that is, a set of propositions that are consistent with one another, it is possible that some of the statements can be deduced from other statements. For example, in the syllogism, “All men are mortal; Socrates is a man; Socrates is mortal” the last claim can be deduced from the first two.

A first principle is an axiom that cannot be deduced from any other within that system. The classic example is that of Euclid’s [book] *Elements*; its hundreds of geometric propositions can be deduced from a set of definitions, postulates, and common notions: all three types constitute first principles.

In the Tao’s Template ontology, the Cosmos is axiomatically assumed or postulated to emerge from the primordial paradox (the Tao experiencing itself *as if* it were not itself). After the primordial paradox, three more postulates are assumed: Oneness, Twoness, and Threeness. From here, All Things are assumed to emerge.

Philosophy in general

In philosophy “first principles” are from First Cause attitudes commonly referred to as *a priori* terms and arguments, which are contrasted to *a posteriori* terms, reasoning or arguments, in that the former is simply assumed and exist prior to the reasoning process and the latter are deduced or inferred after the initial reasoning

process. First principles are generally treated in the realm of philosophy known as epistemology, but are an important factor in any metaphysical speculation.

In philosophy “first principles” are often somewhat synonymous with *a priori*, datum and axiomatic reasoning.

I would say that these Latin terms can be understood as time-like, *a posteriori* coming after *a priori*. It is axiomatic in this book that the Cosmos is basically an epistemic learning system, meaning that it has the goal of transforming the unknown into the known. Therefore, when the Cosmic system, or a subsystem thereof, has learned something empirically–experientially–*a posteriori*, then that becomes *a priori* knowledge upon which to learn more stuff. In the notion of the ever-learning Cosmos, it is claimed that it did not start out with logic–mathematics as an *a priori* given, but as something that congealed over time; refer to [Chapter I-X](#), “Live and Learn”. Basically and briefly, all Being is also all Becoming and *vice versa*; all phenomena interdependently arise, as oriental philosophy has adopted as a first principle.

Scientists and philosophers partake of the Cosmic aspiration to remember Itself. Aristotle suggested that scientists, in their research or learning endeavor, are looking for First Principles:

Aristotle’s contribution

Terence Irwin writes:

When Aristotle explains in general terms what he tries to do in his philosophical works, he says he is looking for “first principles” (or “origins”; *archai*):

In every systematic inquiry (*methodos*) where there are first principles, or causes, or elements, knowledge and science result from acquiring knowledge of these; for we think we know something just in case we acquire knowledge of the primary causes, the primary first principles, all the way to the elements. It is clear, then, that in the science of nature as elsewhere, we should try first to determine questions about the first principles. The naturally proper direction of our road is from things better known and clearer to us, to things that are clearer and better known by nature; for the things that are known to us are not the same as the things known unconditionally (*haplôs*). Hence it is necessary for us to progress, following this procedure, from the things that are less clear by nature, but clearer to us, towards things that are clearer and better known by nature. (*Physics*, 184a10–21)

The connection between knowledge and first principles is not axiomatic as expressed in Aristotle’s account of a first principle (in one sense) as “the first basis from which a thing is known” (*Metaphysics*, 1013a14–15). The search for first principles is not peculiar to philosophy; philosophy shares this aim with biological, meteorological, and historical inquiries, among others. But Aristotle’s references to first principles in this opening passage of the *Physics* and at the start of other philosophical inquiries imply that it is a primary task of philosophy.

The principles of the Tao’s Template ontology are defined and explained in [Chapter I-X](#). To my way of thinking, they are about as fundamental as they can be, but I admit to defects and deficiencies in terms of omniscience and omnipotence, as should Aristotle and all other scientists and philosophers. We do the best we can with what we have.

Descartes

Profoundly influenced by Euclid, Descartes was a rationalist who invented the foundationalist system of philosophy. He used the method of doubt, now called Cartesian doubt, to systematically doubt everything he could possibly doubt until he was left with what he saw as purely indubitable truths. Using these self-evident propositions as his axioms, or foundations, he went on to deduce his entire body of knowledge from them. The foundations are also called *a priori* truths. His most famous proposition is “*Je pense, donc je suis*”. (I think, therefore I am, or *Cogito ergo sum*)

Descartes describes the concept of a first principle in the following excerpt from the preface to the [book] *Principles of Philosophy* (1644):

I should have desired, in the first place, to explain in it what philosophy is, by commencing with the most common matters, as, for example, that the word philosophy signifies the study of wisdom, and that by wisdom is to be understood not merely prudence in the management of affairs, but a perfect knowledge of all that man can know, as well for the conduct of his life as for the preservation of his health and the discovery of all the arts, and that knowledge to subserve these ends must necessarily be deduced from first causes; so that in order to study the acquisition of it (which is properly called philosophizing), we must

commence with the investigation of those first causes which are called Principles. Now, these principles must possess two conditions: in the first place, they must be so clear and evident that the human mind, when it attentively considers them, cannot doubt their truth; in the second place, the knowledge of other things must be so dependent on them as that though the principles themselves may indeed be known apart from what depends on them, the latter cannot nevertheless be known apart from the former. It will accordingly be necessary thereafter to endeavor so to deduce from those principles the knowledge of the things that depend on them, as that there may be nothing in the whole series of deductions which is not perfectly manifest. [https://en.wikipedia.org/wiki/First_principle — retrieved 17 May 2022]

Regardless of what Descartes said, I say — and I suggest that the Tao's Template ontology says — that acquisition of knowledge from rational first principles alone is inadequate. My suggestion is that the first principle of systematic inquiry should be to marry scientific empirical *a posteriori* inquiry with philosophical rational *a priori* inquiry. If we find “knowledge” that does not fit with both of those methods of inquiry, then I suggest that we should keep inquiring. This *Cosmogony* book and my *Cosmology* book are attempts to marry rational first principles *a priori* philosophy and *a posteriori* empirical science.

Another way to approach what is real and true — other than building a structure upon a foundation of first principles — is to think in terms of truth and reality holistically: as a consistent, coherent, consilient “system”.

① *Systems Thinking*

Wikipedia itself is an attempt to systematize knowledge into convenient categories, so let's look at what it has to say about systems:

SYSTEMS THEORY

Systems theory is the interdisciplinary study of systems, i.e. cohesive groups of interrelated, interdependent parts that can be natural or human-made. Every system is bounded by space and time, influenced by its environment, defined by its structure and purpose, and expressed through its functioning. A system may be more than the sum of its parts if it expresses synergy or emergent behavior.

Changing one part of a system may affect other parts or the whole system. It may be possible to predict these changes in patterns of behavior. For systems that learn and adapt, the growth and the degree of adaptation depend upon how well the system is engaged with its environment. Some systems support other systems, maintaining the other system to prevent failure. The goals of systems theory are to model a system's dynamics, constraints, conditions, and to elucidate principles (such as purpose, measure, methods, tools) that can be discerned and applied to other systems at every level of nesting, and in a wide range of fields for achieving optimized equifinality [the property of allowing or having the same effect or result from different events].

As I attempt to show in this *Cosmogony* book and my *Cosmology* book, one of the factors that makes the Tao's Template ontology so versatile yet definitive is that it is the system of systems within systems. The pattern of the principles are “scale invariant”, meaning that the pattern of principles is repeated across all space and time, from smallest to largest and from oldest to youngest.

General systems theory is about developing broadly applicable concepts and principles, as opposed to concepts and principles specific to one domain of knowledge. It distinguishes dynamic or active systems from static or passive systems. Active systems are activity structures or components that interact in behaviors and processes. Passive systems are structures and components that are being processed. For example, a program is passive when it is a disc file and active when it runs in memory. The field is related to systems thinking, machine logic, and systems engineering. [https://en.wikipedia.org/wiki/Systems_theory — 11 February 2022]

Refer to **Chapter I-X**, “Yin + Yang = Chi”, section “Passive + Active = Action” for more about what is said there.

It seems to me that the Tao's Template ontology is not only built on first principles, it does so in a systematic way.

① *Archetypal Thinking*

Throughout this book, components of the Tao's Template ontology are referred to as “archetypes”. What do I mean by the application of this word? Wikipedia begins to explain, and I continue to explain after the following excerpt from the Wikipedia article on archetypes.

The concept of an archetype (from Greek: ἀρχα ... ‘to begin’ + τύπος ... ‘sort, type’) appears in areas relating to behavior, historical psychology, and literary analysis. An archetype can be:

1. a statement, pattern of behavior, prototype, “first” form, or a main model that other statements, patterns of behavior, and objects copy, emulate, or “merge” into. Informal synonyms frequently used for this definition include “standard example”, “basic example”, and the longer-form “archetypal example”; mathematical archetypes often appear as “canonical examples”.
2. the Platonic concept of pure form, believed to embody the fundamental characteristics of a thing.
3. a collectively-inherited unconscious idea, a pattern of thought, image, etc., that is universally present, in individual psyches, as in Jungian psychology
4. a constantly-recurring symbol or motif in literature, painting, or mythology. This definition refers to the recurrence of characters or ideas sharing similar traits throughout various, seemingly unrelated cases in classic storytelling, media, etc. This usage of the term draws from both comparative anthropology and from Jungian archetypal theory.

Archetypes are also very close analogies to instincts, in that, long before any consciousness develops, it is the impersonal and inherited traits of human beings that present and motivate human behavior. They also continue to influence feelings and behavior even after some degree of consciousness developed later on.

[><https://en.wikipedia.org/wiki/Archetype>< — retrieved 11 February 2022]

Of the four items listed above, the usage of archetype that is closest to the heart of this *Cosmogony* book is item #2 above, which is described in more detail in the Wikipedia article:

The origins of the archetypal hypothesis date as far back as Plato. Plato’s *eidos*, or ideas, were pure mental forms that were imprinted in the soul before it was born into the world. Some philosophers also translate the archetype as “essence” in order to avoid confusion with respect to Plato’s conceptualization of Forms. While it is tempting to think of Forms as mental entities (ideas) that exist only in our mind, the philosopher insisted that they are independent of any minds (real). *Eidos* were collective in the sense that they embodied the fundamental characteristics [attributes] of a thing rather than its specific peculiarities. In the seventeenth century, Sir Thomas Browne and Francis Bacon both employ the word archetype in their writings; Browne in *The Garden of Cyrus* (1658) attempted to depict archetypes in his usage of symbolic proper-names.

The concept of psychological archetypes was advanced by the Swiss psychiatrist Carl Jung, c. 1919. Jung has acknowledged that his conceptualization of archetype is influenced by Plato’s *eidos*, which he described as “the formulated meaning of a primordial image by which it was represented symbolically.” According to Jung, the term archetype is an explanatory paraphrase of the Platonic *eidos*, also believed to represent the word form. He maintained that Platonic archetypes are metaphysical ideas, paradigms, or models, and that real things are held to be only copies of these model ideas.

In Jung’s psychological framework, archetypes are innate, universal prototypes for ideas and may be used to interpret observations. A group of memories and interpretations associated with an archetype is a complex (e.g. a mother complex associated with the mother archetype). Jung treated the archetypes as psychological organs, analogous to physical ones in that both are morphological constructs that arose through evolution. At the same time, it has also been observed that evolution can itself be considered an archetypal construct.

In the Tao’s Template ontology, the Cosmos exists in seven basic/fundamental/archetypal forms that I call Aspects, and the Cosmos changes in seven basic/fundamental/archetypal ways that I call Processes.

Jung states in part one of [his book] *Man And His Symbols* that:

My views about the ‘archaic remnants’, which I call ‘archetypes’ or ‘primordial images’, have been constantly criticized by people who lack sufficient knowledge of the psychology of dreams and of mythology. The term ‘archetype’ is often misunderstood as meaning certain definite mythological images or motifs, but these are nothing more than conscious representations. Such variable representations cannot be inherited. The archetype is a tendency to form such representations of a motif — representations that can vary a great deal in detail without losing their basic pattern. [><https://en.wikipedia.org/wiki/Archetype>< — 11 February 2022]

Scientists recognize the so-called “ontological primitives” in concrete physical phenomena such as matter/energy, fields and forces, and the laws of nature. However, they do not generally recognized that these have their abstract counterparts in beauty, truth/mind, love, and life. According to the Tao’s Template ontology, both concrete and abstract phenomena are on equal ontological footing — they are both equally “real”; refer to **Chapter I-X**, “Concrete + Abstract = Entity” for further discussion. Basically and briefly, concrete phenomena are regarded as specific instantiations of general abstract phenomena, aka archetypes — there is a “correspondence” between them, as described in the section “Correspondence Theory of Truth” above.

Neither can exist or function without the other; they are the reciprocal of each other. In the Tao's Template ontology the abstractions are what I call Attributes, such as Twoness and Ordinal and Inspiration.

Some people, such as Jung, had an aptitude for recognizing archetypes and appreciating their significance. This is a good talent for scientists and philosophers to have. This book and my other books are built on my personal penchant for “pattern recognition”, a phenomenon that merits a subsection of its own:

① *Pattern Recognition*

When I compare myself to others, it seems to me that I have a penchant or aptitude or talent for “pattern recognition”. Wikipedia describes pattern recognition this way:

PATTERN RECOGNITION

In psychology and cognitive neuroscience, pattern recognition describes a cognitive process that matches information from a stimulus with information retrieved from memory.

Pattern recognition occurs when information from the environment is received and entered into short-term memory, causing automatic activation of a specific content of long-term memory. An early example of this is learning the alphabet in order. When a carer repeats ‘A, B, C’ multiple times to a child, utilizing the pattern recognition, the child says ‘C’ after they hear ‘A, B’ in order. Recognizing patterns allows us to predict and expect what is coming. The process of pattern recognition involves matching the information received with the information already stored in the brain. Making the connection between memories and information perceived is a step of pattern recognition called identification. Pattern recognition requires repetition of experience. Semantic [meaning-making] memory, which is used implicitly and subconsciously is the main type of memory involved with recognition.

There are six main theories of pattern recognition: template matching, prototype-matching, feature analysis, recognition-by-components theory, bottom-up and top-down processing, and Fourier analysis. The application of these theories in everyday life is not mutually exclusive. Pattern recognition allows us to read words, understand language, recognize friends, and even appreciate music. Each of the theories applies to various activities and domains where pattern recognition is observed. Facial, music and language recognition, and seriation [the arrangement of things in a series] are a few of such domains. Facial recognition and seriation occur through encoding visual patterns, while music and language recognition use the encoding of auditory patterns.

The theory of pattern recognition that is most relevant to this *Cosmogony* book is this one:

Feature Analysis

Multiple theories try to explain how humans are able to recognize patterns in their environment. Feature detection theory proposes that the nervous system sorts and filters incoming stimuli to allow the human (or animal) to make sense of the information. In the organism, this system is made up of feature detectors, which are individual neurons, or groups of neurons, that encode specific perceptual features. The theory proposes an increasing complexity in the relationship between detectors and the perceptual feature. The most basic feature detectors respond to simple properties of the stimuli. Further along the perceptual pathway, higher organized feature detectors are able to respond to more complex and specific stimuli properties. When features repeat or occur in a meaningful sequence, we are able to identify these patterns because of our feature detection system. [[https://en.wikipedia.org/wiki/Pattern_recognition_\(psychology\)<—retrieved 11 February 2022](https://en.wikipedia.org/wiki/Pattern_recognition_(psychology)<—retrieved%2011%20February%202022%5B>)]

Near as I can tell, the neuronal structure in my brain is such that it produces a finely-tuned feature detection filter-sorter system that is able to easily filter out extraneous and irrelevant data and easily sort the remaining relevant data into a pattern. In other words, my brain is wired to do what philosophers and scientists are wont to do: systematically and methodically get to the bottom of how the Cosmos works. The pattern was originally given to me in the form of templates, Tao's Template, and its derivatives the Natural Sequence schema and the Process/Aspect System matrix.

Speaking of “template”, check this out:

Template Matching

Template matching theory describes the most basic approach to human pattern recognition. It is a theory that assumes every perceived object is stored as a “template” into long-term memory. Incoming information is compared to these templates to find an exact match. In other words, all sensory input is compared to multiple representations of an object to form one single conceptual understanding. The theory defines perception as a fundamentally recognition-based process. It assumes that everything we see, we understand only through past exposure, which then informs our future perception of the external world. For example, A, A, and A are all

recognized as the letter A, but not B. This viewpoint is limited, however, in explaining how new experiences can be understood without being compared to an internal memory template.

The original pattern handed to me was the Overleaf System of the Michaelian teachings. It is an expansion of the Natural Sequence, which is an expansion of Tao's Template, which I recognize as fundamental. When I use Tao's Template as an algorithm, it generates the Natural Sequence (and the Process/Aspect System), as we see in the [Chapter I-X](#), "Derivation of the Natural Sequence", further on.

According to a series of fifty hour-long YouTube videos by John Vervaeke titled "Awakening from the Meaning Crisis" the process of filter-sort is somewhat mysterious. How is it that a person is able to filter-sort the mass of incoming sensory data and form a coherent and salient view of inner and outer realities. He refers to this as "relevance realization", which seems to me to be somewhat like pattern recognition. My suggestion is that some brains, especially brains inclined to science and philosophy, because of their own innate structure, are more efficient and effective at recognizing patterns in nature than typical brains. My further suggestion is that if those brains were to use the Tao's Template ontology, the Natural Sequence schema, the Process/Aspect System matrix, their perceptions would become even more efficient and effective in their scientific and philosophical endeavors. More is said about this in a subsection further on.

The faculty of exceptional talent for pattern recognition comes with a warning label:

① **Apophenia**

Recall the graphic at the beginning of this chapter, where a progression is shown from Data to Information to Knowledge to Insight to Wisdom to Conspiracy Theory. My aspiration is to stop my alleged aptitude for pattern recognition before it gets to Conspiracy Theory. It so happens that there is a name for "jumping to conclusions", for making unwarranted connections between unrelated phenomena, where relevance realization goes astray, and that word is:

APOPHENIA

Apophenia ... is the tendency to perceive meaningful connections between unrelated things. The term (German: *Apophänie* from the Greek verb ἀποφαίνειν (*apophaínein*)) was coined by psychiatrist Klaus Conrad in his 1958 publication on the beginning stages of schizophrenia. He defined it as "unmotivated seeing of connections [accompanied by] a specific feeling of abnormal meaningfulness". He described the early stages of delusional thought as self-referential over-interpretations of actual sensory perceptions, as opposed to hallucinations. Apophenia has also come to describe a human propensity to unreasonably seek patterns in random information, such as can occur while gambling.

Apophenia can be considered a commonplace effect of brain function. Taken to an extreme, however, it can be a symptom of psychiatric dysfunction, for example, as a symptom in paranoid schizophrenia, where a patient sees hostile patterns (for example, a conspiracy to persecute them) in ordinary actions. Apophenia is also typical of conspiracy theories, where coincidences may be woven together into an apparent plot.

[><https://en.wikipedia.org/wiki/Apophenia> — retrieved 11 February 2022]

Readers of my books are free to discern and evaluate whether or not the Tao's Template ontology is legitimate or illegitimate.

Some do, but I do not have any need to integrate other systems based on other schemas. The Tao's Template ontology is derived conceptually and algorithmically, step by step, from first principles (logic and mathematics), and it seems as fundamental to me as one can get, and to me other systems seem contrived in comparison. When I encounter other schemas, I study them to see if they can be subsumed within Tao's Template/Natural Sequence/Process-Aspect System, and usually they can. If they cannot, then I question if they are built upon faulty axioms, premises, assumptions.

② **'Cherry Picking' the Data**

Here where we humans live in the mesocosm, things are really messy; it is extremely difficult to discern an underling simplicity behind the complexity, if such there be. Scientists and philosophers can be obsessive about understanding what exists and how it functions; they look to the microcosm and the macrocosm because they assume that simplicity lies at these extremes. Both the mathematical model of the microcosm, Quantum Physics, and the mathematical model of the macrocosm, General Relativity, are indeed simple compared to the bewildering variety of phenomena that we see when we step out the front door of our home.

Consequently, if aspirants of simplicity are to understand the basics, it is necessary for them to chunk the voluminous data into sizes that are manageable by their limited brain capacity. This process can go awry:

Cherry picking, suppressing evidence, or the fallacy of incomplete evidence is the act of pointing to individual cases or data that seem to confirm a particular position while ignoring a significant portion of related and similar cases or data that may contradict that position. Cherry picking may be committed intentionally or unintentionally.

The term is based on the perceived process of harvesting fruit, such as cherries. The picker would be expected to select only the ripest and healthiest fruits. An observer who sees only the selected fruit may thus wrongly conclude that most, or even all, of the tree's fruit is in a likewise good condition. This can also give a false impression of the quality of the fruit (since it is only a sample and is not a representative sample). A concept sometimes confused with cherry picking is the idea of gathering only the fruit that is easy to harvest, while ignoring other fruit that is higher up on the tree and thus more difficult to obtain (see low-hanging fruit).

Cherry picking has a negative connotation as the practice neglects, overlooks or directly suppresses evidence that could lead to a complete picture.

Cherry picking can be found in many logical fallacies. For example, the "fallacy of anecdotal evidence" tends to overlook large amounts of data in favor of that known personally, "selective use of evidence" rejects material unfavorable to an argument, while a false dichotomy picks only two options when more are available. Some scholars classify cherry-picking as a fallacy of selective attention, the most common example of which is the confirmation bias. Cherry picking can refer to the selection of data or data sets so a study or survey will give desired, predictable results which may be misleading or even completely contrary to reality.

[>https://en.wikipedia.org/wiki/Cherry_picking< — 10 May 2024]

Fuller descriptions follow in that Wiki, and there are links to many other Wikis. The point that I want to make here is this: the fact that the Natural Sequence schema and its Attributes can be discerned in so many realms of settled science and mainstream philosophy argues for the notion that what I am doing re gathering data for documentation in this *Cosmogony* book is not 'cherry-picking' or confirmation bias, but pattern recognition 'on steroids'.

② **Relevance Realization**

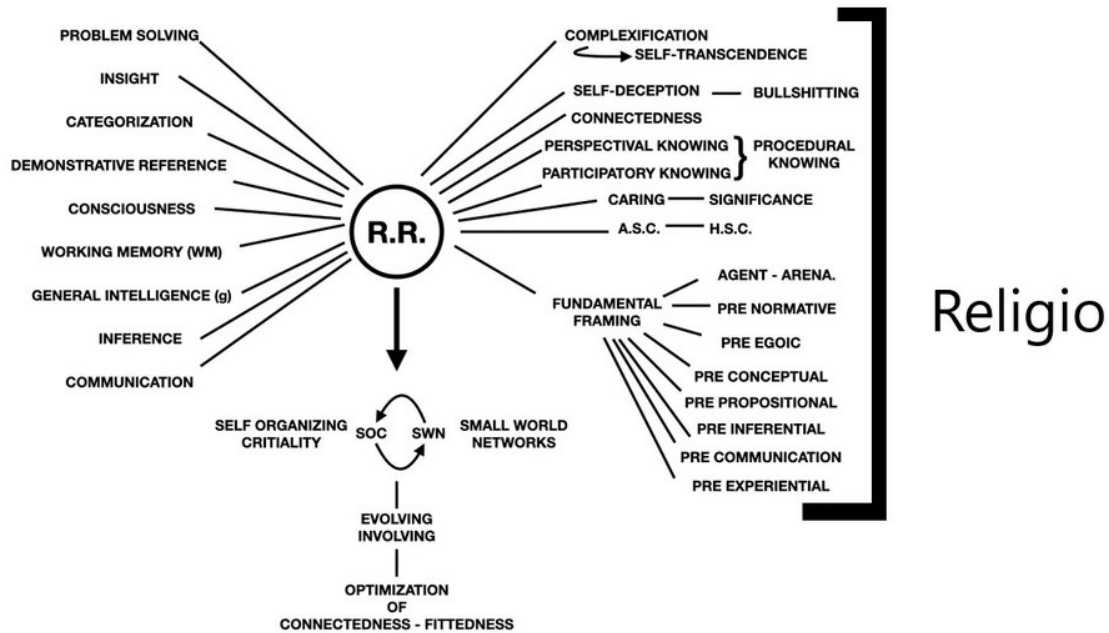
Speaking of obsession, John Vervaeke, a PhD in cognitive sciences, has said that he is obsessed with what he calls "relevance realization":

Relevance realization is the name I give to a process which I argue is central to general intelligence. Your general intelligence is your capacity to solve a wide variety of problems in a wide variety of domains. For most of the problems you face the interrelated tasks of selecting what you are to pay attention to, what you are going to remember, and what you are going to do. The problem facing attention is that the amount of information available to you is astronomically vast. You have to ignore most of it, which is a lot of information. You cannot just arbitrarily guess what you should attend to nor can you methodically check all the information for that would take more time than your lifetime. There is a similar problem facing memory. Your long term memory stores a vast amount of knowledge, and the number of ways that information can be combined is astronomically vast. Similarly, all the possible sequences of actions which you could undertake is astronomically vast. Yet, moment by moment you are neither guessing nor methodically checking all the information, all your memory, or all the options for action. You are homing in on the relevant information while remembering the information relevant to your situation and selecting a relevant course of action. What is so impressive is how this is all obvious to you, and it is very often relevant to the context you are in and to the problem at hand. You can rely on the obviousness of your experience and that it is reliably sensitive to context. However, cognitive science has to explain how you generate such obviousness such that it is contextually sensitive to solving your problems. Saying that relevance is obvious or depends on context does not solve the problem because this merely renames the problem of relevance realization as the problem of generating a sense of the relevance of information in a contextually sensitive manner, and how do we do that? To say we learn it by experience is not helpful because to say we learn is to say that we zero in on relevant information in order to solve our problems. This learning cannot be arbitrary association nor can it use exhaustive examination of situations. Learning presupposes relevance realization and therefore cannot explain it. I currently have a paper under review, where my coauthors and I argue that relevance realization is probably convergent with the precision weighting at the core of predictive processing models. This convergence adds significant theoretical plausibility to the proposal that relevance realization is central to

intelligence. [<https://www.quora.com/What-is-a-summary-of-relevance-realization-according-to-John-Vervaeke> — retrieved 10 May 2024]

When I discovered Vervaeke's work on YouTube about the year 2020, I realized that relevance realization is relevant to my aspiration to discern the signal from the noise in the data that impinges my sensory apparatus. Decades ago, I somehow intuitively realized that the Tao's Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix, were relevant to my aspiration to understand the Cosmos. I leave it to readers of this book and my other books to discern if my idiosyncratic realization of the structure of the Cosmos is relevant to them; am I headed in the right direction, or not? You be the judge for yourself.

The following graphic was borrowed from



① Summary and Conclusion

This chapter was a scientific and philosophical overview of epistemology — how it is that we methodically and systematically approach knowledge and understanding of what IS and how IT works. In other words, science and philosophy are methods of decrypting the encoded universe. The Tao, where/when it bifurcated, where/when it hid from Itself, the subsequent universe of space/time and time/space appeared to become scrambled. Our experience as fragments of the Tao is the process of decrypting the code of the Cosmos. Another way to say this is that the Cosmos is expanding into the Chaos and organizing it, which is the essence of transmuting ignorance and stupidity and foolishness and evil and ugliness into knowledge and understanding and wisdom and goodness and beauty. Yet another way to say this is that the Cosmos is about epistemology “all the way down” to the bottom of reality, and that the ultimate ontology is unknown and unknowable by anything less than the transcendent Tao.





Chapter I-3

THEOLOGICAL CONSIDERATIONS

[[This chapter should maybe be moved to the Cosmogony book if/when it is far enough along to be released in preliminary form.]]

① **The terms used in Tao's Template** — Yin and Yang and Chi and One and Two and Three and All — are what I call Attributes. However, in my research, I have discovered what may be called *meta*-Attributes because they are *beyond* the Attributes. These are discussed in this chapter, Theological Considerations, because they describe the nature of the primordial Tao that produces the One which produces the Two which produces the Three which produces All via the harmonization of the Yin and the Yang.

One of the suppositions that I make for this *Cosmogony* book is that the vast majority of its readers will not have much in the way of theological sophistication; meaning, they will lack depth and breadth of knowledge of the academic thinking on the subject. It is my impression that even those lay people who are devout in their religious tradition are not prone to ponder theological concerns; that sort of thing is left to the leadership — priests, rabbis, guru's, imams, shamans — of the religion, who tend to “dumb down”, you might say, abstract theological concepts for their congregants. If this is not the case with you, then you may regard this chapter as an overview, a review of the subject. The reason I provide an overview of the topic is because I think it is important for us to correlate theological concepts with what may be called the “meta-Attributes” (as well as the Attributes) of the Tao's Template (TT) ontology, the Natural Sequence (NS) schema, and the Process/Aspect System (PAS) matrix. One could say that the TT-NS-PAS epistemology is the Absolute “dumbed down” to the level of the Cosmos that we humans can understand.

Theologians give a lot of thought to concerns about the nature or characteristics of the deity or deities. If you are not a theologian, then you might not have given much thought to such concerns; you might or might not have accepted the definitions and descriptions of the deity of whatever cultures or philosophies or religions you have been exposed to at various times in your life. A brief review of the topic of theology is relevant to this *Cosmogony* book, especially for those non-theologian readers, because one of its basic premises is that there is a concept of a deity of sorts, referred to as the “Tao”, and it is from this Tao that cosmology and cosmogony are said to emerge. The term was briefly defined and described in **Chapter I-1**, “Introduction to Cosmogony”, in the section titled “Introduction to the Tao and Taoism”, so this chapter on theological considerations should be regarded as an extension of that section.

Before we examine some of the components of theology such as found in the TT-NS-PAS epistemology, we will first have a description of theology as a field of inquiry itself.

Taoism

① Theology

Theology is the study of the nature of the alleged divine, and in this book my preference is to apply the term “Tao” to this divinity rather than “God”, because the term God in most religions is encumbered with concepts of a personal deity, which are not discussed in this book. Rather, the concept of the deity endorsed by this book is of the impersonal and transpersonal sort, which is what academic theologians typically explore and explain.

As usual, in this chapter as in other chapters, I turn to Wikipedia for an introduction to the subject at hand. Important words and phrases are underlined for emphasis, clarifying words and correlated concepts are interpolated in [brackets], and I provide paragraphs of commentary between paragraphs of quoted material.

THEOLOGY

Theology is the systematic study of the nature of the divine, or more broadly of religious belief. It is taught as an academic discipline, typically in universities and seminaries. It occupies itself with the unique content of analyzing the supernatural, but also deals with religious epistemology, asks and seeks to answer the question of revelation. Revelation pertains to the acceptance of God, gods, or deities, as not only transcendent or above the natural world, but also willing and able to interact with the natural world and to reveal themselves to humankind.

Those underlined words indicate that theologians have made a conceptual distinction between the component of Tao as transcendent (beyond nature) and Tao as immanent (within nature); this distinction has its own section further on.

... The study of theology may help a theologian more deeply ... explore the nature of divinity without reference to any specific tradition.... Theology might also help a theologian ... explore possible ways of interpreting the world.

My interest in exploring theological considerations in this book is because a proper understanding of the nature of the Tao is relevant to a proper understanding of the characteristics of the natural world. In fact, I would say, as many others have said, that to understand the Tao one should study Its embodiment in nature. The obverse is also true, that to understand the natural world in full, one should study the nature of Tao.

Greek *theologia* (θεολογία) was used with the meaning ‘discourse on God’ around 380 BC by Plato in [his book] *The Republic*. Aristotle divided theoretical philosophy into *mathematike*, *physike*, and *theologike*, with the latter corresponding roughly to metaphysics, which, for Aristotle, included discourse on the nature of the divine.

My *Cosmology* and *Cosmogony* books also have a grounding in mathematics and physics, as well as theology.

Drawing on Greek Stoic sources, the Latin writer Varro distinguished three forms of such discourse:

1. mythical, concerning the myths of the Greek gods;
 2. rational philosophical analysis of the gods and of cosmology; and
 3. civil, concerning the rites and duties of public religious observance.
- [><https://en.wikipedia.org/wiki/Theology>< — retrieved 22 June 2023]

Of the items on this list, only Item #2 is of interest to me in my books, especially my *Tao* quadrilogy of books.

The “rational philosophical *analysis*” of the deity and cosmology has its place in my books, but so does the trans-rational mystical experience of the deity and of cosmology (which one could perhaps refer to as a *synthesis*), and that is the subject of the next section.

① Philosophical versus Mystical Theology

Before we move on to an actual review of theology, I want to clarify what I meant in the previous section, where I made a distinction between philosophical and mystical theology.

Basically and briefly, mystical theology is experiential. All down through history, the major and minor world religions have had their mystical ‘wing’, a few people who have had one or many so-called “mystical” or “religious” or “spiritual” experiences, aka transcendent states of consciousness in which they claimed to have experienced the nature of divinity directly, and then they report it to others, often in writing. It might be difficult for people who have not had such an experience to understand what the mystics report. Even so, I will report on these reports after the review of philosophical theology in the next few sections.

Philosophical theology is not experiential in the same way that mystical theology is. Rather, it is conceptual, a product of deep abstract thinking, often including logical and mathematical correlates, because logic and mathematics is also very conceptual. Most people will be able to relate to the vocabulary and the descriptions of philosophical theologians better than they are able to relate to the experiences of mystics.

I make this distinction because it seems to me that experiential mystical theology correlates with the essence of the meaning of Cardinality, whereas conceptual philosophical theology correlates with the essence of the meaning of Ordinality, two terms that are fundamental when explaining the TT-NS-PAS epistemology.

Another way to state this difference is to correlate mystical theology with what philosophers refer to as “ontology”, the quest to understand what is ultimately real, and “epistemology”, the quest to understand how

we come to know what is true. Ontology and epistemology are discussed in [the previous chapter](#). The point to be emphasized here is that mystical experiences tend to remove doubt about what is ontologically real and true, whereas philosophical conceptualizations never arrive at that level of certainty about, and intimacy with, the Tao.

Absolute versus Transcendence versus Immanence

In theology, the deity is commonly conceived as having two aspects, a conceivable aspect called “immanence”, and an inconceivable aspect called “transcendence”. A synonym for transcendence is the Absolute deity. However, in philosophical theology, there is a concept even beyond the transcendent aspect of deity, and that is called the absolute absolute. Lets start the discussion with

In religion, transcendence is the aspect of a deity’s nature and power that is completely independent of the material universe, beyond all known physical laws. This is contrasted with immanence, where a god is said to be fully present in the physical world and thus accessible to creatures in various ways. In religious experience, transcendence is a state of being that has overcome the limitations of physical existence, and by some definitions, has also become independent of it.... It is affirmed in various religious traditions’ concept of the divine, which contrasts with the notion of a god (or, the Absolute) that exists exclusively in the physical order (immanentism), or is indistinguishable from it (pantheism). Transcendence can be attributed to the divine not only in its being, but also in its knowledge. Thus, a god may transcend both the universe and knowledge (is beyond the grasp of the human mind). Although transcendence is defined as the opposite of immanence, the two are not necessarily mutually exclusive. Some theologians and metaphysicians of various religious traditions affirm that a god [Tao] is both within and beyond the universe (panentheism); in it, but not of it; simultaneously pervading it and surpassing it. [[https://en.wikipedia.org/wiki/Transcendence_\(religion\)<](https://en.wikipedia.org/wiki/Transcendence_(religion)<) — retrieved 15 June 2023]

The doctrine or theory of immanence holds that the divine encompasses or is manifested in the material world. It is held by some philosophical and metaphysical theories of divine presence. Immanence is usually applied in monotheistic, pantheistic, pandeistic, or panentheistic faiths to suggest that the spiritual world permeates the mundane. It is often contrasted with theories of transcendence, in which the divine is seen to be outside the material world. Major faiths commonly devote significant philosophical efforts to explaining the relationship between immanence and transcendence but do so in different ways, such as:

- casting immanence as a characteristic of a transcendent God (common in Abrahamic religions),
- subsuming immanent personal gods in a greater transcendent being (such as with Brahman in Hinduism), or
- approaching the question of transcendence as something which can only be answered through an appraisal of immanence. [<https://en.wikipedia.org/wiki/Immanence<> — retrieved 15 June 2023]

which I interpret within the NS-PAS schema to be other words for the distinction between the being-in-space (Aspect) and the doing-in-time (Process) respectively of the immanent component of deity. As we saw in a previous section, the “immanent” component of deity is the Oneness of nature (motion) which bifurcates into the Twoness of nature (space/time, time/space), which trifurcates into the Threeness of nature (Dimensionality, Directionality). Recall that the immanent component of deity is distinct from the “transcendent” component of deity because It is beyond the Oneness and the Twoness and the Threeness of nature.

Apophatic Theology versus Cataphatic Theology

Apophatic theology, also known as negative theology, is a form of theological thinking and religious practice which attempts to approach God, the Divine, by negation, to speak only in terms of what may not be said about the perfect goodness that is God.[web 1] It forms a pair together with cataphatic theology, which approaches God or the Divine by affirmations or positive statements about what God is.

The apophatic tradition is often, though not always, allied with the approach of mysticism, which aims at the vision of God, the perception of the divine reality beyond the realm of ordinary perception.

Atman = Brahman

Pantheism

Pantheism is the philosophical religious belief that reality, the universe and the Cosmos are identical to divinity and a supreme being or entity. The physical universe is thus understood as an immanent deity, still expanding and creating, which has existed since the beginning of time. The term 'pantheist' designates one who holds both that everything constitutes a unity and that this unity is divine, consisting of an all-encompassing, manifested god or goddess. All astronomical objects are thence viewed as parts of a sole deity.

The worship of all gods of every religion is another definition, but it is more precisely termed Omnism. Pantheist belief does not recognize a distinct personal god, anthropomorphic or otherwise, but instead characterizes a broad range of doctrines differing in forms of relationships between reality and divinity. Pantheistic concepts date back thousands of years, and pantheistic elements have been identified in various religious traditions. The term pantheism was coined by mathematician Joseph Raphson in 1697 and since then, it has been used to describe the beliefs of a variety of people and organizations.

Pantheism was popularized in Western culture as a theology and philosophy based on the work of the 17th-century philosopher Baruch Spinoza, in particular, his book *Ethics*. A pantheistic stance was also taken in the 16th century by philosopher and cosmologist Giordano Bruno.

After that introduction, the Wikipedia article presented a lengthy description of the Etymology, Definition, and History of the concept. The gist of that history indicates that the concept is ambiguous, subject to various interpretations and understandings, dependent upon the social context and the personality of the philosopher or theologian. In conclusion, we find this:

There are multiple varieties of pantheism and various systems of classifying them relying upon one or more spectra or in discrete categories.

Degree of determinism

The philosopher Charles Hartshorne used the term Classical Pantheism to describe the deterministic philosophies of Baruch Spinoza, the Stoics, and other like-minded figures. Pantheism (All-is-God) is often associated with monism (All-is-One) and some have suggested that it logically implies determinism (All-is-Now).^{1]} Albert Einstein explained theological determinism by stating, "the past, present, and future are an 'illusion'". This form of pantheism has been referred to as "extreme monism", in which – in the words of one commentator – "God decides or determines everything, including our supposed decisions." Other examples of determinism-inclined pantheisms include those of Ralph Waldo Emerson, and Hegel.

However, some have argued against treating every meaning of "unity" as an aspect of pantheism,^[86] and there exist versions of pantheism that regard determinism as an inaccurate or incomplete view of nature. Examples include the beliefs of John Scotus Eriugena,^[87] Friedrich Wilhelm Joseph Schelling and William James.^[88]

Degree of belief

It may also be possible to distinguish two types of pantheism, one being more religious and the other being more philosophical. The Columbia Encyclopedia writes of the distinction:

"If the pantheist starts with the belief that the one great reality, eternal and infinite, is God, he sees everything finite and temporal as but some part of God. There is nothing separate or distinct from God, for God is the universe. If, on the other hand, the conception taken as the foundation of the system is that the great inclusive unity is the world itself, or the universe, God is swallowed up in that unity, which may be designated nature."^[89]

Form of monism

A diagram with neutral monism compared to Cartesian dualism, physicalism and idealism

Philosophers and theologians have often suggested that pantheism implies monism.

Other

In 1896, J. H. Worman, a theologian, identified seven categories of pantheism: Mechanical or materialistic (God the mechanical unity of existence); Ontological (fundamental unity, Spinoza); Dynamic; Psychical (God is the soul of the world); Ethical (God is the universal moral order, Fichte); Logical (Hegel); and Pure (absorption of God into nature, which Worman equates with atheism).

In 1984, Paul D. Feinberg, professor of biblical and systematic theology at Trinity Evangelical Divinity School, also identified seven: Hylozoistic; Immanentistic; Absolutistic monistic; Relativistic monistic; Acosmic; Identity of opposites; and Neoplatonic or emanationistic.

[><https://en.wikipedia.org/wiki/Pantheism>< — retrieved 16 October 2023]

For my purposes in this *Cosmology* book, I equate philosophical pantheism with the description of the immanent aspect of the Tao, rather than the transcendent aspect of Tao, thus the creation rather than the creator.

Panentheism

Panentheism (“all in God”, from the Greek πᾶν, pân, 'all', ἐν, en, 'in' and Θεός, Theós, 'God') is the belief that the divine intersects every part of the universe and also extends beyond space and time. The term was coined by the German philosopher Karl Krause in 1828 to distinguish the ideas of Georg Wilhelm Friedrich Hegel (1770–1831) and Friedrich Wilhelm Joseph Schelling (1775–1854) about the relation of God and the universe from the supposed pantheism of Baruch Spinoza, after reviewing Hindu scriptures. Unlike pantheism, which holds that the divine and the universe are identical, panentheism maintains an ontological distinction between the divine and the non-divine and the significance of both.

In panentheism, the universal spirit is present everywhere, which at the same time “transcends” all things created. While pantheism asserts that “all is God”, panentheism claims that God is greater than the universe. Some versions of panentheism suggest that the universe is nothing more than the manifestation of God. In addition, some forms indicate that the universe is contained within God, like in the Kabbalah concept of tzimtzum. Much of Hindu thought is highly characterized by panentheism and pantheism.

[><https://en.wikipedia.org/wiki/Panentheism><— retrieved 16 October 2023]

Solipsism

Tao is a Solipsist.

Deism

Mysticism

Mysticism is popularly known as becoming one with God or the Absolute, but may refer to any kind of ecstasy or altered state of consciousness which is given a religious or spiritual meaning. It may also refer to the attainment of insight in ultimate or hidden truths, and to human transformation supported by various practices and experiences.

The term “mysticism” has Ancient Greek origins with various historically determined meanings. Derived from the Greek word μύω *múō*, meaning “to close” or “to conceal”, mysticism referred to the biblical, liturgical, spiritual, and contemplative dimensions of early and medieval Christianity. During the early modern period, the definition of mysticism grew to include a broad range of beliefs and ideologies related to “extraordinary experiences and states of mind.”

In modern times, “mysticism” has acquired a limited definition, with broad applications, as meaning the aim at the “union with the Absolute, the Infinite, or God”. This limited definition has been applied to a wide range of religious traditions and practices, valuing “mystical experience” as a key element of mysticism.

Since the 1960s scholars have debated the merits of perennial and constructionist approaches in the scientific research of “mystical experiences”. The perennial position is now largely dismissed by scholars”, most scholars using a contextualist approach, which considers the cultural and historical context.

[><https://en.wikipedia.org/wiki/Mysticism>< — retrieved 19 October 2023]

The point of this section to to convey to the reader that mystical experiences had by humans is the source of much of the understanding of the nature of the transpersonal deity. In fact, mere reasoning and philosophical speculation are inadequate to comprehend the nature of the transcendent deity, the Tao, because the Tao is beyond comprehension by the merely rational human mind. However, the comprehensible is said to emerge from the incomprehensible.

Minimum One versus Maximum One

The quantum versus the Quantum

The discontinuum versus the Continuum

Digital versus Analogue

Tabulation of Theological Terminology

Concluding Comments

This chapter is a useful precursor to the study of cosmology/cosmogony in that there is a realm beyond objective space/time and subjective time/space within which the Cosmos emerges. Refer to **Chapter I-x**, “Reductionism + Emanationism = Emergentism” for that story.





Chapter I-4

PHILOSOPHICAL CONSIDERATIONS

[[This chapter should maybe be moved to the Cosmology book if/when it is far enough along to be released in preliminary form.]]

Noumenon versus Phenomenon

[[The function of this section is to further elaborate on the distinction between the 'unknown' and the 'known', which correlates with the 'transcendent Tao' and the 'eminent Tao' in all their ramifications, aka their interpolations (the subtraction, division, rooting process) and extrapolations (the addition, multiplication, exponentiation process), and the quest of each to know the other. Connect to Relationalism and Epistemology.]]

PHENOMENON

A phenomenon (pl.: phenomena), sometimes spelled phaenomenon, is an observable event. The term came into its modern philosophical usage through Immanuel Kant, who contrasted it with the noumenon, which cannot be directly observed. Kant was heavily influenced by Gottfried Wilhelm Leibniz in this part of his philosophy, in which phenomenon and noumenon serve as interrelated technical terms. Far predating this, the ancient Greek Pyrrhonist philosopher Sextus Empiricus also used phenomenon and noumenon as interrelated technical terms. [<https://en.wikipedia.org/wiki/Phenomenon> — retrieved 09 May 2024]

NOUMENON

In philosophy, a noumenon (/ˈnuːmənən/, /ˈnɑː-/; from Greek: νοούμενον; pl.: noumena) is knowledge posited as an object that exists independently of human sense. The term noumenon is generally used in contrast with, or in relation to, the term phenomenon, which refers to any object of the senses. Immanuel Kant first developed the notion of the noumenon as part of his transcendental idealism, suggesting that while we know the noumenal world to exist because human sensibility is merely receptive, it is not itself sensible and must therefore remain otherwise unknowable to us.[3] In Kantian philosophy, the noumenon is often associated with the unknowable "thing-in-itself" (German: Ding an sich). However, the nature of the relationship between the two is not made explicit in Kant's work, and remains a subject of debate among Kant scholars as a result.

The Indian Vedānta philosophy (specifically Advaita), the roots of which go back to the Vedic period, talks of the ātman (self) in similar terms as the noumenon. Regarding the equivalent concepts in Plato, Ted Honderich writes: "Platonic Ideas and Forms are noumena, and phenomena are things displaying themselves to the senses... This dichotomy is the most characteristic feature of Plato's dualism; that noumena and the noumenal world are objects of the highest knowledge, truths, and values is Plato's principal legacy to philosophy."

[<https://en.wikipedia.org/wiki/Noumenon> — retrieved 09 May 2024]

[[The Noumenon Wike has much more to quote and comment. 'thing-in-itself' = transcendent Tao, 'before' (= more ontologically primitive than) transcendent Tao 'invents' immanent Tao. Does it make sense to equate transcendent Tao with the ultimate Noumenon and equate the eminent Tao with the ultimate Phenomenon?]]

Perspectivism

[[Quote Wikipedia as usual ><https://en.wikipedia.org/wiki/Perspectivism><. The basic notion to be developed in this section is that as Tao (Self) fragments Itself (Taoness > Oneness > Twoness > Threeness > Allness), each fragment self has a partial view of the not-self and other selves, like a hall of mirrors. The emergence of 3-D selfhood occurs at the Twoness > Threeness level/stage = the insideness/outsideness dichotomy. Where/when the Theeness of selfhood exists/happens, the next stage, the Allness stage, of the Cosmic evolutionary process — selves interacting — can begin.]]

... the philosophical stance known as perspectivism. This constitutes the worldview held by many indigenous cultures who use psychedelics. It is touched on in our interview with Chief Mapu of the Huni Kuin tribe in Brazil, and with transpersonal psychologist Maria Islas, and with psychedelic philosopher Peter Sjosted-Hughes. Perspectivism is the idea that to learn about something, say a tree, we have to become it. To use John Vervaeke's terminology, we have to come into a perspectival and participatory knowing. Shamans understand animals not primarily by observing them as a subject observing an object, but by becoming a new subject. A deep relationality is built into this, and it is vastly different from the Western rationalist view that in order to understand something, we have to observe it from a distance in order to generate facts about it.

[><https://en.wikipedia.org/wiki/Perspectivism>< — retrieved 09 May 2024]

Discuss “point of view” in Einstenian relativity terms and concepts = “reference frames”

Discuss “point of view” in quantum physics terms and concepts = “the measurement problem”

Those are the areas of physics where the objective and the subjective realms in the macrocosm and the microcosm interface. Relativity is the Cardinal pole of physics and Quantum is Ordinal pole of physics, but they are united conceptually by understanding “point-of-view”, subjective and objective perspectives interfacing.

Essence and Energy

[[This section needs more deep thought in order to correlate with TT-NS-PAS terminology.]]

Another relevant theological notion about the nature of the deity has to do with the distinction between Its so-called “essence” and its so-called “energy”. Wikipedia has a thorough discussion of essence versus energy. As usual, in quoting therefrom, underlined words are my emphasis, [bracketed] words and phrases are my explanatory interpolations, and my commentary is interspersed between paragraphs of quoted material.

INTRODUCTION

In Palamite theology, there is a distinction between the essence (*ousia*) and the energies (*energeia*) of God. It was first formulated by Gregory Palamas (1296–1359) as part of his defense of the Athonite monastic practice of *hesychasm* [stillness, rest, quiet, silence] against the charge of heresy brought by the humanist scholar and theologian Barlaam of Calabria.

Based on this paragraph alone, I might suppose that the *ousia* (Essence) of God is in *hesychasm* (= as space exists = is at rest), whereas the *energia* (Energy) of God is in activity (= as time functions = is in motion), but that is not what is said in the next paragraph, where the difference between Essence and Energy is obviously the same as the difference between Transcendence and Immanence, which is discussed in a previous section:

In layman's terms, God's essence is distinct from God's energies in the same manner as the Sun's essence and energies are distinct. The Sun's essence is a ball of burning gas, while the Eastern Orthodox hold that God's essence is incomprehensible. As the Sun's essence is certainly unapproachable and unendurable, so the Eastern Orthodox hold of God's essence. As the sun's energies on Earth, however, can be experienced and are evidenced by changes that they induce (ex. melting, hardening, growing, bleaching, etc.), the same is said of God's energies — though perhaps in a more spiritual sense (ex. melting of hearts or strength, hardening of hearts, spiritual growth, bleaching to be “white as snow”, though more physical and psychological manifestations occur as well as in miracles, and inspiration, etc.). The important points being made are that while God is unknowable in His essence, He can be known (i.e. experienced) in His energies, and such experience changes neither who or what God is nor who or what the one experiencing God is. Just as a plant does not become the Sun simply because it soaked up the light and warmth and grew, nor does a person who soaks up the warmth and light of God and spiritually grows ever become God — though such may be called a child of God or “a god”.

Obviously, where the essence of God is said to be “incomprehensible, unapproachable, unendurable, unknowable”, that is referring to the transcendent aspect of the Tao, and where the energy of God is said to be “changing, evidenced, manifest, knowable, experienced”, that is referring to the immanent aspect of the Tao.

Eastern Orthodox theologians generally regard this distinction as a real distinction, and not just a conceptual distinction. Historically, Western Christian thought, since the time of the Great Schism, has tended to reject the essence–energies distinction as real in the case of God, characterizing the view as a heretical introduction of an unacceptable division in the Trinity and suggestive of polytheism.

By the way, in the Tao's Template ontology, the notion of “conceptual distinction” *per se* is fundamental and therefore “real”. That is, what we humans refer to as reality is a concept in the mind of Tao, and all phenomena in the mind of Tao and the minds of humans are relative to other phenomena, meaning that what is real is what is immanent to the perceiver, and what is conceptual is at the next higher/later level/stage, aka transcendent.

Historical background

The essence–energy distinction was formulated by Gregory Palamas of Thessaloniki (1296–1359), as part of his defense of the Athonite monastic practice of *hesychasmos*, the mystical exercise of “stillness” to facilitate ceaseless inner prayer and noetic contemplation of God, against the charge of heresy brought by the humanist scholar and theologian Barlaam of Calabria. According to catholic-church.org,

The Ultimate Reality and Meaning of the Palamite theology consists of the distinction between God's Essence and Energy. This is a way of expressing the idea that the transcendent God remains eternally hidden in His Essence, but at the same time that God also seeks to communicate and The Distinction between God's Essence and Energy unite Himself with us personally through His Energy.

There, and only there in this Wikipedia article, does the word “transcendent” appear, but it allows me to assert with confidence, in addition to the descriptions, that the distinction between Essence and Energy is the same as the distinction between Transcendence and Immanence, which is discussed in a previous section. Even so, more is quoted because it clarifies to the mind of the reader what is meant by certain features of the Tao's Template ontology, and instantiations thereof throughout this *Cosmogony* book.

The Wikipedia article continues:

EASTERN ORTHODOX VIEWS

Essence and energy

In Eastern Orthodox theology God's essence is called *ousia*, “all that subsists by itself and which has not its being in another”, and is distinct from his energies (*energeia* in Greek, *actus* in Latin) or activities as actualized in the world. The *ousia* of God is God as God is. The essence, being, nature, and substance of God as taught in Eastern Christianity is uncreated, and cannot be comprehended in words. According to Lossky, God's *ousia* is “that which finds no existence or subsistence in another or any other thing”. God's *ousia* has no necessity or subsistence that needs or is dependent on anything other than itself.

The definition and description of *ousia*/essence is equivalent to that of the transcendent component of deity.

It is the energies of God that enable us to experience something of the Divine, at first through sensory perception and then later intuitively or noetically. As St John Damascene states in Chapter 4 of *An Exact Exposition of the Orthodox Faith*, “all that we say positively of God manifests not his [undifferentiated] nature but the things about [attributes of] his nature.”

In the Tao's Template ontology, the Absolute-Absolute is indistinct, the Absolute is a self as distinct from or relative to a no-self, and the Relative is a self as distinct from another self. Thus, the transcendent Absolute is another word for God's Essence, which interacts with the Relative.

DISTINCTION BETWEEN ESSENCE AND ENERGY

Real distinction

According to Fr. John Romanides, Palamas considers the distinction between God's essence and his energies to be a “real distinction”, as distinguished from the Thomistic “virtual distinction” and the Scotist “formal distinction”. Romanides suspects that Barlaam accepted a “formal distinction” between God's essence and his energies. Other writers agree that Palamas views the distinction between the divine essence and the divine energies as “real”.

According to Vladimir Lossky of the neopatristic school, if we deny the real distinction between essence and energy, we cannot fix any clear borderline between the procession of the divine persons (as existences and/or realities of God) and the creation of the world: both the one and the other will be equally acts of the divine

nature (strictly uncreated from uncreated). The being and the action(s) of God then would appear identical, leading to the teaching of pantheism.

Modern interpretation

Some contemporary scholars argue against describing Palamas's essence–energies distinction in God as a metaphysically “real” distinction. Orthodox philosophical theologian David Bentley Hart expresses doubt “that Palamas ever intended to suggest a real distinction between God’s essence and energies.” G. Philips argues that Palamas’s distinction is not an “ontological” distinction but, rather, analogous to a “formal distinction” in the Scotist sense of the term. According to Dominican Catholic theological historian Fr. Aidan Nichols, Palamas’s essence–energies distinction is “not simply by virtue of his saving action *ad extra*, much less as a merely ‘formal’ distinction, something demanded by the limited operating capacities of human minds.”

According to Anna N. Williams’s study of Palamas, which is more recent than the assessments of Hart and Philips, in only two passages does Palamas state explicitly that God’s energies are “as constitutively and ontologically distinct from the essence as are the three Hypostases”, and in one place he makes explicit his view, repeatedly implied elsewhere, that the essence and the energies are not the same; but Williams contends that not even in these passages did Palamas intend to argue for an “ontological or fully real distinction”, and that the interpretation of his teaching by certain polemical modern disciples of his is false.

Eastern Orthodox criticism of Western theology

Eastern Orthodox theologians have criticized Western theology, especially the traditional scholastic claim that God is *actus purus* [absolute perfection], for its alleged incompatibility with the essence–energies distinction. Christos Yannaras writes, “The West confuses God’s essence with his energy, regarding the energy as a property of the divine essence and interpreting the latter as “pure energy” (*actus purus*). According to George C. Papademetriou, the essence–energies distinction “is contrary to the Western confusion of the uncreated essence with the uncreated energies and this is by the claim that God is *Actus Purus*”.

[>https://en.wikipedia.org/wiki/Essence–energies_distinction< retrieved 22 June 2023]

Principle of Plenitude

[[There are some serious problems with this section, but it seems fruitful to figure them out.]]

The principle of plenitude asserts that the universe contains all possible forms of existence. Arthur Lovejoy, a historian of ideas, was the first to trace the history of this philosophically important principle explicitly. Lovejoy distinguishes two versions of the principle: a [space-like] static version, in which the universe displays a constant fullness and diversity, and a [time-like] temporalized version, in which fullness and diversity gradually increase over time.

I would say that both versions might be correct in their own way, if it is understood that one applies to Tao’s experience of space and the other version applies to Tao’s experience of time. The space-like version seems to be equivalent to the so-called “block universe” notion that Einstein and some others favored; refer to **Chapter? Section?** Basically and briefly, the block universe is the notion that the passage of time is illusory in the sense that time is a subjective reality within subsystems of the Cosmos, not an objective reality as the entirety of the system of space is. *[[Am I going to get into interpretations of relativistic and quantum physics in this book or the Cosmology book?]]* I am going to say that the latter of those two versions of the principle of plenitude is more consistent with the Tao’s Template ontology as described and explained in this *Cosmogony* book, which is all about the development of subsystems of the Cosmos over time.

Lovejoy traces the principle of plenitude to the writings of Plato, finding in the *Timaeus* an insistence on “the necessarily complete translation of all the ideal possibilities into actuality”. By contrast, he [Lovejoy] takes Aristotle to reject the principle in his [book] *Metaphysics*, when he writes that “it is not necessary that everything that is possible should exist in actuality”.

One reconciliation of the two is to say that Plato and Aristotle are both correct, but Plato is talking about the time component of the Cosmos and Aristotle is talking about the space component of the Cosmos. Recall from Larsonian physics [**where?**] that space and time are the reciprocal of each other, meaning: the more of one the less of the other. **Hence, as plenitude increases over time (see first quoted paragraph), plenitude decreases over space?**

Since Plato, the principle of plenitude has had the following adherents:

- Epicurus reiterated the principle in fr.266 Us. His follower Lucretius (DRN V 526-33) famously applied the principle to the sets of multiple explanations by which the Epicureans account for astronomical and meteorological phenomena: every possible explanation is also true, if not in our world, then elsewhere in the infinite universe.
 - Augustine of Hippo brought the principle from Neo-Platonic thought into early Christian Theology.
 - St Anselm's ontological arguments for God's existence used the principle's implication that nature will become as complete as it possibly can be, to argue that existence is a "perfection" in the sense of a completeness or fullness.
 - Thomas Aquinas accepted a modified form of the principle, but qualified it by making several distinctions that safeguard the freedom of God.
 - Giordano Bruno's insistence on an infinity of worlds was not based on the theories of Copernicus, or on observation, but on the principle applied to God. His death may then be attributed to his conviction of its truth, as he refused to recant even while facing capital punishment for his view about this and other matters, which caused him to be convicted of heresy.
 - Spinoza, according to Lovejoy, "expressed the principle of plenitude in its most uncompromising form" and "represented it as necessary in the strict logical sense".
 - Kant believed in the principle but not in the possibility of its empirical verification.
 - Leibniz believed that the best of all possible worlds would actualize every genuine possibility.
- [>https://en.wikipedia.org/wiki/Principle_of_plenitude< — retrieved 01 July 2023]

Notice that the above adherents to the notion of plenitude are all theologians and philosophers. What are not included in the list are the notions espoused by various physicists. [[The challenge for me is to correlate the principle of plenitude with physics theories. Particularly Qbism and its epistemology, and the ontology found in the chapter "Potential + Actual = Creation".]]

Hypostasis

[[This section might belong in the chapter "Theological Considerations"]]

Greek philosophy has given Western civilization many words and concepts that seem to apply to what I am calling the Attributes of the Tao's Template ontology / the Natural Sequence schema / the Process/Aspect System matrix; "hypostasis" is one of those words.

Briefly and basically, this is the notion that there is some foundation upon which all else is built. "Hypostasis" is literally translation into English as "under-standing". The idea with hypostasis is that there is an 'end' of 'explanation'; there is a 'bedrock' notion 'below' which one cannot go, and the conceptual, philosophical, theological, cosmological edifice is built 'upward' thereon. Colloquially, "the buck stops here"; "its turtles all the way down" to the bottom, the basis, the hypostasis.

As you will see in the exposition to follow, the concept was adopted by early Christian church 'fathers', who liked Greek philosophy, as they attempted to make sense of that Jesus fellow, and figure out what he was all about, and incorporate that understanding into a formalized doctrinal scheme.

In physics, there is a debate between substantivalism and relationalism; in mathematics there is a debate between invented or discovered; in philosophy there is this debate about the quantitative understanding of *hypostasis*: is it Unitarian, Binitarian, or Trinitarian? In the Tao's template ontology, Taoness and Oneness and Twoness and Threeness and All are hypostatic; those notions (combined) are necessary and sufficient as the ontological primitives of the Chaos/Cosmos.

As usual, I quote and comment on the Wikipedia article on the subject of the section.

Hypostasis (plural: hypostases), from the Greek ὑπόστασις (*hypóstasis*), is the underlying state or underlying substance and is the fundamental reality that supports all else. But it is not the same as the concept of a substance. In Neoplatonism the hypostasis of the soul, the intellect (*nous*) and "the one" was addressed by Plotinus.[1] In Christian theology, the Holy Trinity consists of three hypostases: Hypostasis of the Father, Hypostasis of the Son, and Hypostasis of the Holy Spirit.[2]

Ancient Greek philosophy

Pseudo-Aristotle used hypostasis in the sense of material substance.[3]

Neoplatonists argue that beneath the surface phenomena that present themselves to our senses are three higher spiritual principles, or hypostases, each one more sublime than the preceding. For Plotinus, these are the Soul, the Intellect, and the One.[1][4]

Christian theology

Italo-Greek icon, representing the Holy Trinity, Venice (16th century)

See also: Hypostatic union

The term hypostasis has a particular significance in Christian theology, particularly in Christian triadology (study of the Holy Trinity), and also in Christology (study of Christ).[5][6]

In Christian triadology

In Christian triadology three specific theological concepts have emerged throughout history,[7] in reference to number and mutual relations of divine hypostases:

the Monohypostatic (or miahypostatic) concept advocates that God has only one hypostasis:[8][9]

the Dyohypostatic concept advocates that God has two hypostases (Father and Son);[10]

the Trihypostatic concept advocates that God has three hypostases (Father, Son and the Holy Spirit).[11]

Origen "taught that there were three hypostases within the Godhead." [12]:185 "Arius ... spoke readily of the hypostases of Father, Son and Holy Spirit." [12]:187 Asterius, a leading Arian, "said that there were three hypostases". [12]:187

Eustathius and Marcellus promoted a monohypostatic interpretation of the Nicene Creed; [13]:235 They were Sabellians: "It seems most likely that Eustathius was primarily deposed for the heresy of Sabellianism." [13]:211 Marcellus of Ancyra "cannot be acquitted of Sabellianism". [14]

The "clear inference from [Athanasius'] usage" is that "there is only one hypostasis in God." [15]:48 The Western Church also preferred a one hypostasis theology: "[Athanasius] had attended the Council of Serdica among the Western bishops in 343, and a formal letter of that Council had emphatically opted for the belief in one, and only one, hypostasis as orthodoxy. Athanasius certainly accepted this doctrine at least up to 359, even though he tried later to suppress this fact." [12]:444

Both traditional Trinity doctrine and the Arians taught three distinct hypostases in the Godhead. The difference is that, in the Trinity doctrine, they are one ousia ('substance').

Hypostasis and ousia

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Hypostasis is the individual aspect of ousia, this means ousia is the parent characteristic that is shared by the hypostasis under it. Ousia can be shared by numerous hypostasis, as hypostasis is the individual expression of that ousia just how ego is an expression of the underlying soul. In this case it's clear to see that the ego and the soul are seemingly different as well as the same thing for the ego is not without the soul, they can however coexist. Ousia is the nature of that existence and all things that exist have ousia, as it's the nature of that existence in the way that it exists. Ousia is what makes a rock a rock and hypostasis is the various kinds of rocks; ousia is the form as well as nature of particles that construct an entity in the case of physical phenomena. On the other hand for

spiritual phenomena it's the level of presence & creative force that differentiates one ousia from another. Like it has been said earlier this nature of existence(ousia) maybe shared by various hypostasis or instances of ousia.

Hypostasis is not the same as type or part, a Hypostasis holds all the nature described by its ousia. This means the ousia is equally possessed by each hypostasis & in that sense they are all the same. Each hypostasis is one as well as many at once. This is because all of them hold the same ousia, the difference is in their expressions of it.

Nicene Creed

"One of the most striking aspects of Nicaea in comparison to surviving baptismal creeds from the period, and even in comparison to the creed which survives from the council of Antioch in early 325, is its use of the technical terminology of ousia and hypostasis." [15]:92

"Considerable confusion existed about the use of the terms hypostasis and ousia at the period when the Arian Controversy broke out." [12]:181 "The ambiguous anathema in N (the Nicene Creed) against those who believe that the Son is 'from another hypostasis or ousia than the Father' ... (is one example) of this unfortunate semantic misunderstanding." [12]:181 R. P. C. Hanson says that the Nicene Creed "apparently (but not quite certainly) identifies hypostasis and ousia." [12]:188

Trinitarian doctrine

Hanson described Trinitarian doctrine, as developed through the fourth-century Arian controversy, as follows:

"The champions of the Nicene faith ... developed a doctrine of God as a Trinity, as one substance or ousia who existed as three hypostases, three distinct realities or entities (I refrain from using the misleading word 'Person'), three ways of being or modes of existing as God." Hanson Lecture

Hanson explains hypostases as 'realities', 'entities', 'ways of being', and 'modes of existing' but says that the term person is misleading. Person, as used in English, where each person is a distinct entity with his or her own mind and will, is not equivalent to the concept of hypostasis in the "doctrine of God as a Trinity."

But the main point of the definition is that God is one "ousia who existed as three hypostases." The purpose here is to show that the Nicene Creed probably uses these terms as synonyms but that their meanings were changed to enable the formulation of the central doctrine of the Trinity.

Greek philosophy

These terms originate from Greek philosophy, where they had essentially the same meaning and meant the fundamental reality that supports all else. In a Christian context, this concept may refer to God or the Ultimate Reality.

The Bible

According to Hanson, "the only strictly theological use (of the word hypostasis) is that of Hebrews 1:3, where the Son is described as 'the impression of the nature' [hypostasis] of God." [12]:182 "The word also occurs twenty times in the LXX (the ancient Greek translation of the Old Testament), but only one of them can be regarded as theologically significant. ... At Wisdom 16:21 the writer speaks of God's hypostasis, meaning his nature; and no doubt this is why Hebrews uses the term 'impression of his nature'." [12]:182

The Bible never refers to God's ousia.

Early Church Fathers

In early Christian writings, hypostasis was used to denote 'being' or 'substantive reality' and was not always distinguished in meaning from terms like ousia ('essence'), substantia ('substance') or qnoma (specific term in Syriac Christianity).[16] It was used in this way by Tatian and Origen.[7]

"Tertullian at the turn of the second to the third centuries had already used the Latin word substantia (substance) of God ... God therefore had a body and indeed was located at the outer boundaries of space. ... It was possible for Tertullian to think of Father, Son, and Holy Spirit sharing this substance, so that the relationship of the Three is, in a highly refined sense, corporeal. ... He can use the expression Unius substantiae ('of one substance'). This has led some scholars to see Tertullian as an exponent of Nicene orthodoxy before Nicaea ... But this is a far from plausible theory. Tertullian's materialism is ... a totally different thing from any ideas of ousia or homoousios canvassed during the fourth century." [12]:184

During Arian controversy

When the Arian controversy began, hypostasis and ousia were synonyms:

"For many people at the beginning of the fourth century the word hypostasis and the word ousia had pretty well the same meaning." [12]:181 "For at least the first half of the period 318–381, and in some cases considerably later, ousia and hypostasis are used as virtual synonyms." [12]:183

Therefore, when dealing with documents from or before the beginning of the Arian controversy:

[The two terms] did not mean, and should not be translated, 'person' and 'substance', as they were used when at last the confusion was cleared up and these two distinct meanings were permanently attached to these words. [12]:181

Even for Athanasius, some decades after the controversy began, "hypostasis and ousia were still synonymous." [12]:440

Alternative views

Among those who regarded them as synonyms, two groups may be identified:

Three hypostases

One group said that the Father, Son, and Spirit are three hypostases (three distinct realities), each with his own ousia:

Among the pre-Nicene church fathers, Origen "used hypostasis and ousia freely as interchangeable terms to describe the Son's distinct reality within the Godhead. ... He taught that there were three hypostases within the Godhead." [12]:185 As examples from the fourth century, Hanson includes Eusebius of Caesarea and Eusebius of Nicomedia, two of the main anti-Nicenes.

One hypostasis

The other group said that the Father, Son, and Spirit are one single hypostasis and one ousia, meaning that they are one single reality or being:

Among the pre-Nicene church fathers, "Dionysius of Rome ... said that it is wrong to divide the divine monarchy 'into three ... separated hypostases ... people who hold this in effect produce three gods'." [12]:185 In the fourth century, the Sabellians Eustathian and Marcellus were famous for this teaching.[17] It is argued that Athanasius also fell into this category.[18] The "clear inference from [Athanasius'] usage" is that "there is only one hypostasis in God." (LA, 48)

Distinction by Arians

It is often said that the first person to propose a difference in the meanings of hypostasis and ousia, and for using hypostasis as synonym of person, was Basil of Caesarea,[19] namely in his letters 214 (375 A.D.)[20] and 236 (376 A.D.)[21] However Hanson, in his discussion of the two terms, stated that some Arians had already made this distinction decades before Basil:

With respect to Arius, Hanson wrote: "It seems likely that he was one of the few during this period who did not confuse the two." "Arius ... spoke readily of the hypostases of Father, Son and Holy Spirit" but "no doubt he believed that the Father and the Son were of unlike substance." [12]: 187 Speaking of another prominent Arian, Hanson says: "Asterius certainly taught that the Father and the Son were distinct and different in their hypostases. ... But he also described the Son as 'the exact image of the ousia and counsel and glory and power' of the Father. Once again we find a writer who clearly did not confuse ousia and hypostasis." [12]: 187

Asterius is called an Arian but, as indicated by the quote above, "he thought that the resemblance of the Son to the Father was closer than Arius conceived." [12]: 187

Cappadocian Fathers

The three Cappadocian Fathers are Basil of Caesarea (330 to 379), Gregory of Nazianzus (329 to 389), and Gregory of Nyssa (335 to about 395) who was one of Basil's younger brothers. [12]: 676

"Basil's most distinguished contribution towards the resolving of the dispute about the Christian doctrine of God was in his clarification of the vocabulary." [12]: 690

"Basil uses hypostasis to mean 'Person of the Trinity' as distinguished from 'substance' which is usually expressed as either ousia or 'nature' (physis) or 'substratum'." [12]: 690–691

Not one undivided substance

However, the Cappadocians did not yet understand God as one undivided ousia (substance), as in the Trinity doctrine. They said that the Father, Son, and Spirit have exactly the same type of substance, but each has his own substance. This can be shown as follows:

Unalterably like in respect of ousia

Basil began his career as theologian as a Homoiousian. He therefore believed similar to other Homoiousians, that the Son's substance is similar to the Father's:

"[Basil] came from what might be called an 'Homoiousian' background." (RH, 699) Therefore, "the doctrine of 'like in respect of ousia' was one which they could accept, or at least take as a starting point, and which caused them no uneasiness." [12]: 678

This means that Basil believed in two distinct hypostases with similar substances. Later, he replaced the concept of 'similar substance' with 'exactly the same substance' but retained the idea of two distinct hypostases:

He says that in his own view 'like in respect of ousia' (the slogan of the party of Basil of Ancyra) was an acceptable formula, provided that the word 'unalterably' was added to it, for then it would be equivalent to homoousios." "Basil himself prefers homoousios." "Basil has moved away from but has not completely repudiated his origins." [12]: 694

This also meant that Basil understood homoousios in a generic sense of two beings with the same type of substance, rather than two beings sharing one single substance.

The general and the particular

Basil of Caesarea explains that the distinction between ousia and hypostases is the same as that between the general and the particular; as, for instance, between the animal and the particular man:

He wrote: "That relation which the general has to the particular, such a relation has the ousia to the hypostasis." [12]:692

"In the DSS [Basil] discusses the idea that the distinction between the Godhead and the Persons is that between an abstract essence, such as humanity, and its concrete manifestations, such as man." [12]:698

"Elsewhere he can compare the relation of ousia to hypostasis to that of 'living being' to a particular man and apply this distinction directly to the three Persons of the Trinity." This suggests "that the three are each particular examples of a 'generic' Godhead." [12]:692

Basil "argued that [homoousios] was preferable because it actually excluded identity of hypostases. This, with the instances which we have already seen in which Basil compared the relation of hypostasis to ousia in the Godhead to that of particular to general, or of a man to 'living beings', forms the strongest argument for Harnack's hypothesis." [12]:697 "Harnack ... argued that Basil and all the Cappadocians interpreted homoousios only in a 'generic' sense ... that unity of substance was turned into equality of substance." [12]:696

Later developments

Consensus was not achieved without some confusion at first in the minds of Western theologians since in the West the vocabulary was different. [22] Many Latin-speaking theologians understood hypo-stasis as 'sub-stantia' (substance); thus when speaking of three hypostases in the Godhead, they may have suspected three substances or tritheism. However, after the mid-fifth-century Council of Chalcedon, the word came to be contrasted with ousia and was used to mean 'individual reality', especially in the trinitarian and Christological contexts. The Christian concept of the Trinity is often described as being one God existing in three distinct hypostases/personae/persons. [23]

In Christology

Within Christology, two specific theological concepts have emerged throughout history, in reference to the Hypostasis of Christ:

monohypostatic concept (in Christology) advocates that Christ has only one hypostasis; [24]

dyohypostatic concept (in Christology) advocates that Christ has two hypostases (divine and human). [25]

John Calvin's views

John Calvin wrote: "The word ὑπόστασις which, by following others, I have rendered substance, denotes not, as I think, the being or essence of the Father, but his person; for it would be strange to say that the essence of God is impressed on Christ, as the essence of both is simply the same. But it may truly and fitly be said that whatever peculiarly belongs to the Father is exhibited in Christ, so that he who knows him knows what is in the Father. And in this sense do the orthodox fathers take this term, hypostasis, considering it to be threefold in God, while the essence (οὐσία) is simply one. Hilary everywhere takes the Latin word substance for person. But though it be not the Apostle's object in this place to speak of what Christ is in himself, but of what he is really to us, yet he sufficiently confutes the Asians and Sabellians; for he claims for Christ what belongs to God alone, and also refers to two distinct persons, as to the Father and the Son. For we hence learn that the Son is one God with the Father, and that he is yet in a sense distinct from him, so that a subsistence or person belongs to both."

[>[https://en.wikipedia.org/wiki/Hypostasis_\(philosophy_and_religion\)](https://en.wikipedia.org/wiki/Hypostasis_(philosophy_and_religion))< — retrieved 09 May 2024]





Chapter I-5

MYTHOLOGICAL CONSIDERATIONS

Define “mythology” as the ancient way of bridging theology and philosophy (the subjects of the two previous chapters): shamans telling made-up stories about the ‘gods’ that embody natural laws and philosophical truths.

Perhaps there should be a Part of this book that describes and explains mythologies from ancient cultures in terms of the Natural Sequence principles. This would be a huge project for me because I have not yet done much research. The work of Joseph Campbell might provide a good start, but there must be other sources. That Part would be similar to Part III, Ancient Religions and Philosophies”. I suspect the interpretation of myths in terms of NS principles would not be as easy as with religions and philosophies.

Biography of Joseph Campbell

Joseph John Campbell (March 26, 1904 – October 30, 1987) was an American writer. He was a professor of literature at Sarah Lawrence College who worked in comparative mythology and comparative religion. His work covers many aspects of the human experience. Campbell's best-known work is his book *The Hero with a Thousand Faces* (1949), in which he discusses his theory of the journey of the archetypal hero shared by world mythologies, termed the monomyth.

Since the publication of *The Hero with a Thousand Faces*, Campbell's theories have been applied by a wide variety of modern writers and artists. His philosophy has been summarized by his own often repeated phrase: "Follow your bliss." [6] He gained recognition in Hollywood when George Lucas credited Campbell's work as influencing his *Star Wars* saga. [7]

Campbell's approach to folklore topics such as myth and his influence on popular culture has been the subject of criticism, especially from academic folklorists. [https://en.wikipedia.org/wiki/Joseph_Campbell] — retrieved 19 May 2024]

Monomyth

Monomyth

Main article: Monomyth

Campbell's concept of monomyth (one myth) refers to the theory that sees all mythic narratives as variations of a single great story. The theory is based on the observation that a common pattern exists beneath the narrative elements of most great myths, regardless of their origin or time of creation. Campbell often referred to the ideas of Adolf Bastian and his distinction between what he called "folk" and "elementary" ideas, the latter referring to the prime matter of monomyth while the former to the multitude of local forms the myth takes in order to remain an up-to-date carrier of sacred meanings. The central pattern most studied by Campbell is often referred to as "the hero's journey" and was first described in *The Hero with a Thousand Faces* (1949). [43] An enthusiast of novelist James Joyce, [44] Campbell borrowed the term "monomyth" from Joyce's *Finnegans Wake*. [45] Campbell

also made heavy use of Carl Jung's theories on the structure of the human psyche, and he often used terms such as anima, animus and ego consciousness.

As a strong believer in the psychic unity of mankind and its poetic expression through mythology, Campbell made use of the concept to express the idea that the whole of the human race can be seen as engaged in the effort of making the world "transparent to transcendence" by showing that underneath the world of phenomena lies an eternal source which is constantly pouring its energies into this world of time, suffering, and ultimately death. To achieve this task one needs to speak about things that existed before and beyond words, a seemingly impossible task, the solution to which lies in the metaphors found in myths. These metaphors are statements that point beyond themselves into the transcendent. The Hero's Journey was the story of the man or woman who, through great suffering, reached an experience of the eternal source and returned with gifts powerful enough to set their society free.

As this story spread through space and evolved through time, it was broken down into various local forms (masks), depending on the social structures and environmental pressures that existed for the culture that interpreted it. The basic structure, however, has remained relatively unchanged and can be classified using the various stages of a hero's adventure through the story, stages such as the Call to Adventure, Receiving Supernatural Aid, Meeting with the Goddess/Atonement with the Father and Return. These stages, as well as the symbols one encounters throughout the story, provide the necessary metaphors to express the spiritual truths the story is trying to convey. Metaphors for Campbell, in contrast with similes which make use of the word like, pretend to a literal interpretation of what they are referring to, as in the sentence "Jesus is the Son of God" rather than "the relationship of man to God is like that of a son to a father".[46]

In the 1987 documentary Joseph Campbell: A Hero's Journey, he explains God in terms of a metaphor:

God is a metaphor for a mystery that absolutely transcends all human categories of thought, even the categories of being and non-being. Those are categories of thought. I mean it's as simple as that. So it depends on how much you want to think about it. Whether it's doing you any good. Whether it is putting you in touch with the mystery that's the ground of your own being. If it isn't, well, it's a lie. So half the people in the world are religious people who think that their metaphors are facts. Those are what we call theists. The other half are people who know that the metaphors are not facts. And so, they're lies. Those are the atheists.[47]

Functions of myth

Campbell often described mythology as having a fourfold function within human society. These appear at the end of his work *The Masks of God: Creative Mythology*, as well as various lectures.[48]

The Mystical/Metaphysical Function

Awakening and maintaining in the individual a sense of awe and gratitude before the 'mystery of being' and his or her participation in it

According to Campbell, the absolute mystery of life, what he called transcendent reality, cannot be captured directly in words or images. Symbols and mythic metaphors on the other hand point outside themselves and into that reality. They are what Campbell called "being statements"[48] and their enactment through ritual can give to the participant a sense of that ultimate mystery as an experience. "Mythological symbols touch and exhilarate centers of life beyond the reach of reason and coercion.... The first function of mythology is to reconcile waking consciousness to the mysterium tremendum et fascinans of this universe as it is."[49]

The Cosmological Function

Explaining the shape of the universe

For pre-modern societies, myth also functioned as a proto-science, offering explanations for the physical phenomena that surrounded and affected their lives, such as the change of seasons and the life cycles of animals and plants.

The Sociological Function

Validate and support the existing social order

Ancient societies had to conform to an existing social order if they were to survive at all. This is because they evolved under "pressure" from necessities much more intense than the ones encountered in our modern world. Mythology confirmed that order and enforced it by reflecting it into the stories themselves, often describing how the order arrived from divine intervention. Campbell often referred to these "conformity" myths as the "Right Hand Path" to reflect the brain's left hemisphere's abilities for logic, order and linearity. Together with these myths however, he observed the existence of the "Left Hand Path", mythic patterns like the "Hero's Journey" which are revolutionary in character in that they demand from the individual a surpassing of social norms and sometimes even of morality.[50]

The Pedagogical/Psychological Function

Guide the individual through the stages of life

As a person goes through life, many psychological challenges will be encountered. Myth may serve as a guide for successful passage through the stages of one's life.

Evolution of myth

Campbell's view of mythology was by no means static and his books describe in detail how mythologies evolved through time, reflecting the realities in which each society had to adjust.[a] Various stages of cultural development have different yet identifiable mythological systems. In brief these are:

The Way of the Animal Powers

Hunting and gathering societies

At this stage of evolution, religion was animistic, as all of nature was seen as being infused with a spirit or divine presence. At center stage was the main hunting animal of that culture, whether the buffalo for Native Americans or the eland for South African tribes, and a large part of religion focused on dealing with the psychological tension that came from the reality of the necessity to kill versus the divinity of the animal. This was done by presenting the animals as springing from an eternal archetypal source and coming to this world as willing victims, with the understanding that their lives would be returned to the soil or to the Mother through a ritual of restoration.[51] The act of slaughter then becomes a ritual where both parties, animal and mankind, are equal participants. In *Mythos and The Power of Myth*,[52] Campbell recounts the story he calls "The Buffalo's Wife" as told by the Blackfoot tribe of North America. The story tells of a time when the buffalos stopped coming to the hunting plains, leaving the tribe to starve. The chief's daughter promises to marry the buffalo chief in return for their reappearance, but is eventually spared and taught the buffalo dance by the animals themselves, through which the spirits of their dead will return to their eternal life source. Indeed, Campbell taught that throughout history mankind has held a belief that all life comes from and returns to another dimension which transcends temporality, but which can be reached through ritual.

The Way of the Seeded Earth

Early agrarian societies

Beginning in the fertile grasslands of the Levant and the Fertile Crescent of Mesopotamia in the Bronze Age and moving to Europe, the practice of agriculture spread along with a new way of understanding mankind's relationship to the world. At this time the earth was seen as the Mother, and the myths focused around Her life-giving powers. The plant and cultivation cycle was mirrored in religious rituals which often included human sacrifice, symbolic or literal.[53] The main figures of this system were a female Great Goddess, Mother Earth, and her ever-dying and ever-resurrected son/consort, a male God. At this time the focus was to participate in the

repetitive rhythm the world moved in expressed as the four seasons, the birth and death of crops and the phases of the moon. At the center of this motion was the Mother Goddess from whom all life springs and to whom all life returns. This often gave Her a dual aspect as both mother and destroyer.

The Way of the Celestial Lights

The first high civilizations

As the first agricultural societies evolved into the high civilisations of Mesopotamia and Babylonia, the observation of the stars inspired them with the idea that life on earth must also follow a similar mathematically predetermined pattern in which individual beings are but mere participants in an eternal cosmic play. The king was symbolised by the Sun with the golden crown as its main metaphor, while his court were the orbiting planets. The Mother Goddess remained, but her powers were now fixed within the rigid framework of a clockwork universe.

However, two barbarian incursions changed that. As the Indo-European (Aryan) people descended from the north and the Semites swept up from the Arabian desert, they carried with them a male dominated mythology with a warrior god whose symbol was the thunder. As they conquered, mainly due to the superior technology of iron smithing, their mythology blended with and subjugated the previous system of the Earth Goddess. Many mythologies of the ancient world, such as those of Greece, India, and Persia, are a result of that fusion with gods retaining some of their original traits and character but now belonging to a single system. Figures such as Zeus and Indra are thunder gods who now interact with Demeter and Dionysus, whose ritual sacrifice and rebirth, bearing testament to his pre-Indo-European roots, were still enacted in classical Greece. But for the most part, the focus heavily shifted toward the masculine, with Zeus ascending the throne of the gods and Dionysus demoted to a mere demi-god.

This demotion was very profound in the case of the biblical imagery where the female elements were marginalized to an extreme. Campbell believed that Eve and the snake that tempted her were once fertility gods worshipped in their own right, with the tree of knowledge being the Tree of Life.[54] He also found significance in the biblical story of Cain and Abel, with Cain being a farmer whose agrarian offering is not accepted by God, while herder Abel's animal sacrifice is. In the lecture series of Mythos, Campbell speaks of the Mysteries of Eleusis in Ancient Greece, where Demeter's journey in the underworld was enacted for young men and women of the time. There he observed that wheat was presented as the ultimate mystery with wine being a symbol of Dionysus, much like in the Christian mysteries where bread and wine are considered to incarnate the body and blood of Jesus. Both religions carry the same "seeded earth" cosmology in different forms while retaining an image of the ever-dying, ever-resurrected God.

The Way of Man

Medieval mythology, romantic love, and the birth of the modern spirit

Campbell recognized that the poetic form of courtly love, carried through medieval Europe by the traveling troubadours, contained a complete mythology in its own right.[55] In *The Power of Myth* as well as the "Occidental Mythology" volume of *The Masks of God*, Campbell describes the emergence of a new kind of erotic experience as a "person to person" affair, in contrast with the purely physical definition given to Eros in the ancient world and the communal agape found in the Christian religion. An archetypal story of this kind is the legend of Tristan and Isolde which, apart from its mystical function, shows the transition from an arranged-marriage society as practiced in the Middle Ages and sanctified by the church, into the form of marriage by "falling in love" with another person that we recognize today. So what essentially started from a mythological theme has since become a social reality, mainly due to a change in perception brought about by a new mythology – and represents a central foundational manifestation of Campbell's overriding interpretive message, "Follow your bliss."

Campbell believed that in the modern world the function served by formal, traditional mythological systems has been taken on by individual creators such as artists and philosophers.[b] In the works of some of his favorites, such as Thomas Mann, Pablo Picasso and James Joyce, he saw mythological themes that could serve the same life-giving purpose that mythology had once played. Accordingly, Campbell believed the religions of the world to be the various culturally influenced "masks" of the same fundamental, transcendent truths. All religions can bring one to an elevated awareness above and beyond a dualistic conception of reality, or idea of "pairs of opposites" such as being and non-being, or right and wrong. Indeed, he quotes from the Rigveda in the preface to *The Hero*

with a Thousand Faces: "Truth is one, the sages speak of it by many names."
[>https://en.wikipedia.org/wiki/Joseph_Campbell< — retrieved 19 May 2024]





Chapter I-X

UNITY > DUALITY > TRIALITY

[[This chapter belongs in the Cosmology book when it is ready to be released.]]

The progression “Tao > One > Two > Three > All” codified in Tao’s Template has a deep and broad presence in philosophy and theology, and that is what we examine in this chapter.

Unity

Duality

Triality



Chapter I-x

DERIVATION OF THE NATURAL SEQUENCE

What came first, yes or no? Think about that for a moment ... or two ... or three....

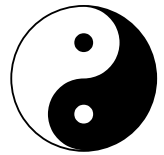
The answer is that you cannot have the one without the other, neither is more primitive than the other, they are co-dependent, they imply each other. This answer is more or less the same as the answer to the question, why is there something rather than nothing? That answer being that you cannot have one without the other, neither is more primitive than the other, they are co-dependent, they imply each other.

In this introduction I am going to discuss a cascade of contraries such as yes and no, something and nothing, because it is absolutely necessary, and relatively contingent, to so so if one is to understand the structure and meaning of the Natural Sequence (NS) schema in all its gloriosity and mundanity. We will examine the cascade of contraries in terms of logic, mathematics, physics, philosophy, theology, and cosmology....

The Taijitu Tango Principle

The first concept to explain, in a rather lengthy discourse, is what I refer to as the *Taijitu Tango Principle* (TTP).

“Taijitu” is the Chinese name for what is generally called the “yin-yang” symbol. Everybody knows what that looks like, but I am going to insert an image anyway, over there. → The relevant points that I want to make, in the context of the structure of the Natural Sequence spectrum, is that the figure represents (to me) the principle of Substantivalism (Oneness) with the perimeter circle, and Relationalism (Twoness) with the interplay of black and white. So that you do not need to look up those obscure capitalized words, following is a brief introduction to them; underlines are my emphasis:



Relationalism is any theoretical position that gives importance to the relational nature of things. For relationalism, things exist [being = space] and function [doing = time] only as relational entities. Relationalism in a broader sense applies to any system of thought that gives importance to the relational nature of reality. But in its narrower and philosophically restricted sense as propounded by the Indian philosopher Joseph Kaipayil and others, relationalism refers to the theory of reality that interprets the existence, nature, and meaning of things in terms of their relationality or relatedness. On the relationalist view, things are neither self-standing entities nor vague events but relational particulars. (In metaphysics, particulars are defined as concrete, spatiotemporal entities as opposed to abstract entities, such as properties or numbers.) Particulars are inherently relational, as they are ontologically (ontology is the philosophical study of being, becoming, existence, reality) open to other particulars in their constitution and action. Particulars, as relational particulars, are the ultimate constituents of reality. Particulars interact and make the very fabric of reality. In discussions about space and time, the name relationalism ... refers to Leibniz’s relationist notion of space and time as against Newton’s substantivalist views. According to Newton’s substantivalism, space and time are entities in their own right, existing independently of things. Leibniz’s relationism, on the other hand, describes space and time as systems of relations that exist between objects. [<https://en.wikipedia.org/wiki/Relationalism> retrieved 06 May 2020]

Relationalism was mentioned in this quote as the contrary philosophy to Substantivalism in the metaphysical search for an understanding of the ultimate nature of spacetime reality, aka the ontology of what is ultimately real. Newton regarded two abstract concepts, space and time, as more real than the motions of matter and energy that exist and function on the stage or background of space and time; Leibniz regarded concrete objects as more real; what one thought of as ultimate, the other thought of as penultimate, and vice-

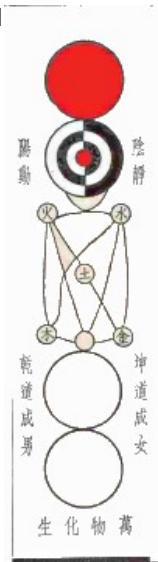
versa; these two had different points of view (POV). The reader may have had their curiosity piqued, and wish to do an internet search on those two words to get a clearer idea; looking for the bedrock of existence is a deep subject haha. By nature, most people tend to be Substantialists, believing that things exist *per se* = in themselves, rather than being Relationalists by nature, meaning they perceive that *things exist in contrast to all that they are not*. In the argument that follows, I propose to reconcile Leibniz and Newton in a logical way: I equate Substantialism with the Absolute (ultimate abstract “sub-stance”, meaning, the foundation upon which all else stands), and Relationalism with the idea of *Distinction* itself, starting with the distinction between the Absolute and the One and the subsequent cascade of distinctions. One way to anthropomorphize the difference between the abstract and the concrete is to regard the Absolute as the “Mind of God”, and the Distinctions as the thoughts, feelings, and behaviors of God. In my view, Substantialism is conceptually more primitive than Relationalism as black/white is contained within the circle of the taijitu.

Space and time were mentioned a few times in the quote; there is much discussion further on about what space and time have to do with the Natural Sequence.

That is not the whole story of the Taijitu. As usual, let’s consult the omniscient Wikipedia:

The taijitu consists of five parts. Strictly speaking, the “yin and yang symbol”, itself popularly called taijitu, represents the second of these five parts of the diagram. [shown there →]

- [Beyond all representations, such as the diagram, is the Absolute Absolute, which is not relative to anything, including existence or nonexistence]
- At the top, an empty circle depicts the absolute (Wuji) [which is distinct from the Relative, represented by the next circle down]
- A second circle represents the Taiji as harboring Dualism, yin and yang, represented by filling the circle in a black-and-white pattern. In some diagrams, there is a smaller empty circle at the center of this, representing Emptiness as the foundation of duality.
- Below this second circle is a five-part diagram representing the Five Agents (Wuxing), representing a further stage in the differentiation of Unity into Multiplicity. The Five Agents are connected by lines indicating their proper sequence, Wood → Fire → Earth → Metal → Water.
- The circle below the Five Agents represents the conjunction of Heaven and Earth, which in turn gives rise to the “ten thousand things”. This stage is also represented by the Eight Trigrams (Bagua).
- The final circle represents the state of multiplicity, glossed “The ten thousand things are born by transformation”.



As usual, those underlined words are my emphasis, to draw attention to ideas that figure into the derivation of the arrangement of the Worldview spectrum. I will get to those concepts further on.

In the phrase, Taijitu Tango, “Tango” is, of course, an allusion to “it takes two to tango”, the tango being a type of dance that involves two people, usually male and female. Here is what Wikipedia has to say about that, with my underlines for emphasis:

“It takes two to tango” is a common idiomatic expression which suggests something in which more than one person or other entity are paired in an inextricably-related and active manner....

[>https://en.wikipedia.org/wiki/It_takes_two_to_tango< retrieved 06 May 2020]

It is not meaningless that male and female dancing, or “masculinity” and “femininity” as interacting principles, are also associated conceptually with yang and yin in Oriental metaphysics. This explanation of the tango looks to me a lot like the ontological philosophy of Relationalism, so that is why I pair Tango with Taijitu. I elevate Taijitu Tango to a *principle* because I regard it as the ultimate concept that explains how we get everything from one thing via an infinite regress / infinite progress of self-reference. Only the first step of getting from nothing to one thing is a magical mystery miracle, but beyond that, there is a cascade of “symmetry breaks” all the way up to the Process/Aspect System. For the obligatory Wikipedia explanation of that concept, take a look at this:

In physics, symmetry breaking is a phenomenon in which (infinitesimally) small fluctuations acting on a system crossing a critical point decide the system’s fate, by determining which branch of a bifurcation is taken. To an outside observer unaware of the fluctuations (or “noise”), the choice will appear arbitrary. This process is called symmetry “breaking”, because such transitions usually bring the system from a symmetric but disorderly state

into one or more definite states. Symmetry breaking is thought to play a major role in pattern formation. In 1972, Nobel laureate P.W. Anderson used the idea of symmetry breaking to show some of the drawbacks of the constructionist converse of reductionism in his paper titled “More is different” in Science. Symmetry breaking can be distinguished into two types, explicit symmetry breaking and spontaneous symmetry breaking, characterized by whether the equations of motion fail to be invariant or the ground state fails to be invariant. In explicit symmetry breaking, the equations of motion describing a system are variant under the broken symmetry. In spontaneous symmetry breaking, the equations of motion of the system are invariant, but the system is not because the background (spacetime) of the system, its vacuum, is non-invariant. Such a symmetry breaking is parametrized by an order parameter. A special case of this type of symmetry breaking is dynamical symmetry breaking.

Let’s now look at the algorithmic, formulaic cascade of symmetry breaks, starting at a more primitive concept even than the Absolute, and then progress from Substantivalism to Relationalism and beyond. Recall the quotation in Part One taken from Chapter 42 of the Tao Te Ching; underlines are my emphasis because I believe those words represent first principles:

Tao produced the One; the One produced the Two; the Two produced the Three; the Three produced All things. All things carry the Yin and embrace the Yang; through the blending of the Chi they achieve harmony.

This last line says to me that Yin and Yang are in a perpetual ‘dance’ — the Taijitu Tango — and it is beautiful to behold, as embodied in the Process/Aspect System. Anyway, the relationship of this quotation and first principles to features of the PAS, particularly Worldviews, is shown in the table below.

Note that the Taijitu Tango Principle (TTP) is not the Two which is produced by the One, or even the principle of Twoness itself; it is represented by the word “produced” in the phrases, which refers to the *difference* between each space-like “state of being” (One, Two, Three) in the time-like procedure of emergence: One → Two → Three. TTP is also represented by the lines that join/separate the boxes on the table below. The TTP is the thus principle of mutual definition. In other words, everything is known not only by what it is, but also by what it is not. This concept is the same as the figure-ground and the Rubin face-vase instantiations of the principle discussed here: >https://en.wikipedia.org/wiki/Rubin_vase< and here >[https://en.wikipedia.org/wiki/Figure%E2%80%93ground_\(perception\)](https://en.wikipedia.org/wiki/Figure%E2%80%93ground_(perception))< *My hope is that you are able to get out of the typical human perceptual POV at the reductionist end of the spectrum and into the holistic end of the atypical human perceptual POV. In the latter Wikipedia article, there is also discussion of the distinction between atomistic reductionism versus gestalt holism. There are chapters in Godel Escher Bach on the figure-ground principle, and there is a chapter in The Quantum and the Lotus about Relationalism in Cardinal metaphysics and Ordinal physics. The difference between quantitative Ordinal and qualitative Cardinal is worth exploring.*

The TTP is also fundamental to the concepts of Ordinality and Cardinality as used in the PAS.

TTP emphasizes the Point of View that created Two (black and white) out of One, and Sevenness/Sequence emphasizes that there is a fractal nested spectrum between black and white into innumerable shades of gray between the extremes.

Oneness = Circular argument, self-reference, infinite regress, turtles all the way down, the bottom of the explanatory tree – these are the actual solution to the problem of existence rather than non-existence. For the human mind to try to get below the concept of finiteness (Oneness) is unfathomable (get it) There is no deeper layer of reality accessible to logic and mathematics than the difference between Taoness and Oneness.

Taijitu Tango: Ordinal Worldviews have an Ordinal nature to them (as in the Ordinal Processes), but they have a Cardinal mojo to them as in the Cardinal Processes. For instance:

- PRIMITIVES manifest the Termination Process but with the dynamism of the Origination Process
- TRADITIONALISTS often manifest the Involution Process in terms of moralistic, fundamentalistic religiosity, which is a debased spirituality of the Evolution Process, which shows up as a moralistic, and
- MATERIALISTS manifest the]]
- 3D = turning outside – in
- 2D = turning upside – down
- 1D = turning end for end

- Explain dimensionality in terms of Cartesian x, y, and z axis with plus and minus = leftside-rightside on the x axis = yes/no, do/not do behavior system hierarchy // plus and minus on the y axis as upside-downside dichotomy = good bad, value system hierarchy // explain z axis = inside-outside dichotomy = exclusion-inclusion dichotomy boundary of a sphere = belief system hierarchy.
-
- cardinal/ordinal versus ordinal/cardinal
- Ordinal bottom-up emergence versus Cardinal top-down emanation
- Two kinds of individualism: subjective and objective: Ordinal maximizes focus on individualistic objectivity, cardinal maximizes focus on individualistic subjectivity. Ordinal Worldviews = not much in there; Cardinal Worldviews = not much out there.
-

Table 2Gb — FIRST PRINCIPLES and DERIVATIVES							
NULLITY	TAO						
UNITY	ONE						
DUALITY	YIN/YANG			CHI	YANG/YIN		
TRIALITY	First	Second	Third	ALL	Threeness	Twoness	Oneness
GEOMETRY	– 1-D –	– 2-D –	– 3-D –	= P-D =	+ 3-D +	+ 2-D +	+ 1-D +
ORDINAL RANK	First	Second	Third	Fourth	Fifth	Sixth	Seventh
CARDINAL RANK	Sevenness	Sixness	Fiveness	Fourness	Threeness	Twoness	Oneness
DIALECTIC	Ordinal/Cardinal			Neutral	Cardinal/Ordinal		
DESCRIPTIONS	Physics/Figure/Quantitative/Objective/Concrete/Femininity/Relationalism			Gestalt	Metaphysics/Ground/Qualitative/Subjective/Abstract/Masculinity/Substantialism/		
AXIAL	Action	Inspiration	Expression	Assimilation	Expression	Inspiration	Action
SYSTEM	Behavioral	Value	Belief	Intuitional	Belief	Value	Behavioral
DIRECTION	Backward	Downward	Outward	Around	Inward	Upward	Forward
PROCESS	Termination	Involution	Analysis	Combination	Synthesis	Evolution	Origination
ASPECT	Goal	Shadow	Attitude	Worldview	Center	Role	Mode
WORLDVIEW	Primitivism	Traditionalism	Materialism	Collectivism	Holism	Transperson'm	Messianism
ZONE	Resolution	Immanence	Fragmentation	Experience	Unification	Transcendence	Activation

My comments on this table are as follows. Apologies for the math lesson, but the fact of the matter is that the Process/Aspect System has mathematics as its foundation, particularly number theory and geometry; and if you do not understand that, you do not *understand* the Process/Aspect System in depth:

- NULLITY: The first row shows Tao which produces the One. The Tao has no distinguishing characteristics other than that it is the “ground of being”, the *source* of everything that does have characteristics, aka “personality”. In terms of numbers, one could equate Tao with either Zero or Infinity or both or neither of those. The differentiation process begins with:
- UNITY: The first production of Tao is One. One of the properties of the One is “finitude” — the state of having limits or bounds — which neither zero nor infinity possess. There is still no personality at this stage of the differentiation process. In theological terms, one can regard Tao as *transcendent* (not made of Tao stuff) to what it produces (which is the Yin way to look at it), or one can regard Tao as *immanent* to (made of Tao stuff) what it produces (which is the Yang way to look at it).
- DUALITY: The One produced the Two, meaning that
- TRIALITY: The Two produced the Three, meaning that each Two was then divided
- GEOMETRY: A One-dimensional phenomenon is like a line that has an end and a beginning; a Two-dimensional phenomenon is like a plane that has a bottom and a top; a Three-dimensional phenomenon is like a solid that has an inside and an

- ORDINAL RANK:
- CARDINAL RANK:

Taijitu Tango

- DIALECTIC: Synonyms for
- AXIAL: These are the names of the Axial Attributes, so called because each Axis has opposite poles that are related to the 1-D real number line (x-axis), the imaginary number line (y-axis), and the surreal number line (z-axis) .
- SYSTEM:
- DIRECTION: This is explained in greater detail in Part One, so regard this as a
- PROCESS:
- ASPECT:
- WORLDVIEW:
- ZONE:

The Tao's Tango (Tao > One > Two > Three > All) plays out like this: Not-Self = Tao = Zero has no distinguishing characteristics; self = One alone, without another; Two = self and other-self; Three = other-selves. (All of these are implied in the first distinction-identification in the Laws of Form.) The pre-spacetime logical structure of no-self, self, other-self, other-selves. These are the Quanta that produce spacetime in an infinite regress of self-reference. The paradox of self-reference translates into geometry as orthogonality, aka perpendicularity.

Select suitable sources about Threeness from Wikipedia article on trichotomies:
>[https://en.wikipedia.org/wiki/Trichotomy_\(philosophy\)](https://en.wikipedia.org/wiki/Trichotomy_(philosophy))<. Search for the word "dichotomy" on Wikipedia – there is a bunch.

Godel's incompleteness theorem was arrived at via examining the paradox of self-contradiction in yes versus no versus both versus neither versus maybe.

Dialectic Attributes switch sides in the Septenary as they apply to Roles (a space/time structure) versus as they apply to Age/Level (a time/space structure)?

The philosophy of Substantialism is as if the Cartesian coordinate system has the origin point set at Zero; the philosophy of relationalism is as if the Cartesian coordinate system has the origin point set at One. Zero has the potential of all numbers; Infinity has the actuality of all numbers; The primest of prime numbers, One, is "halfway" between Zero and Infinity, where fractions > Infinitesimal and whole numbers > Infinity. I wonder if one of the problems with mathematical physics is that it hinges the universe on Zero as its absolute rather than One as the true Absolute.

Looking out in space is looking back in time; the faster you go in space the slower you go in time. At rest in space is the speed of light in time; at rest in time is the speed of light in space. Thus, space and time are the reciprocal of each other. The speed of light is not a maximum, it is just another minimum or at rest, when considered in the light of Larsonian nothing-but-motion physics.

The Big Bang was just as much an implosion as it was an explosion, in the sense that Oneness split into the twoness of space and time, aka objective and subjective realities.

Looking out in space is the same as looking backward in time.

Conceptually, the Maximum One (the Quantum) is the same as the Minimum One (the quantum). This is represented by the torus aka hypersphere.

Summary

One of the postulates of this book is that personality has a structure that mirrors physics, and that structure is logical and mathematical. In Part One, that derivation was presented. Basically, Ordinality in the PAS is time-like because it manifests as a sequence, and Cardinality in the PAS is space-like because it exists all as once, as space does. Also postulated is the notion that subjectivity is time-like and objectivity is space-like, with the combination, spacetime, being Neutral. Spacetime, the combination of space and time, is flat, but considered separately, space appears as "open" (undetermined) outside your skin and curved "closed" (determined) inside your skin. In a similar fashion, time appears to be "flat" in the now moment, but appears to be "closed"

(determined) in the past and “open” (undetermined) in the future. Thus, space-like interiority = time-like subjectivity; space-like exteriority = objectivity....

My sense of the situation is that there might be other ways to portray the tapestry, to weave a narrative of how existence is structured and functioning, but this is my guess for the time being.

Consciousness Identification and Disidentification

Disambiguating Septenaries

There is theory and then there is practice; there is one's model of the world, and then there is the actual world; there is the pure abstract archetype, and then there is how it manifests in a particular instantiation in a particular environment. The scientific enterprise is all about closing in on the truth via squeezing the truth from both of these sides.

There is fitting the real-world data into the abstract model and there is fitting the model to the data. In science, the way forward is via feedback between the two. To use scientific terminology: I have a model derived from ‘first principles’; this makes it a ‘hypothesis’. With the research that has gone into writing this book, I show my checking it against the real world to see how it hold up. If it holds up, then I have a ‘theory’. A theory is a comprehensive, integrated, elegant, systematic explanation of regularities in nature. Newtonian mechanics is a theory; biological evolution is a theory; Einsteinian relativity is a theory; quantum mechanics is a theory. I would like to think that this book will demonstrate the Natural Sequence to be a theory in good standing.

[[Have a paragraph or two on inductive reasoning (bottom up, by generalizing observations to successively higher levels of abstraction) versus deductive reasoning (top down, from assumed first principles or axioms at the highest level of abstraction); quote from Wikipedia or wherever: ><https://danielmiessler.com/blog/the-difference-between-deductive-and-inductive-reasoning/>< This book starts with deductive from Tao's Template as providing clues from logic to mathematics to physics to chemistry to biology to psychology to spirituality.]]

The thing that is different from other “integrationists” about my approach to synthesizing various systems is that I claim to have discovered the “Canonical Septenary”, which is algorithmically generated from ‘first principles’. Yes, that is a grandiose claim, but I would like to believe that the claim will not seem so grandiose to you when you see that the ‘big thinkers’ over the millennia are converging on the Canonical Septenary, the Natural Sequence. The gist of the Canonical Septenary has been known from antiquity; my contribution is to discover the logic, the mathematics, and the physics that underlies the CS.

Like static on the radio, or snow on the TV screen, thus is the pure abstract characteristics of the Natural Sequence obscured and distorted by the instantiations in the sensible world.

Michael students have various opinions about various septenaries, such as the chakras, and their correlation with the Overleaves. Let me share with you my rationale regarding the problem of variation and ambiguity in the descriptions of various septenaries in subsequent sections of this book. I can understand that others might not agree with this method. My overall strategy is to compare and contrast the various instantiations of the septenary in order to come to a clear and thorough understanding of the septenary in realms both theoretical and empirical. I seek to disambiguate.

- First I intend to document in subsequent sections instances of the Natural Sequence that are not ambiguous. I will present a derivation of the Overleaf system from logic and geometry, explaining the why/how of the symmetry of the NS. I will also present phenomena in nature. Scientists agree that mathematics and nature are intimately related. Other than one's consciousness becoming “one with the universe”, one cannot get any closer to Truth than a study of Mathematics and Nature. It is really much more reliable than “channeling”.
- Second, when I look at the descriptions of the various septenaries, despite the ambiguity and variation, there is enough similarity to convince me that they are a manifestation of the NS. (There is more evidence and argument to present.) I admit that this takes an understanding of the seven Processes that only I have – so far – but then no other Michael student that I know of has attempted to understand the Processes. I hope to explain them so that others can understand, and then I believe the NS correlation with the various septenaries will be more obvious.

- Third, with an understanding of the derivation and meaning of the Processes, and acceptance that there is a correlation of the NS with the septenaries, then one can disambiguate the description of the septenaries. My belief is that people added a lot of illegitimate interpretation because they did not understand the primordial NS “template”. I suspect those people didn't necessarily know what they were talking about, and the contradictions indicate that.
- Fourth, each manifestation of the NS should be at least a little different from the others because it has to be adapted to suit the situation. Chakras should be somewhat different from Monads should be somewhat different from Centers should be somewhat different from Ages should be somewhat different from Planes, et cetera. There are variations from the pure primordial logical-geometrical differentiation of the NS from the undifferentiated Tao at the different scales and in the different conditions. The pattern is similar enough to be recognized but different enough to do its job in the various applications and scales. It reminds me of fractal iterations: similar but not exactly the same.
- Fifth, there appears to be an overlap in the descriptions of the chakras, each one blending into the neighbors. No wonder there are ambiguities and variations in the descriptions. This is to be expected. The Overleaf system is all neatly distinguished into definitive boxes, but we all know that is not what happens in our real lives, and it is often very difficult to discern which “boxes” we belong in. This overlapping occurs in other instances of the septenary. Each Age has seven Levels which recapitulate the Ages in a milder form. This often makes it very difficult to discern people's Ages or Levels. I submit that the same problem ambiguates the description and expression of the various other septenaries.
- Sixth, once again I state that my case for the NS does not rise or fall with the various and ambiguous descriptions of the septenaries. Each of you is free to research intellectually or experientially to come to your own understanding about the NS and about the other septenaries.
- Seventh, it was entirely a judgment call on my part to omit discussion of septenaries that obviously did not easily fit the Septenarian Attributes. I regard these as artificial contrivances that only confuse and obscure the Natural Sequence.

[[Perhaps put the mathematical derivation of the NS here, from Part One of The Process Aspect System.]]

The Dreaming Metaphor

The premise discussed in this section is that Tao is experiencing itself AS IF it were not itself. One way to think of this is a metaphor commonly used in mysticism, that Brahman dreams the world into existence

The Paradox Principle

As we will see in this section, the notion of explaining stuff in terms of, or as derivative of, other stuff must start/end somewhere. In terms of Tao's Template, that beginning/ending of explanation is the Tao. The definition and description of the Tao is found in [Chapter X-x](#). Basically and briefly, the Tao is the undifferentiated Source or Ground or Substance *out of which* (in cataphatic theology) All is differentiated in stages, or *within which* (in apophatic theology) All is differentiated in stages. The ultimate Tao has no beginning/ending. One of the other characterizations of the Tao is that it has no explanation — that it is the ultimate “just is” — then stuff other than Tao, which is explainable as derivative of a prior, must ultimately be understood as the Tao experiencing itself *as if* it were not itself. In other words, the Tao, via primary and primordial self-contradiction or paradox, “produces” the One, and so on to All things. This notion of self-contradiction shows up in various realms of science and philosophy and psychology and biology, as documented in this section, in the following subsections.

Technically speaking, the Paradox Principle does not appear *within* the numerous instantiations of the Natural Sequence that are reviewed in this book, but it is the foundational principle out of which the NS emerges. If there was no initial paradox, there would be no NS.

Before we get into the discussion of the Paradox Principle, it might be useful to mention the notion referred to as the so-called “absolute”, which is distinct from the “relative”.

Absolute versus Relative

The bedrock ontological principle of the Tao's Template ontology is the very notion of distinction itself; and the notion that distinction implies an asymmetry to the sides of the distinction. The most primitive distinction that I have thought of is the pure abstract conceptual complementary difference between No and Yes. These two

correlate with the distinction between complementary Yin and Yang respectively in Tao's Template, and the distinction between complementary Ordinal and Cardinal respectively in the Natural Sequence, and the distinction between complementary Negative and Positive in the Process/Aspect System. The corollary notion is that distinction *per se* "produces" or generates all that exists in space and functions in time in the Cosmos in a cascade of asymmetrical distinctions. In the Tao's Template ontology, the cascade of distinctions follows the sequence Tao > One > Two > Three > All.

So where does the Absolute fit into this cascade of distinguishability? The first distinction is between that which has no distinctions — the Absolute — and that which has distinctions — the Relative. In philosophy, this is the distinction between the so-called "Absolute" and the so-called "Relative". Wikipedia has somewhat to say on the subject. Notice as you read the following that there is some ambiguity in the understanding of what the Absolute is. My suggestion is that the reason that there are differences in the understanding of the definition of the Absolute is that the descriptions do not start with the notion that "distinction" is the most fundamental ontological primitive notion from which all epistemology emerges, in the cascade of distinctions mentioned at the beginning of this section. My interspersed comments are my clarification.

INTRODUCTION

In philosophy (often specifically metaphysics), the Absolute, in most common usage, is a perfect, self-sufficient reality that depends upon nothing external to itself. In theology, the term is also used to designate the supreme being.

Hegel

Hegel considers the Absolute as an "unconditioned reality which is *either* the [transcendent] spiritual ground of all being *or* the [immanent] whole of things considered as a spiritual unity". This definition of the Absolute is also found in the works of F. W. J. Schelling, the perceived insufficiencies of which inspired Hegel to develop his own distinctive account. Hegel's view was anticipated by Johann Gottlieb Fichte. The concept of "the Absolute" as "the sum of all being, actual and potential" was introduced in modern philosophy by Hegel.

Unlike Schelling, Fichte, and Hegel, my understanding limits the Absolute to the Tao as distinct from the One in the TT algorithm "Tao produced the One", in which the One equates with "the whole of things considered as a spiritual unity" and "the sum of all being". [[Perhaps I need to study further if Hegel *et al* start from the notion of distinction as in Relationalism or starts from the notion of Substantialism.]] Refer to the section "Transcendent versus Immanent" further on. Refer to the section "Potential versus Actual" further on. A review of the definition and description of these terms reveals that Tao = Absolute = Transcendent = Potential, and One = Relative = Immanent = Actual.

For Hegel, as understood by Martin Heidegger, the Absolute is "spirit, that which is present to itself in the certainty of unconditional self-knowing". As Hegel is understood by Frederick Copleston, "[I]ogic studies the absolute 'in itself'; the philosophy of nature studies the absolute 'for itself'; and the philosophy of spirit studies the absolute 'in and for itself'."

In British philosophy, self-identified neo-Hegelian F. H. Bradley distinguishes the concept of Absolute from God, whereas Josiah Royce, another neo-Hegelian and founder of the American idealism school of philosophy, has equated them.

Indian religions

The concept of the Absolute has been used to interpret the early texts of the Indian religions such as those attributed to Yajñavalkya, Nagarjuna and Adi Shankara.

According to Takeshi Umehara, some ancient texts of Buddhism state that the "truly Absolute and the truly Free must be nothingness", the "void". Yet, the early Buddhist scholar Nagarjuna, states Paul Williams, does not present "emptiness" as some kind of Absolute; rather, it is "the very absence (a pure non-existence) of inherent existence" in Mādhyamaka school of the Buddhist philosophy.

According to Glyn Richards, the early texts of Hinduism state that the Brahman or the nondual Brahman—Ātman is the Absolute. [[https://en.wikipedia.org/wiki/Absolute_\(philosophy\)](https://en.wikipedia.org/wiki/Absolute_(philosophy))] — retrieved 15 June 2023]

That Wikipedia article did not make a distinction that I would like to make, namely that there is the "Absolute Absolute" which cannot be compared or contrasted to anything or to nothing or the Absolute or the Relative — it is ineffable, inconceivable, non-experiential — and then there is the "Absolute" which is defined conceptually as being in contrast to the "Relative".

In terms of the Tao's Template ontology, the Absolute Absolute should, technically, not even be mentioned let alone discussed (my bad for putting a label on), but the Relative can be correlated with everything inside the border of the PAS chart, and the Absolute can be correlated with the undefined region outside the PAS chart. The border or boundary of the chart therefore makes a distinction between the Relative and the Absolute, following the principle that every phenomenon is distinguished by the being/doing and the not-the-being/doing.

The Absolute is that against which everything not Absolute is measured, or relative. In terms of physics, the state of Rest is Absolute, and the first distinction, Motion is measured relative to Rest, the second distinction, Space and Time are measured relative to Motion.

Unsatisfied with the Wikipedia article, which does not contrast the Absolute with the Relative, I searched the internet for pages that do make the contrast, and found this:

ABSOLUTE VS RELATIVE

Absolute came from the Latin words *absolute* and *absolvere* which mean "to set free or make separate". Absolute is defined as free from any limitation, qualification, condition, or restriction. When used as an adjective, it is used to mean final and not liable to modification.

Furthermore, a thing that is conceived to be absolute depends on [no]thing else and is beyond human control. No mortal being can influence the absolute. It is in this sense, that God is called the Absolute by a Theist.

In Physics, absolute is independent of arbitrary standards or of particular properties of substances or systems....

To that description I add that the Absolute is undifferentiated — meaning that it has not quantities or qualities or properties or attributes or other types of characteristics — within itself, but the Absolute is differentiated from the Relative, the Relative referring to that which can be characterized by properties

Relative came from the latin word *relativus* which means "relate". It is defined as something dependent upon external conditions for its specific nature, size, etc. as opposed to absolute or independent.

Its specific nature exists only by relation or in proportionate to something else. For example, "value is relative to demand".

Everything sustains both an absolute and a relative capacity. One is absolute as it is unrestricted; one is relative as well as it is a part of the universe, and stands in relation to the whole.

Comparing the absolute of a scientific quantity being measured to some other a relative measurement like density leads us to define Absolute Density as a substance's mass per unit volume at a specified temperature. Relative Density (also referred to as specific gravity) then would be the ratio of density of a given substance to the density of a given base material. The use of relative density is preferred over the term specific gravity since the latter means relative density in connection with water.

Relative density is a unit-less quantity. If some substance is denser than water, then its relative density will be greater than one and will sink in water. If the resulting relative density is exactly 1, then it goes to say that the densities are equal. If a substance's relative density is less than one then it is less dense than the reference and will float in water.

Summary:

1. Relative is always in proportion to a whole. Absolute is the total of all existence.
2. Relative is dependent while absolute is independent.
3. Absolute is capable of being thought of or conceived by itself alone.

The natural extension of the notion that there is an Absolute/Relative dichotomy is the notion of a self-contradiction.

The Paradox Principle

The purpose of this section is to begin the discussion of the notion that paradox, in the sense of self-contradiction, lies at the foundation of existence in space and function in time, as in "Tao produced the One; the One produced the Two" according to Tao's Template. In this view, the appearance of a paradox in some particular phenomenon is not destructive (meaning that something is horribly wrong); rather it is constructive, in that it points to a meta phenomenon. Thus, paradox is not a problem, it is the solution to the problem of manifestation versus non-manifestation.

Let's see what Wikipedia has to say on the subject.

INTRODUCTION

A paradox is a logically self-contradictory statement or a statement that runs contrary to one's expectation. It is a statement that, despite apparently valid reasoning from true premises, leads to a seemingly self-contradictory or a logically unacceptable conclusion. A paradox usually involves contradictory-yet-interrelated elements that exist simultaneously and persist over time. They result in "persistent contradiction between interdependent elements" leading to a lasting "unity of opposites".

The key word here is "logic" in that logic is typically predicated on the so-called "law of the excluded middle", that something cannot be both true and false. The Tao and the One are not thus constrained; they are pre-logical and/or meta-logical. That a new logic is required to understand phenomena in the real world is acknowledged:

In logic, many paradoxes exist that are known to be invalid arguments, yet are nevertheless valuable in promoting critical thinking, while other paradoxes have revealed errors in definitions that were assumed to be rigorous, and have caused axioms of mathematics and logic to be re-examined. One example is [mathematician, logician] Russell's paradox, which questions whether a "list of all lists that do not contain themselves" would include itself, and showed that attempts to found set theory on the identification of sets with properties or predicates were flawed. Others, such as Curry's paradox, cannot be easily resolved by making foundational changes in a logical system.

The essence of Russell's paradox is self-reference. In the case of Tao, self-reference is the only way to "produce the One".

Introduction

Common themes in paradoxes include self-reference, infinite regress, circular definitions, and confusion or equivocation between different levels of abstraction. Patrick Hughes outlines three laws of the paradox:

Self-reference

An example is the statement "This statement is false", a form of the liar paradox. The statement is referring to itself. Another example of self-reference is the question of whether the barber shaves himself in the barber paradox. Yet another example involves the question "Is the answer to this question 'No'?"

This paradox is resolved by Tao producing an infinite regress of self-references, aka "space".

Contradiction

"This statement is false"; the statement cannot be false and true at the same time. Another example of contradiction is if a man talking to a genie wishes that wishes couldn't come true. This contradicts itself because if the genie grants their wish, they did not grant their wish, and if the genie refuses to grant their wish, then he did indeed grant their wish, therefore making it impossible either to grant or not grant their wish without leading to a contradiction.

This paradox is resolved by inventing a potentially infinite regress of self-contradictions, aka "time".

Vicious circularity, or infinite regress

"This statement is false"; if the statement is true, then the statement is false, thereby making the statement true. Another example of vicious circularity is the following group of statements: "The following sentence is true." and "The previous sentence is false."

It is axiomatic in the TT-NS=PAS schema, which starts/ends with Tao, that the Oneness of Motion and the Twoness of space/time are produced by this principle self-referential contradictory infinite circularity. I do not say 'vicious circular regress' because that would characterize a self-destructive Cosmos, which is not what we experience. Rather, I prefer to say 'virtuous circular progress', because that is self-creative, which is what we experience in expanding and complexifying space/time.

Note that word "circularity", and note that the word circularity applies to a phenomenon in space and that the word cyclicity applies to phenomena in time. In mathematical terms, the immanent Tao producing the One is, in mathematical terms, like infinity producing finity. The paradox is resolved by the notion that zero and infinity are reciprocal to each other in terms of mathematics, and that space and time are reciprocal to each other in terms of physics, and that therefore circularity and cyclicity are the reciprocal of each other in terms of potential phenomena. What "reciprocal" means in this context is that infinite circularity = zero cyclicity, and vice versa. One way to visualize this is to contemplate the graph of a circle: it is both finite and infinite

The Wikipedia article continues with a discussion of various kinds of 'paradox' other than the self-referential kind, but they are not relevant to the point that I want to make here, namely that the Cosmos emerged from the 'paradox' of Tao's primordial self-reference, and Cosmos continues to emerge in the here and now, and the Cosmos presumably has the potential to continue to emerge infinitely and eternally. For a discussion of the notion of "Potential versus Actual", refer to

Quine's classification

W. V. O. Quine (1962) distinguished between three classes of paradoxes:

According to Quine's classification of paradoxes:

A veridical paradox produces a result that appears absurd, but is demonstrated to be true nonetheless. The paradox of Frederic's birthday in *The Pirates of Penzance* establishes the surprising fact that a twenty-one-year-old would have had only five birthdays had he been born on a leap day. Likewise, Arrow's impossibility theorem demonstrates difficulties in mapping voting results to the will of the people. Monty Hall paradox (or equivalently three prisoners problem) demonstrates that a decision that has an intuitive fifty-fifty chance is in fact heavily biased towards making a decision that, given the intuitive conclusion, the player would be unlikely to make. In 20th-century science, Hilbert's paradox of the Grand Hotel, Schrödinger's cat, Wigner's friend or the Ugly duckling theorem are famously vivid examples of a theory being taken to a logical but paradoxical end.

A falsidical paradox establishes a result that not only appears false but actually is false, due to a fallacy in the demonstration. The various invalid mathematical proofs (e.g., that $1 = 2$) are classic examples of this, often relying on a hidden division by zero. Another example is the inductive form of the horse paradox, which falsely generalises from true specific statements. Zeno's paradoxes are 'falsidical', concluding, for example, that a flying arrow never reaches its target or that a speedy runner cannot catch up to a tortoise with a small head-start. Therefore, falsidical paradoxes can be classified as fallacious arguments.

A paradox that is in neither class may be an antinomy, which reaches a self-contradictory result by properly applying accepted ways of reasoning. For example, the Grelling–Nelson paradox points out genuine problems in our understanding of the ideas of truth and description.

A fourth kind, which may be alternatively interpreted as a special case of the third kind, has sometimes been described since Quine's work:

A paradox that is both true and false at the same time and in the same sense is called a *dialetheia*. In Western logics, it is often assumed, following Aristotle, that no *dialetheia* exist, but they are sometimes accepted in Eastern traditions (e.g. in the Mohists,[23] the Gongsun Longzi,[24] and in Zen[25]) and in some paraconsistent logics. It would be mere equivocation or a matter of degree, for example, to both affirm and deny that "John is here" when John is halfway through the door, but it is self-contradictory simultaneously to affirm and deny the event.

Ramsey's classification

Frank Ramsey drew a distinction between logical paradoxes and semantic paradoxes, with Russell's paradox belonging to the former category, and the liar paradox and Grelling's paradoxes to the latter.[26] Ramsey introduced the by-now standard distinction between logical and semantical contradictions. Logical contradictions involve mathematical or logical terms like class and number, and hence show that our logic or mathematics is problematic. Semantical contradictions involve, besides purely logical terms, notions like thought, language, and symbolism, which, according to Ramsey, are empirical (not formal) terms. Hence these contradictions are due to faulty ideas about thought or language, and they properly belong to epistemology.[27]

In philosophy

A taste for paradox is central to the philosophies of Laozi, Zeno of Elea, Zhuangzi, Heraclitus, Bhartṛhari, Meister Eckhart, Hegel, Kierkegaard, Nietzsche, and G.K. Chesterton, among many others. Søren Kierkegaard, for example, writes in the *Philosophical Fragments* that:

But one must not think ill of the paradox, for the paradox is the passion of thought, and the thinker without the paradox is like the lover without passion: a mediocre fellow. But the ultimate potentiation of every passion is always to will its own downfall, and so it is also the ultimate passion of the understanding to will the collision, although in one way or another the collision must become its downfall. This, then, is the ultimate paradox of thought: to want to discover something that thought itself cannot think.[28]

In medicine

A paradoxical reaction to a drug is the opposite of what one would expect, such as becoming agitated by a sedative or sedated by a stimulant. Some are common and are used regularly in medicine, such as the use of stimulants such as Adderall and Ritalin in the treatment of attention deficit hyperactivity disorder (also known as ADHD), while others are rare and can be dangerous as they are not expected, such as severe agitation from a benzodiazepine.[29]

The actions of antibodies on antigens can rarely take paradoxical turns in certain ways. One example is antibody-dependent enhancement (immune enhancement) of a disease's virulence; another is the hook effect (prozone effect), of which there are several types. However, neither of these problems is common, and overall, antibodies are crucial to health, as most of the time they do their protective job quite well.

In the smoker's paradox, cigarette smoking, despite its proven harms, has a surprising inverse correlation with the epidemiological incidence of certain diseases.

Self-reference

Self-reference is a concept that involves referring to oneself or one's own attributes, characteristics, or actions. It can occur in language, logic, mathematics, philosophy, and other fields. In natural or formal languages, self-reference occurs when a sentence, idea or formula refers to itself. The reference may be expressed either directly — through some intermediate sentence or formula — or by means of some encoding. In philosophy, self-reference also refers to the ability of a subject to speak of or refer to itself, that is, to have the kind of thought expressed by the first person nominative singular pronoun "I" in English. Self-reference is studied and has applications in mathematics, philosophy, computer programming, second-order cybernetics, and linguistics, as well as in humor. Self-referential statements are sometimes paradoxical, and can also be considered recursive.

In logic, mathematics and computing

In classical philosophy, paradoxes were created by self-referential concepts such as the omnipotence paradox of asking if it was possible for a being to exist so powerful that it could create a stone that it could not lift. The Epimenides paradox, 'All Cretans are liars' when uttered by an ancient Greek Cretan was one of the first recorded versions. Contemporary philosophy sometimes employs the same technique to demonstrate that a supposed concept is meaningless or ill-defined.

In mathematics and computability theory, self-reference (also known as impredicativity) is the key concept in proving limitations of many systems. Gödel's theorem uses it to show that no formal consistent system of mathematics can ever contain all possible mathematical truths, because it cannot prove some truths about its own structure. The halting problem equivalent, in computation theory, shows that there is always some task that a computer cannot perform, namely reasoning about itself. These proofs relate to a long tradition of mathematical paradoxes such as Russell's paradox and Berry's paradox, and ultimately to classical philosophical paradoxes.

Refer to the chapter "**Gödel's Incompleteness Theorems**" in Chapter Xx. Basically and briefly, I understand one of the consequence to be that, in order to be complete, a formal (logically structured) system such as the universe, must include paradox or self-contradiction at its foundation, which is one of the notions that I claim is embodied in Tao's Template.

In game theory, undefined behaviors can occur where two players must model each other's mental states and behaviors, leading to infinite regress.

Refer to the section "**Infinite Regress**" in Chapter Xx. Basically and briefly,

In computer programming, self-reference occurs in reflection, where a program can read or modify its own instructions like any other data. Numerous programming languages support reflection to some extent with varying degrees of expressiveness. Additionally, self-reference is seen in recursion (related to the mathematical recurrence relation) in functional programming, where a code structure refers back to itself during computation. 'Taming' self-reference from potentially paradoxical concepts into well-behaved recursions has been one of the great successes of computer science, and is now used routinely in, for example, writing compilers using the 'meta-language' ML. Using a compiler to compile itself is known as bootstrapping. Self-modifying code is possible to write (programs which operate on themselves), both with assembler and with functional languages such as Lisp, but is generally discouraged in real-world programming. Computing hardware makes fundamental use of self-reference in flip-flops, the basic units of digital memory, which convert potentially paradoxical logical self-relations into memory by expanding their terms over time. Thinking in terms of self-reference is a pervasive part of programmer culture, with many programs and acronyms named self-referentially as a form of humor, such as GNU ('GNU's not Unix') and PINE ('Pine is not Elm'). The GNU Hurd is named for a pair of mutually self-referential acronyms. ETC [<https://en.wikipedia.org/wiki/Self-reference> — retrieved 01 June 2023]

Auto-catalysis

Auto-didactic

Self-actualization

Circularity in Space and Cyclicity in Time

Autopoiesis

The term autopoiesis (from Greek αὐτο- (auto-) 'self', and ποίησις (poiesis) 'creation, production') refers to a system capable of producing and maintaining itself by creating its own parts. The term was introduced in the 1972 publication *Autopoiesis and Cognition: The Realization of the Living* by Chilean biologists Humberto Maturana and Francisco Varela to define the self-maintaining chemistry of living cells. The concept has since been applied to the fields of cognition, systems theory, architecture, and sociology. Niklas Luhmann briefly introduced the concept of autopoiesis to organizational theory. ETC [<https://en.wikipedia.org/wiki/Autopoiesis> — retrieved 01 June 2023]

[[say something about the finite and the infinite, and infinitude conceiving finitude.]]

Bootstrap

Symmetry Breaking

[[This section might not work well in this Principle; it needs further thought.]]

Dual-Aspect Monism

George Spencer-Brown: *The Laws of Form*

Let's start with the science of physics

SYMMETRY BREAKING

In physics, symmetry breaking is a phenomenon where a disordered but symmetric state collapses into an ordered, but less symmetric state. This collapse is often one of many possible bifurcations that a particle can take as it approaches a lower energy state. Due to the many possibilities, an observer may assume the result of the collapse to be arbitrary [random]. This phenomenon is fundamental to quantum field theory (QFT), and further, contemporary understandings of physics....

In an infinite system (Minkowski spacetime) symmetry breaking occurs, however in a finite system (that is, any real super-condensed system), the system is less predictable, but in many cases quantum tunneling occurs. Symmetry breaking and tunneling relate through the collapse of a particle into non-symmetric state as it seeks a lower energy.

Symmetry breaking can be distinguished into two types, explicit and spontaneous. They are characterized by whether the equations of motion fail to be invariant, or the ground state fails to be invariant.

Non-technical description

This section describes spontaneous symmetry breaking. In layman's terms, this is the idea that for a physical system, the lowest energy configuration (the vacuum state) is not the most symmetric configuration of the system. Roughly speaking there are three types of symmetry that can be broken: discrete, continuous and gauge, ordered in increasing technicality. [https://en.wikipedia.org/wiki/Symmetry_breaking — retrieved 30 May 2023]

The point to be emphasized here is that when the One (= symmetry) produced the Two (= breaking), the Two are not identical, they were complementary, meaning that the two halves are parts of a whole. Start from the premise that the Tao is primordial Consciousness, that Consciousness is defined as that which makes and breaks distinctions, that the term “produced” refers to the process of fragmentation where Tao experiences itself as if it were not itself ...

Self-simulation hypothesis of the Quantum Gravity Research Foundation (Klee Erwin), John Wheeler

Reciprocity, Complementarity, Conjugate Variables, Figure/Ground, Taijitu Tango

[[Quote Wikipedia with subsections on these various terms that mean the same thing. There is some question in my mind about how much I want to wade into the weeds of fundamental physics in my explanation of Tao's Template, but it might be useful in explaining the difference between the two aspects of Twoness, charted as the 'horizontal' complementarity in terms of space-like levels and the 'vertical' complementarity in terms of time-like stages, in keeping with the convention of space vs time graphs on the “complex plane”. Maybe that should only be included in the *Cosmology* book.

both/and logic versus either/or logic]]

Complementarity

What is referred to as Twoness in the NS schema is referred to as “complementarity” in physics. It does not say so in the following quoted Wikipedia article on the subject, but elsewhere [where?] it is said that the originator of the complementarity principle in physics, Danish physicist Niels Bohr, got the idea from the notion of yin and yang in oriental cosmology, about which I have much to say in this *Cosmogony* book.

INTRODUCTION TO COMPLEMENTARITY

In physics, complementarity is a conceptual aspect of quantum mechanics that Niels Bohr regarded as an essential feature of the theory. The complementarity principle holds that objects have certain pairs of complementary properties which cannot all be observed or measured simultaneously. An example of such a pair is position and momentum. Bohr considered one of the foundational truths of quantum mechanics to be the fact that setting up an experiment to measure one quantity of a pair, for instance the position of an electron, excludes the possibility of measuring the other, yet understanding both experiments is necessary to characterize the [entirety of the] object under study. In Bohr's view, the behavior of atomic and subatomic objects cannot be

separated from the measuring instruments that create the context in which the measured objects behave. Consequently, there is no “single picture” that unifies the results obtained in these different experimental contexts, and only the “totality of the phenomena” together can provide a completely informative description.

I understand that paragraph to mean that a fundamental object (such as an electron), which is known to have a Oneness in terms of “space”, also has a Twoness in terms of “time”, and that is why both sides of the time-like duality cannot be measured or observed or known “simultaneously”, meaning “at the same time”. It takes two perspectives to get to know the whole picture. Physical measuring instruments cannot ‘know’ the entirety of an object that exists as a Oneness in space but also functions as a Twoness in time because the instrument also exists as a Oneness in space but also functions as a Twoness in time because the instrument is changed to know the other half of the Twoness.

The discovery and formalization in physics of the concept of complementarity is the same as the notion expressed in Tao’s Template that “the One produced the Two”. What is not stated explicitly in Tao’s Template is that, if Tao is defined as Knowledge, in the bifurcation process, each half of the Two loses knowledge of the other half.

The next portion of the Wikipedia article makes it clearer that complementarity has to do with ‘knowledge’.

HISTORY

Niels Bohr apparently conceived of the principle of complementarity during a skiing vacation in Norway in February and March 1927, during which he received a letter from Werner Heisenberg regarding an as-yet-unpublished result, a thought experiment about a microscope using gamma rays. This thought experiment implied a trade-off between uncertainties that would later be formalized as the uncertainty principle. To Bohr, Heisenberg’s paper did not make clear the distinction between a position measurement merely disturbing the momentum value that a particle carried and the more radical idea that momentum was meaningless or undefinable in a context where position was measured instead. Upon returning from his vacation, by which time Heisenberg had already submitted his paper for publication, Bohr convinced Heisenberg that the uncertainty trade-off was a manifestation of the deeper concept of complementarity. Heisenberg duly appended a note to this effect to his paper, before its publication, stating:

Bohr has brought to my attention [that] the uncertainty in our observation does not arise exclusively from the occurrence of discontinuities, but is tied directly to the demand that we ascribe equal validity to the quite different experiments which show up in the [particulate] theory on one hand, and in the wave theory on the other hand.

What Bohr and Heisenberg were saying there is that the position/momentum duality in the atomic realm corresponds to the particle/wave duality in the physics realm. What I will say here is that they both correspond to the yin/yang duality in Tao’s Template and the Ordinality/Cardinality duality in the Process/Aspect System. My assertions are discussed at some length in [Chapter Xx](#), “Yin + Yang = Chi”.

Bohr extended his notion of complementarity as a fundamental feature of the Cosmos to make a complementarity between Einsteinian relativity theory and quantum physics theory:

... Bohr pointed out that just as the finitude of the speed of light implies the impossibility of a sharp separation between space and time (relativity), the finitude of the quantum of action implies the impossibility of a sharp separation between the behavior of a system and its interaction with the measuring instruments and leads to the well-known difficulties with the concept of ‘state’ in quantum theory; the notion of complementarity is intended to capture this new situation in epistemology created by quantum theory. Physicists F.A.M. Frescura and Basil Hiley have summarized the reasons for the introduction of the principle of complementarity in physics as follows:

In the traditional view, it is assumed that there exists a reality in space-time and that this reality is a given thing, all of whose aspects can be viewed or articulated at any given moment. Bohr was the first to point out that quantum mechanics called this traditional outlook into question. To him the “indivisibility of the quantum of action” [...] implied that not all aspects of a system can be viewed simultaneously. By using one particular piece of apparatus only certain features could be made manifest at the expense of others, while with a different piece of apparatus another complementary aspect could be made manifest in such a way that the original set became non-manifest, that is, the original attributes were no longer well defined. For Bohr, this was an indication that the principle of complementarity, a principle that he had previously known to appear extensively in other intellectual disciplines but which did not appear in classical physics, should be adopted as a universal principle.

What neither Bohr nor Einstein realized then, and what is not generally recognized now, is that space and time are a Oneness appearing as a Twoness, a complementarity in which space and time are identical in every way, including that both are to be formulated in terms of a three-dimensional geometry. To do so, according to the NS schema, would help to unify physics; refer to [Chapter Xx, “---”](#) for more discussion about that. Furthermore, may I suggest that relativity, which is formulated in continuum mathematics, has a complementarity with quantum physics, which is formulated in discontinuum mathematics. Refer to the chapter “Digital + Analogue = Computation” for more discussion about that. Basically and briefly, Oneness is itself a complementarity, the notion that Oneness has Cardinal and Ordinal Poles, which I refer to as the maximum One which manifests in Einsteinian relativity theory (the Cosmos as the fragmentation of a Unit), and a minimum One which manifests in quantum mechanical theory (the Cosmos as the composite of a unit).

Complementarity was a central feature of Bohr’s reply to the EPR paradox, an attempt by Albert Einstein, Boris Podolsky and Nathan Rosen to argue that quantum particles must have position and momentum even without being measured and so quantum mechanics must be an incomplete theory. The thought experiment proposed by Einstein, Podolsky and Rosen involved producing two particles and sending them far apart. The experimenter could choose to measure either the position or the momentum of one particle. Given that result, they could in principle make a precise prediction of what the corresponding measurement on the other, faraway particle would find. To Einstein, Podolsky and Rosen, this implied that the faraway particle must have precise values of both quantities whether or not that particle is measured in any way. Bohr argued in response that the deduction of a position value could not be transferred over to the situation where a momentum value is measured, and vice versa. [[>https://en.wikipedia.org/wiki/Complementarity_\(physics\)<](https://en.wikipedia.org/wiki/Complementarity_(physics)) — retrieved 07 June 2023]

Subsequent experiments confirmed that Bohr was correct and Einstein was wrong in this case. This means that uncertainty is not just referring to the fact that experiments cannot simultaneously determine both sides of a complementarity (Twoness), but that uncertainty is a feature of reality that goes all the way ‘down’ to the minimum Oneness and all the way ‘up’ to the maximum Oneness. And then, according to the Tao’s Template formalism, even if one gets beneath the uncertainty built into Twoness and arrives at Oneness, there is an uncertainty beyond the Oneness, known as Tao, or Chaos; refer to the chapter “Chaos + Cosmos = Complexity”.

There are interpretations of quantum mechanics that extend the principle of complementarity found in the quantum realm to complementarity in human consciousness. Our normal human state of consciousness is dualistic in that it exists (in space) and functions (in time) like other physical instruments, as stated in one of my previous comments in this subsection. This is commonly characterized as the notion that we have a subconscious mind that is normally inaccessible to our conscious mind. However, it is allegedly possible for humans in a non-dual state of consciousness (such as professed by Advaita Vedanta) to collapse a complementarity, to produce Oneness from Twoness.

Complementarity in physics appears in Tao’s Template, the phrase where it is said that the “Tao produced the One”, which is equivalent to saying that the Tao “forgot” the totality of what it is, thus making the primordial distinction between the known and the unknown. The un-created Tao experiencing the created Cosmos has “curiosity”; it is in the process of “learning”, meaning that the known “seeks” to understand the unknown.

Conjugate Variables

Reciprocity

A quick look at [>https://en.wikipedia.org/wiki/Reciprocity<](https://en.wikipedia.org/wiki/Reciprocity) reveals that the concept has been applied to many realms, namely law and trade, social sciences and humanities, physical sciences and engineering, and mathematics. In other words, the concept applies to the entire spectrum that is covered in this *Cosmogony* book.

[\[\[Do I want to talk about the difference between ontological interpretations of quantum mechanics versus epistemological interpretations? In this book or the *Cosmology* book? It hinges on the notion that consciousness](#)

if fundamental, which means it is epistemology “all the way down”; there is no ontology that is comprehensible.]]

Dual-Aspect Monism

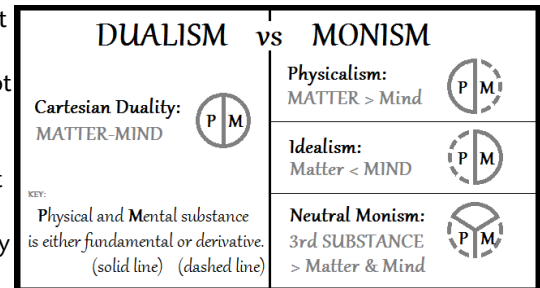
The ontology (notion about what is fundamentally real) that fits best with the Tao's Template ontology has the name of this section. The Wikipedia article is quoted here, as usual:

DOUBLE-ASPECT THEORY

In the philosophy of mind, double-aspect theory is the view that the mental and the physical are two aspects of, or perspectives on, the same substance. It is also called dual-aspect monism, not to be confused with mind–body dualism. The theory's relationship to neutral monism is ill-defined, but one proffered distinction says that whereas neutral monism allows the context of a given group of neutral elements to determine whether the group is mental, physical, both, or neither, double-aspect theory requires the mental and the physical to be inseparable and mutually irreducible (though distinct).

According to Harald Atmanspacher, “dual-aspect approaches consider the mental and physical domains of reality as aspects, or manifestations, of an underlying undivided reality in which the mental and the physical do not exist as separate domains. In such a framework, the distinction between mind and matter results from an epistemic split that separates the aspects of the underlying reality. Consequently, the status of the psychophysically neutral domain is considered as ontic relative to the mind–matter distinction.”

Dual-aspect theory is akin to neutral monism. This diagram contrasts it with physicalism and idealism, as well as Cartesian dualism.



Please take a look at that graphic long enough to understand what it conveys. Refer to Chapter X-x, “Reductionism + Emanationism = Emergence” for a thorough discussion of the notion promulgated in the “reductionistic physicalism” ontology that mind emerges from matter mind, versus the notion promulgated in “emanationistic idealism” ontology that matter emerges from mind. In the Tao's Template ontology both ontologies are true, in accordance with the Paradox Principle [discussed where?]: there is a feedback between the two ontologies, meaning that existence and function works both directions, from Oneness to Twoness and from Twoness to Oneness.

Theories

Possible double-aspect theorists include:

Baruch Spinoza [philosopher, who believed that Nature or God (Deus sive Natura) had two aspects, Extension and Mind.

Arthur Schopenhauer [philosopher], who considered the fundamental aspects of reality to be Will and Representation.

David Bohm [physicist], who used implicate and explicate order as a means of displaying dual-aspects.

Gustav Fechner [physicist, philosopher, psychologist]

Mark Solms, neuropsychanalyst, for whom dual-aspect monism represents a matrix of ontological juxtaposition of psychoanalytical and neuroscientific knowledge from two distinct perspectives: looking from the inside and looking from the outside.

George Henry Lewes [philosopher, psychologist]

Thomas Jay Oord [theologian, philosopher] — calls his version “Material-Mental Monism”

John Polkinghorne [physicist, theologian]

Brian O’Shaughnessy [philosopher] on the dual aspect theory of the Will

Thomas Nagel [philosopher]

David Chalmers [philosopher], who explores a double-aspect view of information, with similarities to [philosopher] Kenneth Sayre’s information-based neutral monism

Note that in that list of dual-aspect monists are philosophers and physicists and psychologist and theologians. Obviously, a thorough review of their work would provide the reader with a thorough description

dual-aspect monism as it applies to many realms of being in space and doing in time. In the Tao's Template ontology, the primordial duality is space/Aspect and time/Process and the primordial monism is the Oneness of motion as produced by the Tao at rest.

The Wikipedia article continued with a discussion of the collaborative work of a physicist and a psychologist. This is not surprising to me that those two science types would compare notes because, per the PAS schema, the “personality” of the universe and the “personality” of humans are instantiations of the same principles. The break in symmetry happens when a consciousness integrity (i.e. “soul”) is embedded in one or the other rather than viewing them both from a ‘higher’ unified perspective (i.e. “oversoul”)

Pauli-Jung conjecture

The Pauli–Jung conjecture is a collaboration in metatheory between physicist Wolfgang Pauli and analytical psychologist Carl Jung, centered on the concept of synchronicity. It was mainly developed between the years 1946 and 1954, four years before Pauli’s death, and speculates on a double-aspect perspective within the disciplines of both collaborators. Pauli additionally drew on various elements of quantum theory such as complementarity, nonlocality, and the observer effect in his contributions to the project. Jung and Pauli thereby “offered the radical and brilliant idea that the currency of these correlations is not (quantitative) statistics, as in quantum physics, but (qualitative) meaning.”

Contemporary physicist T. Filk writes that quantum entanglement, being “a particular type of acausal quantum correlations”, was plausibly taken by Pauli as “a model for the relationship between mind and matter in the framework [...] he proposed together with Jung.” Specifically, quantum entanglement may be the physical phenomenon which most closely represents the concept of synchronicity.

Pauli and Jung’s approach to dual-aspect monism has a very specific further feature, namely that different aspects may show a complementarity in a quantum physical sense. That is, the Pauli-Jung conjecture implies that with regard to mental and physical states there may be incompatible descriptions of different parts that emerge from the whole. This stands in close analogy to quantum physics, where complementary properties cannot be determined jointly with accuracy.

Atmanspacher further refers to Paul Bernays’ views on complementarity in physics and in philosophy when he states that “Two descriptions are complementary if they mutually exclude each other, yet are both necessary to describe a situation exhaustively.

Tao Produced the One

Strange Loop

[[I might not be able to make this subsection relevant to the NS, although “Tao produced the One” is a self-referential paradox, and each Transition and Feedback (see below) is likewise.]]

A strange loop is a cyclic structure that goes through several levels in a hierarchical system. It arises when, by moving only upwards or downwards through the system, one finds oneself back where one started. Strange loops may involve self-reference and paradox. The concept of a strange loop was proposed and extensively discussed by Douglas Hofstadter in [his 1979 book] *Gödel, Escher, Bach*, and is further elaborated in Hofstadter’s book *I Am a Strange Loop*, published in 2007.

A tangled hierarchy is a hierarchical consciousness system in which a strange loop appears.

Definitions

A strange loop is a hierarchy of levels, each of which is linked to at least one other by some type of relationship. A strange loop hierarchy is “tangled” (Hofstadter refers to this as a “heterarchy”), in that there is no well defined highest or lowest level; moving through the levels, one eventually returns to the starting point, i.e., the original level. Examples of strange loops that Hofstadter offers include: many of the works of M. C. Escher, the Canon 5. a 2 from Bach’s Musical Offering, the information flow network between DNA and enzymes through protein synthesis and DNA replication, and self-referential Gödelian statements in formal systems.

In *I Am a Strange Loop*, Hofstadter defines strange loops as follows:

And yet when I say “strange loop”, I have something else in mind — a less concrete, more elusive notion. What I mean by “strange loop” is — here goes a first stab, anyway — not a physical circuit but an abstract loop in which, in the series of stages that constitute the cycling-around, there is a shift from one level of abstraction (or structure) to another, which feels like an upwards movement in an hierarchy, and yet somehow the successive “upward” shifts turn out to give rise to a closed cycle. That is, despite one’s sense of departing ever further from one’s origin, one winds up, to one’s shock, exactly where one had started out. In short, a strange loop is a paradoxical level-crossing feedback loop. (pp. 101-102)

In cognitive science

According to Hofstadter, strange loops take form in human consciousness as the complexity of active symbols in the brain inevitably leads to the same kind of self-reference which Gödel proved was inherent in any complex logical or arithmetical system in his incompleteness theorem. Gödel showed that mathematics and logic contain strange loops: propositions that not only refer to mathematical and logical truths, but also to the symbol systems expressing those truths. This leads to the sort of paradoxes seen in statements such as “This statement is false”, wherein the sentence’s basis of truth is found in referring to itself and its assertion, causing a logical paradox.

Hofstadter argues that the psychological self arises out of a similar kind of paradox. We are not born with an “I” — the ego emerges only gradually as experience shapes our dense web of active symbols into a tapestry rich and complex enough to begin twisting back upon itself. According to this view the psychological “I” is a narrative fiction, something created only from intake of symbolic data and its own ability to create stories about itself from that data. The consequence is that a perspective (a mind) is a culmination of a unique pattern of symbolic activity in our nervous systems, which suggests that the pattern of symbolic activity that makes identity, that constitutes subjectivity, can be replicated within the brains of others, and perhaps even in artificial brains.

Strangeness

The “strangeness” of a strange loop comes from our way of perceiving, because we categorize our input in a small number of “symbols” (by which Hofstadter means groups of neurons standing for one thing in the outside world). So the difference between the video-feedback loop and our strange loops, our “I”s, is that while the former converts light to the same pattern on a screen, the latter categorizes a pattern and outputs its essence, so that as we get closer and closer to our essence, we get further down our strange loop.

Downward causality

Hofstadter thinks our minds appear to us to determine the world by way of “downward causality”, which refers to a situation where a cause-and-effect relationship in a system gets flipped upside-down. Hofstadter says this happens in the proof of Gödel’s incompleteness theorem:

Merely from knowing the formula’s meaning, one can infer its truth or falsity without any effort to derive it in the old-fashioned way, which requires one to trudge methodically “upwards” from the axioms. This is not just peculiar; it is astonishing. Normally, one cannot merely look at what a mathematical conjecture says and simply appeal to the content of that statement on its own to deduce whether the statement is true or false. (pp. 169-170)

Hofstadter claims a similar “flipping around of causality” appears to happen in minds possessing self-consciousness. The mind perceives itself as the cause of certain feelings (“I” am the source of my desires), while according to popular scientific models, feelings and desires are strictly caused by the interactions of neurons.

The parallels between downward causation in formal systems and downward causation in brains are explored by Theodor Nenu (2022), together with other aspects of Hofstadter’s metaphysics of mind. Nenu also questions the correctness of the above quote by focusing on the sentence which “says about itself” that it is provable (also known as a Henkin-sentence, named after logician Leon Henkin). It turns out that under suitable metamathematical choices (where the Hilbert-Bernays provability conditions do not obtain), one can construct formally undecidable (or even formally refutable) Henkin-sentences for the arithmetical system under investigation. This system might very well be Hofstadter’s Typographical Number Theory used in Gödel, Escher, Bach or the more familiar Peano Arithmetic or some other sufficiently rich formal arithmetic. Thus, there are examples of sentences “which say about themselves that they are provable”, but they don’t exhibit the sort of downward causal powers described in the displayed quote. ETC [https://en.wikipedia.org/wiki/Strange_loop — retrieved 01 June 2023]

The One

Monism philosophy
finitude as distinct from infinitude
inertia law of motion via Newton
cosmological principle of uniformity across space and time
the fundamentality of symmetry

The One Produced the Two

Dual Aspect Monism

Symmetry Breaking

Feedback Loop

The Two

Dichotomies

Dualism

Binary Opposition

Introduction

A binary opposition (also binary system) is a pair of related terms or concepts that are opposite in meaning. Binary opposition is the system of language and/or thought by which two theoretical opposites are strictly defined and set off against one another. It is the contrast between two mutually exclusive terms, such as on and off, up and down, left and right. Binary opposition is an important concept of structuralism, which sees such distinctions as fundamental to all language and thought. In structuralism, a binary opposition is seen as a fundamental organizer of human philosophy, culture, and language.

Binary opposition originated in Saussurean structuralist theory. According to Ferdinand de Saussure, the binary opposition is the means by which the units of language have value or meaning; each unit is defined in reciprocal determination with another term, as in binary code. It is not a contradictory relation but a structural, complementary one. Saussure demonstrated that a sign's meaning is derived from its context (syntagmatic dimension) and the group (paradigm) to which it belongs. An example of this is that one cannot conceive of 'good' if we do not understand 'evil'.

Typically, one of the two opposites assumes a role of dominance over the other. The categorization of binary oppositions is "often value-laden and ethnocentric", with an illusory order and superficial meaning. Furthermore, Pieter Fourie discovered that binary oppositions have a deeper or second level of binaries that help to reinforce meaning. As an example, the concepts hero and villain involve secondary binaries: good/bad, handsome/ugly, liked/disliked, and so on.

Theory of binaries

A classic example of binary opposition is the presence-absence dichotomy. According to structuralism, distinguishing between presence and absence, viewed as polar opposites, is a fundamental element of thought in many cultures. In addition, according to post-structuralist criticisms, presence occupies a position of dominance

in human society over absence, because absence is traditionally seen as what you get when you take away presence. (Had absence been dominant, presence might have most naturally been seen as what you get when you take away an absence.)

According to Jacques Derrida, meaning is often defined in terms of binary oppositions, where “one of the two terms governs the other.”

An example of binary opposition is the male-female dichotomy. A post-structuralist view is that male can be seen, according to traditional thought, as dominant over female because male is the presence of a phallus, while the vagina is an absence or loss. John Searle has suggested that the concept of binary oppositions — as taught and practiced by postmodernists and poststructuralists — is specious and lacking in rigor.

[>https://en.wikipedia.org/wiki/Binary_opposition< — retrieved 14 June 2023]

The Two Produced the Three

Fundamentality of orthogonality aka perpendicularity

The Three

Trichotomy

A trichotomy is a three-way classificatory division. Some philosophers pursued trichotomies.

History

Important trichotomies discussed by Aquinas include the causal principles (agent, patient, act), the potencies for the intellect (imagination, cogitative power, and memory and reminiscence), and the acts of the intellect (concept, judgment, reasoning), with all of those rooted in Aristotle; also the transcendentals of being (unity, truth, goodness) and the requisites of the beautiful (wholeness, harmony, radiance).

Kant expounded a table of judgments involving four three-way alternatives, in regard to (1) Quantity, (2) Quality, (3) Relation, (4) Modality, and, based thereupon, a table of four categories, named by the terms just listed, and each with three subcategories. Kant also adapted the Thomistic acts of intellect in his trichotomy of higher cognition — (a) understanding, (b) judgment, (c) reason — which he correlated with his adaptation in the soul’s capacities — (a) cognitive faculties, (b) feeling of pleasure or displeasure, and (c) faculty of desire — of Tetens’s trichotomy of feeling, understanding, will. In his *Logic* (113) Kant notes that all “polytomy are empirical” and “cannot be taught in logic”.

Hegel held that a thing’s or idea’s internal contradiction leads in a dialectical process to a new synthesis that makes better sense of the contradiction. The process is sometimes described as thesis, antithesis, synthesis. It is instanced across a pattern of trichotomies (e.g. being-nothingness-becoming, immediate-mediate-concrete, abstract-negative-concrete); such trichotomies are not just three-way classificatory divisions; they involve trios of elements functionally interrelated in a process. They are often called triads (but ‘triad’ does not have that as a fixed sense in philosophy generally).

Charles Sanders Peirce built his philosophy on trichotomies and triadic relations and processes, and framed the “Reduction Thesis” that every predicate is essentially either monadic (quality), dyadic (relation of reaction or resistance), or triadic (representational relation), and never genuinely and irreducibly tetradic or larger.

Examples of philosophical trichotomies

Plato’s 3 parts of man

Nous (mind, intellect). Psyche (soul). Soma (body).

Plato’s 3 transcendentals

Truth (logic, verum). Goodness (ethics, bonum). Beauty (aesthetics, pulchrum).

Plato’s tripartite soul

Logistikon (logical, rational). Thymoeides (spirited, various animal qualities). Epithymetikon (appetitive, volitive, libidinous, desiring).

[>https://en.wikipedia.org/wiki/Plato's_theory_of_soul<]

Aristotle's 3 kinds of soul	Threptike (nutritive, vegetative). Aisthetike (sensitive, animal). Noetike (rational, human).
Aristotle's 3 main modes of persuasion	Ethos. Pathos. Logos.
Plotinus' three principles	The One. The Intellect. The Soul.
Shema's 3 elements of man	לב / Kardia (heart). נֶפֶשׁ (nephesh) / Psyche (soul). דִּינָא / Dynamis (power)
Saint Paul's tripartite nature of humanity (I Thes. 5:23)	Soma (body). Psyche (soul). Pneuma (spirit). (Paul uses alternative concepts in other passages: kardia [heart], eso kai exo anthropos [inner and outer human being]; nous [mind]; suneidesis [conscience]; sarx [flesh]).
Saint Augustine's 3 Laws	Divine Law. Natural Law. Temporal, Positive, or Human Law.
Saint Augustine's 3 features of the soul	Intellect. Will. Memory. (Saint John of the Cross, OCD follows this also, but may erroneously identify them as 3 distinct powers.)
Saint Albertus Magnus' 3 Universals	<i>Ante rem</i> (Idea in God's mind). <i>In re</i> (potential or actual in things). <i>Post rem</i> (mentally abstracted).
Aquinas' 3 causal principles (from Aristotle)	Agent. Patient. Act.
Aquinas' 3 potencies for intellect (Aristotle)	Imagination. Cogitative power (or, in animals, instinct). Memory (and, in humans, reminiscence).
Aquinas' 3 acts of intellect (based in Aristotle)	Conception. Judgment. Reasoning.
Aquinas' 3 transcendentals of being	Unity. Truth. Goodness.
Aquinas' 3 requisites for the beautiful	Wholeness or perfection. Harmony or due proportion. Radiance.
Sir Francis Bacon's 3 Tables	Presence. Absence. Degree.
Bacon's 3 faculties of mind	Memory. Reason. Imagination.
Bacon's 3 branches of knowledge	History. Philosophy. Poetry. (Inspired the figurative system of human knowledge of Diderot and d'Alembert.)
Thomas Hobbes' 3 Fields	Physics. Moral Philosophy. Civil Philosophy.
John Dryden's 3 ways of transferring	Metaphrase. Paraphrase. Imitation.
Christian Wolff's 3 special metaphysics	Rational psychology. Rational cosmology. Rational theology.
Immanuel Kant's 3 faculties of soul	Faculties of knowledge. Feeling of pleasure or displeasure. Faculty of desire (which Kant regarded also as the will).
Kant's 3 higher faculties of cognition	Understanding. Judgment. Reason.
Kant's 3 judgments of quantity	Universal. Particular. Singular
Kant's 3 categories of quantity	Unity. Plurality. Totality
Kant's 3 judgments of quality	Affirmative. Negative. Infinite
Kant's 3 categories of quality	Reality. Negation. Limitation.
Kant's 3 judgments of relation	Categorical. Hypothetical. Disjunctive.
Kant's 3 categories of relation	Inherence and subsistence. Causality and dependence. Community. In other words: Substance and accident. Cause and effect. Reciprocity.
Kant's 3 judgments of modality	Problematical. Assertoric. Apodictic
Kant's 3 categories of modality	Possibility. Existence. Necessity
Johannes Nikolaus Tetens's 3 powers of mind	Feeling. Understanding. Will.
Hannah Arendt's <i>vita activa</i>	Labor, Work, Action
Hegel's 3 Spirits	Subjective Spirit. Objective Spirit. Absolute Spirit.
Søren Kierkegaard's 3 stages	Aesthetic. Ethical. Religious.

Charles Sanders Peirce's 3 categories	Quality of feeling. Reaction, resistance. Representation, mediation.
C. S. Peirce's 3 universes of experience	Ideas. Brute fact. Habit (habit-taking).
C. S. Peirce's 3 orders of philosophy	Phenomenology. Normative sciences. Metaphysics.
C. S. Peirce's 3 normatives	The good (esthetic). The right (ethical). The true (logical).
C. S. Peirce's 3 semiotic elements	Sign (representamen). Object. Interpretant.
C. S. Peirce's 3 grades of conceptual clearness	By familiarity. Of definition's parts. Of conceivable practical implications.
C. S. Peirce's 3 active principles in the Cosmos	Spontaneity, absolute chance. Mechanical necessity. Creative love.
Gottlob Frege's 3 realms of sense	The external, public, physical. The internal, private, mental. The Platonic, ideal but objective (to which sentences refer).
Sigmund Freud's structural model	Id, ego, and superego
Edmund Husserl's 3 Reductions	Phenomenological. Eidetic. Religious.
R. Steiner more threefold aspects.	Body, soul, and spirit. Imagination, inspiration, and intuition.
Korzybski's 3 types of life	Chemical-binder (i.e. plants). Space-binder (i.e. mammals). Time-binder (i.e. humans). Each one up the scale requires the previous one.
James Joyce's 3 aesthetic stages	Arrest (by wholeness). Fascination (by harmony). Enchantment (by radiance).
Jacques Lacan's 3 orders	Real, Symbolic, and Imaginary
Karl Popper's 3 worlds	Physical things and processes. Subjective human experience. Culture and objective knowledge
Louis Zukofsky's 3 aesthetic elements[20]	Shape. Rhythm. Style.
Maurice Merleau-Ponty's 3 fields	Physical. Vital. Human.
Maurice Merleau-Ponty's 3 categories	Quantity. Order. Meaning.
Eric Berne's transactional analysis	Parent, Adult, Child
Alan Watts' 3 world views	Life as machine (Western). Life as organism (Chinese). Life as drama (Indian).
[> https://en.wikipedia.org/wiki/Trichotomy_(philosophy) < — retrieved 14 June 2023]	

The Three Produced All Things

The Seven Levels of Preposterosity

[[Where does this belong?]]

1. That something should exist rather than nothing
2. That the something that exists is not pure chaos but has order or structure (Cosmos)
3. That there is an evolving creative balance between chaos and order
4. That the order itself has a logical and mathematical evolution
5. That the evolving order has generated life
6. That life has generated self-awareness in a mind
7. That self-awareness in the mind continues beyond the death of the body





Chapter I-x

ATTRIBUTES OF THE NATURAL SEQUENCE

DIALECTIC
AXIAL
DIMENSIONALITY
DIRECTIONALITY
ASPECT
PROCESS





Chapter I-x

PRINCIPLES OF THE NATURAL SEQUENCE

This is an introduction to **the next few sections** where **seven** principles are elaborated in more detail. These are regarded as “principles” because they are typical of the structure and meaning of the Natural Sequence. The principles are repeatedly mentioned and referred to in the entirety of this book, because they are typical of all complete instantiations of the Natural Sequence. The principles have names and descriptions.

My basic premise is that the Process/Aspect System (PAS) matrix is the fundamental ontology of the internal and external, the micro- and the macro- Cosmoses. A component of the PAS is the Natural Sequence (NS), which is derived from Tao’s Template (TT), the 42nd chapter of the *Tao Teh Ching*. My mission impossible, having chosen to accept it, is to hone my epistemology (theory about my knowledge of reality) — using the TT-NS-PAS ontology as a guide — so as to accelerate my immersion back into the ontology (theory about fundamental reality). The time-like developmental aspect of Tao’s Template is expressed in the word “produced”, thus “Tao produced the One, the One produced the Two, the Two produced the Three, the Three produced All things”. The process of production takes place between the numbered nodes. This is distinct from the space-like aspect of Tao’s Template, namely the mathematical primitives of Taoness, Oneness, Twoness, Threeness, and Allness. My book *The Tao of Cosmology* is about the space-like meaning of Tao’s Template; my book *The Tao of Cosmogony* is about the time-like meaning of Tao’s Template.

[[Paragraph on space-like levels as explained in *Cosmology* book versus time-like stages as explained in this *Cosmogony* book.]]

[[Think of a sequential presentation of these Principles according to some incremental didactic procedure.]]

[[Check whether Hofstadter’s GEB notions such as recursion, figure/ground, reductionism/holism can elucidate these principles.]]

[[The below four introductory sections might end up fitting better in a different Chapter.]]

[[Quantum Mechanics (QM) near the minimum One has its principles; General Relativity (GR) near the maximum One has its principles. The QM principles and the GR principles as presently understood seem to be at odds with each other. The scientific/philosophical aspiration is to reconcile them via a ‘deeper’ theory, a unified theory from which QM and GR naturally emerge (as in “Dual Aspect Monism”). Then the next question is: will the monistic/holistic theory of QM/GR apply the same principles to every level/stage, or every instantiation, of the Natural Sequence septenary that exists/functions in between those two extremes? That is to say, will QM and chemistry and biology and psychology and sociology and philosophy and theology and GR follow the same fundamental pattern? If so, then what is understood in one of those instantiations of the septenary can be used as metaphors to understand what is happening in the other instantiations; “its metaphors all the way down”. This chapter suggests what some of those universal general principles might be.]]

① General Systems Theory

The Natural Sequence is a systematic arrangement of archetypal components. The same as the Cosmos itself, the Natural Sequence schema is a whole that is made up of parts. One of the questions that this *Cosmogony* book addresses is the nature of the whole and the nature of the parts in terms of being in space (Attributes of Aspects), and the relationships of the whole and the parts in terms of doing in time (Attributes of Processes). My book *The Tao of Cosmology* emphasized the former, the structure of space; this book *The Tao of Cosmogony* emphasizes the latter, the structure of time. The aspiration and endeavor to discover and understand the

basics of being and doing, Aspect and Process, is called “general systems theory”. As usual, I let Wikipedia do most of the exposition of the subject at hand.

SYSTEMS THEORY

Systems theory is the interdisciplinary study of systems, i.e. cohesive groups of interrelated, interdependent parts that can be natural or human-made. Every system is bounded by space [Aspect] and time [Process], influenced by its environment, defined by its structure [in space] and purpose [in space and time], and expressed through its functioning [in time]. A system may be more than the sum of its parts if it expresses synergy or emergent behavior.

That definition includes some key terms that I address at more length in sections further on: system, structure, purpose, synergy, emergence. Systems are embedded in other systems as a nested hierarchy from the smallest to the largest realm in space, and from the earliest to the latest realm in time; this is discussed in a subsequent section on The Hierarchy Principle. Basically and briefly, the Hierarchy Principle is that there is a type of hierarchy when higher-later stages transcend the earlier-later stages, but also contain them as a subset. Synergy is discussed in the next section; emergence is discussed in this entire chapter. Teleology is discussed in the section by that name further on in this chapter.

Changing one part of a system may affect other parts or the whole system. It may be possible to predict these changes in patterns of behavior. For systems that learn and adapt, the growth and the degree of adaptation depend upon how well the system is engaged with its environment. Some systems support other systems, maintaining the other system to prevent failure. The goals of systems theory are to model a system’s dynamics, constraints, conditions, and to elucidate principles (such as purpose, measure, methods, tools) that can be discerned and applied to other systems at every level of nesting, and in a wide range of fields for achieving optimized equifinality.

The interaction of systems is covered in more detail in [Chapter X-x](#).

General systems theory is about developing broadly applicable concepts and principles, as opposed to concepts and principles specific to one domain of knowledge. It distinguishes dynamic or active systems from static or passive systems. Active systems are activity structures or components that interact in behaviors and processes. Passive systems are structures and components [in space] that are being processed [in time]. For example, a program is passive when it is a disc file and active when it runs in memory. The field is related to systems thinking, machine logic, and systems engineering.

[Activity and passivity are discussed in a section by that name in Chapter X-x.](#)

KEY CONCEPTS

- System: a group of interacting, interdependent parts that form a complex whole.
 - Boundaries: barriers that define a system and distinguish it from other systems in an environment.
 - Homeostasis: the tendency of a system to be resilient with respect to external disruption and to maintain its key characteristics.
 - Adaptation: the tendency of a system to make the internal changes necessary to protect itself and continue to fulfill its purpose.
 - Reciprocal transactions: circular [in space] or cyclical [in time] interactions that systems engage in such that they influence one another.
 - Feedback loop: the process by which systems self-correct based on observations of their current state.
 - Throughput: the rate of energy transfer between a system and its environment over time.
 - Microsystem: the system closest to the client.
 - Mesosystem: relationships among systems in an environment.
 - Exosystem: a relationship between two systems that has an indirect effect on a third system.
 - Macrosystem: a larger system that influences clients, such as policies, administration of entitlement programs, and culture.
 - Equifinality: the way systems can reach the same goal through different paths.
 - Open and closed systems
 - Chronosystem: a system composed of significant life events affecting adaptation.
 - Isomorphism: structural, behavioral, and developmental features that are shared across systems.
- [>https://en.wikipedia.org/wiki/Systems_theory< — 26 May 2022]

That was just the introduction, and of course the Wikipedia article continues with an elaboration of the ins and outs, ups and downs, backwards and forwards of the study of systems.

Science and philosophy are all about categorizing phenomena, and then systematizing the categories, in order to discern the structure of the universe.

① Structure

Hierarchy (refer to a following section) is just one kind of structure that is found in the orderly cCsmos, so let us first take a look at the definition and description of the concept of structure.

A structure is an arrangement and organization of interrelated elements in a material object or system, or the object or system so organized. Material structures include man-made objects such as buildings and machines and natural objects such as biological organisms, minerals and chemicals. Abstract structures include data structures in computer science and musical form. Types of structure include a hierarchy (a cascade of one-to-many relationships), a network featuring many-to-many links, or a lattice featuring connections between components that are neighbors in space. [<https://en.wikipedia.org/wiki/Structure> — retrieved 08 May 2022]

First of all, note the difference between “material” and “abstract” structures: in the Natural Sequence schema, material structures correlate with Ordinality, and abstract structures correlate with Cardinality. This applies to many realms and septenaries discussed in this *Cosmogony* book.

Second of all, note that there are ways other than hierarchy to understanding the way that the Cosmos exists and functions: there is also the “network” way and the “lattice” way. The Wikipedia article talks about those three ways in terms of their manifestation in biological, chemical, mathematical, musical, social, data, software, and logical realms, but I will not discuss them here. As in the previous section, here again, we see that the human mind naturally and easily discerns the Cosmos as consisting of various categories. These categories have been given names, and these categories have scientists and philosophers who study and wonder and explore and ponder their inter-relationships.

① Synergism

The Process/Aspect System matrix allows that influence between space-like levels and time-like stages goes three ways, graphed in the Cartesian coordinate system, each with positive and negative poles, all covered by the term Directionality. Thus there are ‘forward’ and ‘backward’, ‘upward’ and ‘downward’, ‘inward’ and ‘outward’ directions. This applies to all levels in space and stages in time. This means that every level and stage influences every other level and stage; the ‘boundaries’ between the levels and stages are somewhat ‘porous’; the explanation and understanding of each level and stage depends on the context of the entire realm covered by a septenary (and other septenaries in the Cosmos). The name I chose for this notion is “synergy”. Wikipedia has an entry on it, of course. The relevant portions are quoted below:

Synergy is an interaction or cooperation giving rise to a whole that is greater than the simple sum of its parts. The term synergy comes from the Attic Greek word συνεργία *synergia* from *synergos*, συνεργός, meaning “working together”.

Notice in the quotation below that the concept of synergy has been applied to many of the realms discussed in this *Cosmogony* book:

In the natural world, synergistic phenomena are ubiquitous, ranging from physics (for example, the different combinations of quarks that produce protons and neutrons) to chemistry (a popular example is water, a compound of hydrogen and oxygen), to the cooperative interactions among the genes in genomes, the division of labor in bacterial colonies, the synergies of scale in multi-cellular organisms, as well as the many different kinds of synergies produced by socially-organized groups, from honeybee colonies to wolf packs and human societies: compare stigmergy, a mechanism of indirect coordination between agents or actions that results in the self-assembly of complex systems. Even the tools and technologies that are widespread in the natural world represent important sources of synergistic effects. The tools that enabled early hominins to become systematic big-game hunters is a primordial human example. [<https://en.wikipedia.org/wiki/Synergy> — retrieved 09 May 2022]

The trail of explanation regarding synergy is this: each space-like level and time-like stage in the Cosmos as a whole is a coherent synergistic system with some distinctive characteristics compared to other levels and stages > the ‘boundaries’ between levels and stages is ‘porous’ in that there is influential communication between all levels and stages going in both ‘directions’ > the Cosmos as a whole is synergistic, partly because

all of its levels and stages have the same fundamental Attributes. According to the Process/Aspect System matrix, space and time have identical Attributes in every way (although, because of our particular kind of human embodiment, we subjectively experience them as different), so the notion of synergism between space-like levels applies also to time-like stages.

① Teleology

The section on Synergism above discusses influences within a space-like level at a time-like stage. This *Cosmogony* book is about time-like stages that follow the Natural Sequence schema. One might wonder what the evidence is for my claim that all time-like stages influence all others. It is generally acknowledged that the past influences the present and the present influences the future — otherwise there would be no continuity, no regularity, no “laws of physics” (such as entropy, see below) from one moment to the next; that notion is referred to as forward causation. It is not generally acknowledged that the future influences the present; that notion is referred to as backward influence, aka teleology. As (almost) always, Wikipedia has an article on subjects that I want to discuss in this *Cosmogony* book:

Teleology (from τέλος, *telos*, ‘end’, ‘aim’, or ‘goal’, and λόγος, *logos*, ‘explanation’ or ‘reason’) or finality is a reason or an explanation for something which serves as a function of its end, its purpose, or its goal [in the future], as opposed to something which serves as a function of its cause [from the past]. A purpose that is imposed by a human use, such as the purpose of a fork to hold food, is called extrinsic.

Natural teleology, common in classical philosophy, though controversial today, contends that natural entities also have intrinsic purposes, irrespective of human use or opinion. For instance, Aristotle claimed that an acorn’s intrinsic *telos* is to become a fully grown oak tree. Though ancient atomists rejected the notion of natural teleology, teleological accounts of non-personal or non-human nature were explored and often endorsed in ancient and medieval philosophies, but fell into disfavor during the modern era (1600–1900).

In the late 18th century, Immanuel Kant used the concept of *telos* as a regulative principle in his [book] *Critique of Judgment* (1790). Teleology was also fundamental to the philosophy of Karl Marx and G. W. F. Hegel.

Contemporary philosophers and scientists are still in debate as to whether teleological axioms are useful or accurate in proposing modern philosophies and scientific theories. An example of the reintroduction of teleology into modern language is the notion of an attractor. Another instance is when Thomas Nagel (2012), though not a biologist, proposed a non-Darwinian account of evolution that incorporates impersonal and natural teleological laws to explain the existence of life, consciousness, rationality, and objective value. Regardless, the accuracy can also be considered independently from the usefulness: it is a common experience in pedagogy that a minimum of apparent teleology can be useful in thinking about and explaining Darwinian evolution even if there is no true teleology driving evolution. Thus it is easier to say that evolution “gave” wolves sharp canine teeth because those teeth “serve the purpose of” predation regardless of whether there is an underlying non-teleologic reality in which evolution is not an actor with intentions. In other words, because human cognition and learning often rely on the narrative structure of stories — with actors, goals, and immediate (proximal) rather than ultimate (distal) causation (see also proximate and ultimate causation) — some minimal level of teleology might be recognized as useful or at least tolerable for practical purposes even by people who reject its cosmologic accuracy. Its accuracy is upheld by Barrow and Tipler (1986), whose citations of such teleologists as Max Planck and Norbert Wiener are significant for scientific endeavor. [<https://en.wikipedia.org/wiki/Teleology> — retrieved 09 May 2022]

Obviously, from the description above, *telos* has to do with time-like development. In keeping with all that is said in this *Cosmogony* book, my preference is to say that *teleos* is pervasive throughout the Cosmos: the Cosmos is both drawn from the future as well as driven by the past. Consciousness has intentions, purposes, goals from ‘beginning’ to ‘end’. In other words, Consciousness has an imagination of the future as well as a memory of the past.

The whole notion of a system with a structure that works together synergistically toward an overall teleological goal leads to a discussion of the subject of hierarchy.

[[The above four sections might end up fitting better in (a) different Chapter(s).]]

The first principle of the Natural Sequence ontology has to do with the step in Tao’s Template where “the Two produced the Three”.

The Principles can be combined because they are interconnected; they are the necessary and sufficient items that define the fundamental pattern of the Cosmos and its relation to Chaos.

The Septenarian Principle

[https://en.wikipedia.org/wiki/Septenary_\(Theosophy\)](https://en.wikipedia.org/wiki/Septenary_(Theosophy))

https://theosophy.wiki/en/Septenary_Principle

https://theosophy.wiki/en/Primordial_Seven

<https://en.wikipedia.org/wiki/7>

The Ouroboros Principle (Tao produced the One)

This principle can be related to the phrase in the Tao's Template ontology where it is said that "The One produced the Two". The reversal of that notion is that "the Two reduced to the One". Both of those phrases exist and function in what I refer to in this *Cosmogony* book as the "Ouroboros Principle". Let me explain.

Some readers might not be familiar with the term, so, as is my custom, I quote Wikipedia:

The ouroboros ... is an ancient symbol depicting a serpent or dragon eating its own tail. The ouroboros entered Western tradition via ancient Egyptian iconography and the Greek magical tradition. It was adopted as a symbol in Gnosticism and Hermeticism and most notably in alchemy....

The ancient esoteric belief/value/behavior systems of Greek philosophy and Gnosticism and Hermeticism are reviewed in several places in my *Cosmogony* book, and Chapters **III-x and III-x and III-x** are dedicated to them, because I have discerned traces of the Natural Sequence schema in them. The fact that the symbol has had such a widespread and lengthy life, in the minds and hearts of so many seekers of understanding, speaks to the notion that it probably embodies deep truths about the Cosmos. My comments interspersed between the quoted material aim to demonstrate exactly that.

NAME AND INTERPRETATION

The term derives from Ancient Greek οὐροβόρος, from οὐρά oura 'tail' plus -βόρος -boros 'eating'.

The ouroboros is often interpreted as a symbol for eternal cyclic renewal or a cycle of life, death and rebirth; the snake's skin-sloughing symbolizes the transmigration of souls. The snake biting its own tail is a fertility symbol in some religions: the tail is a phallic [*lingam*] symbol and the mouth is a *ynic* [vagina] or womb-like symbol.

More is said elsewhere in this *Cosmogony* book about the "One produced the Two", and about the Chinese word for "produce" also being translated as "beget" and "engender". The basic point to be made here is that because the One has no other to mate with, it must divide Itself into 'male' and 'female' before the Two can go forth and multiply, meaning "produce the Three". **[Many mythologies tell of the 'hermaphrodite' phase in their cosmogonies, where 'male' and 'female' are still undifferentiated....]**

HISTORICAL REPRESENTATIONS

Ancient Egypt

One of the earliest known ouroboros motifs is found in the *Enigmatic Book of the Netherworld*, an ancient Egyptian funerary text in KV62, the tomb of Tutankhamun, in the 14th century BCE. The text concerns the actions of Ra and his union with Osiris in the underworld. The ouroboros is depicted twice on the figure: holding their tails in their mouths, one encircling the head and upper chest, the other surrounding the feet of a large figure, which may represent the unified Ra-Osiris (Osiris born again as Ra). Both serpents are manifestations of the deity Mehen, who in other funerary texts protects Ra in his underworld journey. The whole divine figure represents the beginning and the end of time.

I would add that the ouroboros represents the finiteness of space, as well as the finiteness of time. In terms of the Tao's Template ontology, where/when the "Tao produced the One", that was the indefinite Tao limiting itself to a definite being/doing. In mathematical terms, Tao can be compared to both Zero, as in apophatic theology, and Tao can be compared to Infinity, as in cataphatic theology. Therefore, where/when the "Tao produced the One", that is the same as Zero producing the One and Infinity producing the One. For a more complete discussion of these points, refer to **Chapter I-x and I-x**.

The notions of cause and effect, retro-causation, teleology, and of circularity in space and cyclicity in time are discussed at length elsewhere in this *Cosmogony* book. Basically and briefly, the end of every thing/event in the Cosmos is the beginning of another thing/event, and vice versa. In other words, every manifest thing/event therefore partakes of Twoness. In terms of physics, every thing/event has a location in space/time. In terms of

psychology, every thing and every event has a location in time/space. This is the philosophical notion of Relationalism, the notion that everything/doing exists and functions in relation to its complementary or reciprocal opposite; all this is reviewed in [Chapter I-x](#).

The ouroboros appears elsewhere in Egyptian sources, where, like many Egyptian serpent deities, it represents the formless disorder that surrounds the orderly world and is involved in that world's periodic renewal. The symbol persisted from Egyptian into Roman times, when it frequently appeared on magical talismans, sometimes in combination with other magical emblems. The 4th-century CE Latin commentator Servius was aware of the Egyptian use of the symbol, noting that the image of a snake biting its tail represents the cyclical nature of the year.

My claim is that the Natural Sequence schema is the axiomatic cyclical periodicity in the Cosmos.

As for “formless disorder” did I not say something about “indefinite” in my previous comment? As for the notion of Chaos in relation to Cosmos, I refer the reader to [Chapter I-x](#). Not only is there Chaos “outside” of the Cosmos, there is chaotic phase in the transitions between the orderly phases; this is discussed in the section on the Transition Principle, further on.

Gnosticism and alchemy

Early alchemical ouroboros illustration with the words $\epsilon\nu\ \tau\omicron\ \pi\acute{\alpha}\nu$ (“The All is One”) from the work of Cleopatra the Alchemist in MS Marciana gr. Z. 299. (10th century)

Per the Natural Sequence schema, the One has a maximum pole that encompasses All and a minimum pole that is the center of All. Thus, the entire septenary is an All that is a One, and the Neutral stage in the middle is a One that is an All.

In Gnosticism, a serpent biting its tail symbolized eternity and the soul of the world. The Gnostic [book] *Pistis Sophia* (c. 400 CE) describes the ouroboros as a twelve-part dragon surrounding the world with its tail in its mouth.

The ouroboros symbol, reconciles eternity in time and infinity in space the same way that the Two reduces to the One and the One reduces to the Tao.

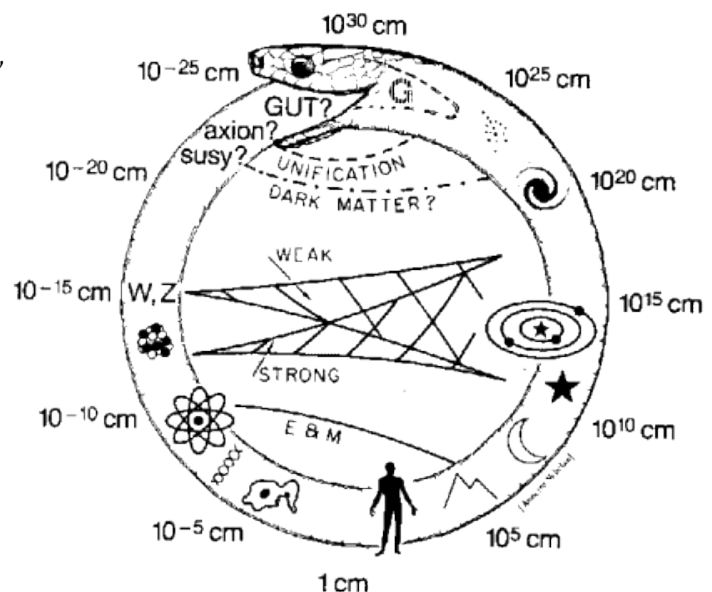
The famous ouroboros drawing from the early alchemical text, *The Chrysopoeia of Cleopatra* ... probably originally dating to the 3rd century Alexandria, but first known in a 10th-century copy, encloses the words *hen to pan* ($\epsilon\nu\ \tau\omicron\ \pi\acute{\alpha}\nu$), “the all is one”. Its black and white halves may perhaps represent a Gnostic duality of existence, analogous to the Taoist yin and yang symbol. The chrysopoeia ouroboros of Cleopatra the Alchemist is one of the oldest images of the ouroboros to be linked with the legendary opus of the alchemists, the philosopher’s stone.

[\[More from Wikipedia ...\]](#)

[><https://en.wikipedia.org/wiki/Ouroboros>< — retrieved 11 April 2024]

In terms of the Ouroboros Principle and the Dialectic Principle (see below) combined, the narrative of the evolutionary process enumerated in Tao’s Template goes something like this:

1. The infinite (transcendent Tao) conceived of the finite (immanent Tao), the primordial dichotomy at the source of the ontological cascade of emerging Attributes.
2. By reflecting in its imagination on the infinite/finite dichotomy, another dichotomy appeared, that between space and time, objectivity and subjectivity: the finite conceived of the circle in space and the cycle in time, which are both infinite and finite in one symbol. (Numbers are also a finite concept with no end; the concept of an infinite regress is built into a finite concept.)
3. The circle/cycle is one-dimensional from the point of view of the line itself



(with a point where the head eats the tail), but from a meta point of view, the circle/cycle is a two-dimensional plane with another dichotomy, the top and bottom surfaces of the disk.

4. With yet another iteration/reflection/recursion, the Twoness of a disk becomes a Threeness if the rim of the disk is curled up into, first a bowl-shaped object, and further into a sphere, which has an inside and an outside. There is a version of the Ouroboros Principle that shows exactly as shown in the nearby image. The smallest scale, the Planck unit, the minimum quantum is at the tail end of the Ouroboros, whereas at the largest scale, the Cosmic horizon, the maximum Quantum is at the head end of the Ouroboros.

① The Holarchy Principle

Previous to this section in this chapter we have seen that the Natural Sequence is a system (a whole made of interacting subsystems) that has a logical and mathematical structure (it is not an amorphous mess), and that the parts work together synergistically. This section is the first of several that describes and explains some of the principles of the Natural Sequence schema. Namely, this first section is about the notion that the Natural Sequence schema is a “holarchy.” If the reader is not familiar with that word, it will be explained in detail in the section after the next section, but for here and now just know that a holarchy is a “nested hierarchy”, where/when each successive space-like level or time-like stage *includes* the previous levels or stages, but *transcends* the precursor(s) in some qualitative way.

Because a holarchy is a type of hierarchical system, let us first examine the concept of hierarchy. In a quotation in the Structure section above, a hierarchy is said to be a “cascade of one-to-many relationships”, but the situation with a hierarchy is actually much more complicated than that. Therefore, let’s now delve into the subject of hierarchy in some detail using Wikipedia, as is my custom, and then look at the related notion of a holarchy.

① Hierarchy

A hierarchy (from Greek: ἱεραρχία, *hierarkhia*, ‘rule of a high priest’, from hierarkhes, ‘president of sacred rites’) is an arrangement of items (objects, names, values, categories, etc.) that are represented as being “above”, “below”, or “at the same level as” one another. Hierarchy is an important concept in a wide variety of fields [realms], such as philosophy, architecture, design, mathematics, computer science, organizational theory, systems theory, systematic biology, and the social sciences (especially political philosophy).

Once again we see a list of many realms within which and among which space-like levels and time-like stages of hierarchy are a factor to consider. Subsequent Parts of this *Cosmogony* book discuss several of the fields listed there.

A hierarchy can link entities either directly or indirectly, and either vertically or diagonally. The only direct links in a hierarchy, insofar as they are hierarchical, are to one’s immediate superior or to one of one’s subordinates, although a system that is largely hierarchical can also incorporate alternative hierarchies. Hierarchical links can extend “vertically” upwards or downwards via multiple links in the same direction, following a path. All parts of the hierarchy that are not linked vertically to one another nevertheless can be “horizontally” linked through a path by traveling up the hierarchy to find a common direct or indirect superior, and then down again. This is akin to two co-workers or colleagues; each reports to a common superior, but they have the same relative amount of authority. Organizational forms exist that are both alternative and complementary to hierarchy. Heterarchy is one such form.

The terminology that has been adopted for the arrangement of items as “above” or “below” or “at the same level” is somewhat metaphorical and somewhat actual. In geology, the layering of rocks in strata is literally true in that the rocks that are later in time are placed in space on top of the strata that are earlier in time. (Note that when the strata are disturbed by earthquakes, it is still possible to discern earlier/once-lower from later/once-higher strata.) The Wikipedia article on hierarchies has somewhat to say about how this literal fact has been adopted to graphically represent more abstract hierarchies:

A hierarchy is typically depicted as a pyramid, where the height of a level represents that level’s status and width of a level represents the quantity of items at that level relative to the whole. For example, the few directors of a company could be at the apex, and the base could be thousands of people who have no subordinates. These pyramids are often diagrammed with a triangle diagram which serves to emphasize the size differences between

the levels (but note that not all triangle/pyramid diagrams are hierarchical; for example, the 1992 USDA food guide pyramid)....

An example of visually representing hierarchy is through nested clusters. Nested clusters represent hierarchical relationships using layers of information.... For more complicated hierarchies, the stair structure represents hierarchical relationships through the use of visual stacking.... A nested hierarchy or inclusion hierarchy is a hierarchical ordering of nested sets. The concept of nesting is exemplified in Russian matryoshka dolls. Each doll is encompassed by another doll, all the way to the outer doll. The outer doll holds all of the inner dolls, the next outer doll holds all the remaining inner dolls, and so on. [<https://en.wikipedia.org/wiki/Hierarchy>< — retrieved 08 May 2022]

The notion of hierarchy originated in ancient times, perhaps even in the prehistory of humankind when groups of people grew large enough that they found it expedient to organize into leaders and followers. The notion has expanded to include many other realms of nature, as noted in the Wikipedia article, and as used in this *Cosmogony* book. This Wikipedia article on hierarchy is intellectually enlightening if you care about understanding the fundamentals of the existence and function of your world and the Cosmos at large. I highly recommend that you read it in its entirety.

One final comment on hierarchy from the Wikipedia article has to do with attributes that can be sequenced in a hierarchy, and they are: “relative value, worth, complexity, power, importance, authority, level, etc.” In this *Cosmogony* book, the focus is on the comparison and contrast of the Dialectic + Axial = Septenarian Attributes of the Natural Sequence schema where I have found that they apply to many realms, listed and unlisted thus far in this book.

① *Holarchy*

I consider the Holarchy Principle to be an upgrade to the notion of a hierarchy because it seems to fit better with the Natural Sequence schema. The title of this section is “The Holarchy Principle”. So what does that have to do with hierarchy? Wikipedia to the rescue:

A holon (Greek: ὅλον, from ὅλος, holos, ‘whole’ and -ον, -on, ‘part’) is something that is simultaneously a whole in and of itself, as well as a part of a larger whole. In other words, holons can be understood as the constituent part-wholes of a hierarchy. Holons are sometimes discussed in the context of self-organizing holarchic open (SOHO) systems.

That introduction is insufficient of itself, so the article continues with more description and explanation and exemplification:

The word holon (Greek: ὅλον) is a combination of the Greek holos (ὅλος) meaning ‘whole’, with the suffix -on which denotes a particle or part (as in proton and neutron). According to Arthur Koestler, holons are self-reliant units that possess a degree of independence and can handle contingencies without asking higher authorities for instructions (i.e., they have a degree of autonomy). These holons are also simultaneously subject to control from one or more of these higher authorities. The first property ensures that holons are stable forms that are able to withstand disturbances, while the latter property signifies that they are intermediate forms, providing a context for the proper functionality for the larger whole.

The point to be emphasized here, in terms of the Tao’s Template ontology (Tao > One > Two > Three > All), is that the Cosmos is ultimately a Oneness which consists of a Twoness, meaning that it has a minimum and a maximum pole with an indefinite quantity of parts between the extremes. In terms of this section of this chapter, a holon is a system (see a previous section) which is a part of super-system (which is part of a super-super-system, and so on to the maximum One) and which consists of sub-systems which consists of sub-sub-systems and so on to the minimum One. Each holon has some integrity but not perfect integrity because it interacts with all the (space-like) larger and smaller, or (time-like) earlier and later, holons. In terms of the Natural Sequence schema, in whatever realm, every instantiation of the Natural Sequence septenary is a holon, and all of the septenaries ‘above’ and ‘below’ the septenary under review are also holons. The whole stack of septenaries, from the smallest to the largest, from the earliest to the latest, is the whole Holarchy.

The holon represents a way to overcome the dichotomy between parts and wholes, as well as a way to account for both the self-assertive and the integrative tendencies of organisms. The term was coined by [philosopher] Arthur Koestler in [his book] *The Ghost in the Machine* (1967).

You may read about Koestler here: >https://en.wikipedia.org/wiki/Arthur_Koestler<. He was a bit of a polymath.

In this way, a holon is a subsystem within a larger system: it is simultaneously an evolving structure while also a part of a greater system composed of other holons. Holons are sometimes discussed in the context of self-organizing holarchic open (SOHO) systems.

At this point in this exposition it is appropriate to mention the Oroboros Principle (see above), where the duality of the minimum one and the maximum one merge into the Oneness that has no Poles. The notion of “self-organization” is discussed in detail in _____, but the general idea is that all levels and stages of the entire septenarian Holarchy, from the minimum one to the maximum one, influence each other.

Prior to introducing the term holon itself, Koestler articulated the concept in [his book] *The Act of Creation* (1964), in which he refers to the relationship between the searches for subjective and objective knowledge:

- Einstein’s space is no closer to reality than Van Gogh’s sky. The glory of science is not in a truth more absolute than the truth of Bach or Tolstoy, but in the act of creation itself. The scientist’s discoveries impose his own order on chaos, as the composer or painter imposes his; an order that always refers to limited aspects of reality, and is based on the observer’s frame of reference, which differs from period to period as a Rembrandt nude differs from a nude by Manet.

When/where “the One produced the Two” (as stated in Tao’s Template) it produced the phenomena of space and time (to use physics terms), and it produced objective (scientific) and subjective (artistic) realms (to use consciousness terms). Space and time, and objective and subjective realms, consist of holonomic levels and stages. The phrase, “frame of reference”, is equivalent to the notion in the mystical interpretation of Tao’s Template that the entirety of objective scientific phenomena and subjective artistic experience consists of changing Points of View in a system derived from the division of the maximum one (or multiplication of the minimum one) into a stack of septenarian holons.

Koestler would finally propose the term holon in *The Ghost in the Machine* (1967), using it to describe natural organisms as composed of semi-autonomous sub-wholes (or, parts) that are linked in a form of hierarchy, a holarchy, to form a whole. The title of the book itself points to the notion that the entire ‘machine’ of life and of the universe itself is ever-evolving toward more and more complex states, as if a ghost were operating the machine.

The first observation was influenced by a story told to him by Herbert A. Simon — the ‘parable of the two watchmakers’ — in which Simon concludes that complex systems evolve from simple systems much more rapidly when there are stable intermediate forms present in the evolutionary process compared to when they are not present.

The second observation was made by Koestler himself in his analysis of hierarchies and stable intermediate forms in non-living matter (atomic and molecular structure), living organisms, and social organizations.

[>[https://en.wikipedia.org/wiki/Holon_\(philosophy\)](https://en.wikipedia.org/wiki/Holon_(philosophy))< — retrieved 31 January 2024]

Other Parts of this book describe the interaction of inanimate and animate, mechanical and organic, septenarian holons that drive the evolutionary process along a succession of instantiations of the Natural Sequence schema. In the various instantiations of the Natural Sequence reviewed in this *Cosmogony* book, it is said that each stage is built on the foundation of the experiences had during previous stage(s), such that each stage includes the previous stage(s), but transcends it or them. This means that, at each stage, there are additional and different characteristics and qualities. I often use the hyphenated phrases “higher-later” and “lower-earlier” to refer to the relative position of stages in the spectrum of the holarchy. Normally, a stage is successfully assimilated and then a subsequent stage is begun. This principle has other names: development, evolution, advancement, and emergence. The “Time Structure” version [Table #] of the Process/Aspect System Chart shows the Hierarchy Principle in table form.

Besides what the Wikipedia article said above about hierarchy and holarchy *per se*, it has somewhat to say about various kinds of hierarchy in various other articles that are relevant to the Natural Sequence. Parts of these articles are quoted below.

① *The Great Chain of Being*

Among the concepts related to the Holarchy Principle is the ancient notion of the so-called “Great Chain of Being”. Conveniently, Wikipedia also has an article on this phrase.

The Great Chain of Being [GCB] is a hierarchical structure of all matter and life, thought by medieval Christianity to have been decreed by God. The chain begins with God and descends through angels, humans, animals, and plants, to minerals.

The Great Chain of Being (Latin: *scala naturae*, “Ladder of Being”) is a concept derived from Plato, Aristotle (in his *Historia Animalium*), Plotinus, and Proclus. Further developed during the Middle Ages, it reached full expression in early modern Neoplatonism.

Refer to [Chapter III-x in Part Three](#), “Neoplatonism”, for the whole story about that.

Divisions

The Chain of Being hierarchy has God at the top, above angels, which like him are entirely spirit, without material bodies, and hence unchangeable. Beneath them are humans, consisting both of spirit and matter; they can change and die, and are thus essentially impermanent. Lower still are animals and plants. At the bottom are the mineral materials of the earth itself; they consist only of matter. Thus, the higher the being is in the chain, the more attributes it has, including all the attributes of the beings below it. The minerals are, in the medieval mind, a possible exception to the immutability of the material beings in the chain, as alchemy promised to turn lower elements like lead into those higher up the chain, like silver or gold.

That notion that the ‘higher’ levels and stages in the GCB include within them the ‘lower’ levels and stages has a better name than “hierarchy”, namely “holarchy”; refer to the previous section by that name in case you missed it.

Subdivisions

Each link in the chain might be divided further into its component parts. In medieval secular society, for example, the king is at the top, succeeded by the aristocratic lords and the clergy, and then the peasants below them. Solidifying the king’s position at the top of humanity’s social order is the doctrine of the divine right of kings. The implied permanent state of inequality became a source of popular grievance, and led eventually to political change as in the French Revolution. The hierarchy was visible in every structure of society: “In the family, the father is head of the household; below him, his wife; below her, their children.”

Milton’s *Paradise Lost* ranked the angels (c.f. Pseudo-Dionysius the Areopagite’s ranking of angels), and Christian culture conceives of angels “in orders of archangels, seraphim, and cherubim, among others.”

The animal division is similarly subdivided, from strong, wild, and untameable lions at the top, to useful but still spirited domestic animals like dogs and horses, to merely docile farm stock like sheep. In the same way, birds could be ranked from lordly eagles high above common birds like pigeons. Below them were fish, those with bones being above the various soft sea creatures. Lower still were insects, with useful ones like bees high above nuisances like flies and beetles. The snake found itself at the bottom of the animal scale, cast down, the medievals supposed, for its wicked role in the Garden of Eden.

Below animals came plants, ranging from the useful and strong oak at the top to the supposedly demonic yew tree at the bottom. Crop plants too were ranked from highest to lowest.

The minerals too were graded, from useful metals (from gold down to lead), to rocks (again, from useful marble downwards), all the way down to soil.

This Wikipedia presentation of the Great Chain of Being starts at the ‘highest’ rank and works ‘down’ from there into lesser and lesser ranks, rather than starting at the ‘lowest’ rank and working ‘up’ from there. This is in keeping with the emanationist cosmology that was prevalent at the time. Emanation is the notion that God created the world that way; refer to [Chapter I-x here in Part One](#), “Reductionism + Emanationism = Emergence” for the whole story.

THE CHAIN

St Thomas Aquinas classified all beings by rank.

The chain of being links God, angels, humans, animals, plants, and minerals. The links of the chain are:

God

God has created all other beings and is therefore outside creation, time, and space. He has all the spiritual attributes found in humans and angels, and uniquely has his own attributes of omnipotence, omniscience, and omnipresence. He is the model of perfection for all lower beings.

Refer to [Chapter I-x here in Part One](#), “Theological Considerations”, for the whole story about “God”.

Angelic beings

In Christian angelology, angels are immortal beings of pure spirit without physical bodies, so they require temporary bodies made of earthly materials to be able to do anything in the material world. They were thought to have spiritual attributes such as reason, love, and imagination. Based on mentions of types of angel in the

Bible, Pseudo-Dionysios devised a hierarchy of angelic beings, which other theologians like St. Thomas Aquinas adopted...

The alleged angelic realm is not discussed in this *Cosmogony* book, although their alleged abode is mentioned in **Chapter II-6 in Part Two**, “The Seven Planes”. It was common for ancient spiritual teachings to have a notion that there were (what I call) “reality systems” ‘above’ the reality system in which humans dwell. These ‘higher’ reality systems were commonly said to be six in number, making seven when the human realm is included. As documented in that chapter, the septenary of planes follows the Natural Sequence schema.

Humanity

Humans uniquely shared spiritual attributes with God and the angels above them, love and language, and physical attributes with the animals below them, like having material bodies that experienced emotions and sensations like lust and pain, and physical needs such as hunger and thirst.

Numerous chapters in **Part Four** provide documentation about the numerous ways that human evolution during history and pre-history has followed the Natural Sequence schema, such as in terms of communication, cognition, morality, and culture.

Animals

Animals have senses, are able to move, and have physical appetites. The highest animals like the lion, the king of beasts, could move vigorously, and had powerful senses such as excellent eyesight and the ability to smell their prey, while lower animals might wriggle or crawl, and the lowest like oysters were sessile, attached to the seabed. All, however, had the senses of touch and taste.

Plants

Plants lacked sense organs and the ability to move, but they could grow and reproduce. The highest plants had attractive attributes like leaves and flowers, while the lowest plants, like mushrooms and moss, did not, and stayed low on the ground, close to the mineral earth. All the same, many plants had useful properties serving for food or medicine.

Minerals

At the bottom of the chain, minerals were unable to move, sense, grow, or reproduce. Their attributes were being solid and strong, while the gemstones possessed magic. The king of gems was the diamond.

Modern science has brought the development of the inanimate mineral realm into its paradigm, claiming it follows the same evolutionary laws or principles of nature as found in the animate realm; refer to Chapter IV-x in Part Four, “Evolution of the Mineral Realm”.

NATURAL SCIENCE

From Aristotle to Linnaeus

The basic idea of a ranking of the world’s organisms goes back to Aristotle’s biology. In his [book] *History of Animals*, where he ranked animals over plants based on their ability to move and sense, and graded the animals by their reproductive mode, live birth being “higher” than laying cold eggs, and possession of blood, warm-blooded mammals and birds again being “higher” than “bloodless” invertebrates.

Aristotle’s non-religious concept of higher and lower organisms was taken up by natural philosophers during the Scholastic period to form the basis of the *Scala Naturae*. The *scala* allowed for an ordering of beings, thus forming a basis for classification where each kind of mineral, plant, and animal could be slotted into place. In medieval times, the great chain was seen as a God-given and unchangeable ordering. In the Northern Renaissance, the scientific focus shifted to biology; the threefold division [mineral, plant, animal] of the chain below humans formed the basis for Carl Linnaeus’s *Systema Naturae* from 1737, where he divided the physical components of the world into the three familiar kingdoms of minerals, plants, and animals.

Per the Tao’s Template ontology (“the Three produced All”), that “threefold division” of the natural world is not accidental or coincidental; Threeness is “God-given” in the same sense as that the three orthogonal dimensions of space/time and time/space are the minimum required for a Cosmos.

In alchemy

Alchemy used the great chain as the basis for its cosmology. Since all beings were linked into a chain, so that there was a fundamental unity of all matter, transformation from one place in the chain to the next might, according to alchemical reasoning, be possible. In turn, the unit of matter enabled alchemy to make another key assumption, the philosopher’s stone, which somehow gathered and concentrated the universal spirit found in all

matter along the chain, and which *ex hypothesi* might enable the alchemical transformation of one substance to another, such as the base metal lead to the noble metal gold.

History has proven the alchemical notion of transmuting “base” elements into “noble” elements to be more metaphorical than literal. In terms of the Process/Aspect System matrix, there are laws of nature such that it transforms over time according to what I refer to as the seven “Processes”. The Cardinal Processes of Origination, Evolution, and Synthesis are particularly relevant to the progress seen in the Cosmos since the Big Bang.

Scala naturae in evolution

The set nature of species, and thus the absoluteness of creatures’ places in the great chain, came into question during the 18th century. The dual nature of the chain, divided yet united, had always allowed for seeing creation as essentially one continuous whole, with the potential for overlap between the links. Radical thinkers like Jean-Baptiste Lamarck saw a progression of life forms from the simplest creatures striving towards complexity and perfection, a schema accepted by zoologists like Henri de Blainville. The very idea of an ordering of organisms, even if supposedly fixed, laid the basis for the idea of transmutation of species, whether progressive goal-directed orthogenesis or Charles Darwin’s undirected theory of evolution.

The Chain of Being continued to be part of metaphysics in 19th century education, and the concept was well known. The geologist Charles Lyell used it as a metaphor in his 1851 [book] *Elements of Geology* description of the geological column, where he used the term “missing links” in relation to missing parts of the continuum. The term “missing link” later came to signify transitional fossils, particularly those bridging the gulf between man and beasts.

The idea of the great chain as well as the derived “missing link” was abandoned in early 20th century science, as the notion of modern animals representing ancestors of other modern animals was abandoned in biology. The idea of a certain sequence from “lower” to “higher” however lingers on, as does the idea of progress in biology.

The notion of “progress” goes beyond the notion that species merely transform in order to adapt to their environment, and vice versa; it means that their evolution is toward greater “complexity and perfection”. In terms of the Natural Sequence schema, increasing complexity happens during the first half of the septenary, and increasing perfection happens during the last half of the septenary. This notion of progress is the essence of the Dialectic Principle, which is documented in a subsequent section of this chapter.

POLITICS

Allenby and Garreau propose that the Catholic Church’s narrative of the Great Chain of Being kept the peace in Europe for centuries. The very concept of rebellion simply lay outside the reality within which most people lived for to defy the King was to defy God. King James I himself wrote, “The state of monarchy is the most supreme thing upon earth: for kings are not only God’s Lieutenants upon earth, and sit upon God’s throne, but even by God himself they are called Gods.”

The Enlightenment broke this supposed divine plan, and fought the last vestiges of feudal hierarchy, by creating secular governmental structures that vested power into the hands of ordinary citizens, rather than in those of divinely ordained monarchs.

However, scholars such as Brian Tierney and Michael Novak have noted the medieval contribution to democracy and human rights.

Chapter VI-6 in Part Six, “The Octave of Political Worldviews”, provides documentation that progress in human governance follows the Natural Sequence schema. The transition from Feudalism to Democracy is more-or-less equivalent to the transition from the ‘lower’ triad of stages to the ‘middle’ stage in the septenary.

ADAPTATIONS AND SIMILAR CONCEPTS

The American philosopher Ken Wilber described a “Great Nest of Being” which he claims to belong to a culture-independent “perennial philosophy” traceable across 3000 years of mystical and esoteric writings. Wilber’s system corresponds with other concepts of transpersonal psychology. In his 1977 book *A Guide for the Perplexed*, the economist E. F. Schumacher described a hierarchy of beings, with humans at the top able mindfully to perceive the “eternal now”. [https://en.wikipedia.org/wiki/Great_chain_of_being < — retrieved 26 March 2021]

Because the ancients did not have a fully developed understanding of the evolution of the inanimate and the animate Cosmos over its history, but rather preferred the notion that the Cosmos was created all at once not so long ago, it can be said that the Great Chain of Being is concerned with the structure of the Cosmos in space. However, the notion of the so-called “Great Nest of Being” — briefly introduced at the end of the Wikipedia

article on the Great Chain of Being — was introduced in modern times, and it includes the notion of an evolution or development of the structure of the Cosmos in time. Because the Natural Sequence is about the time structure of the Cosmos, let's look at Ken Wilber's Great Nest of Being in greater detail.

① *The Great Nest of Being*

The Wikipedia article on holons was brief, but the Holarchy Principle is important to an understanding of the Natural Sequence schema, so the following quotations provide more definitions and descriptions of the phenomenon:

Ken Wilber's reframing of the Great Chain of Being [see previous section] to more accurately reflect what the premodern sages themselves originally meant: each expanding "link" in the Great Chain transcends and includes its juniors, and is therefore actually a Great "Nest" of Being. In [Wilber's so-called] Integral Theory, the Great Nest of Being is not a Platonic given but the result of evolutionary Kosmic habits.

[><https://integrallife.com/glossary/great-nest-of-being/>< — retrieved 05 June 2023]

A source different from Wikipedia provides a second brief definition and description of holarchy as Wilber understood it:

An holistic upgrade of the ancient "Great Chain of Being".

The GREAT NEST OF BEING envisions layers or levels of reality in a non-hierarchical (hierarchy of inclusion) fashion. It consists of folds, spheres or waves which are fractally nested in degrees of holonic simplicity. This replaces masculine metaphysical hierarchy with enactive, holarchical spheres of inclusion — making a humanly useful cosmological model that simultaneously incorporates classical, modern, and post-modern perspectives.

[><https://integrallife.com/glossary/great-nest-of-being/>< — retrieved 05 June 2023]

A fuller description of the difference between hierarchy and holarchy is the following.

The word hierarchy, for many, evokes a rigid system of roles, such as traditionally exists in the military, the Catholic Church, and many government institutions. The nested hierarchies or holarchies found in nature, however, are somewhat different, and frequently natural hierarchies are, too.

Hierarchies as they exist in human institutions consist of individuals who are at progressively higher stages within some social structure. Holarchies consist of the social structures themselves.

Hierarchy: It's lonely at the top. Hierarchy is frequently shaped like a pyramid, with the number of individual members progressively decreasing at higher stages.

Holarchy: The higher, the more inclusive. In holarchy, higher stages contain lower stages, so are necessarily larger.

Hierarchy: Control from the top down. In institutional hierarchies, individuals at higher stages may command or control the behavior of individuals at lower levels.

Holarchy: Bidirectional interactions. In natural holarchies, lower holons and higher holons influence each other. In protein molecules, for example, the overall conformation tightly constrains the positions of individual amino acids. But changes or modifications of individual amino acids can alter conformation. In the organism, the rates of growth and reproduction of individual cells are strictly regulated, but some individual cells control changes in the overall metabolic state of the organism. In human societies, certain forms of behavior are forbidden, but behavior by some individuals may result in changes in social organization.

Hierarchy: a linear chain of command. Hierarchical relationships can generally be traced from higher individuals to lower individuals in a sequential order.

Holarchy: Networks. Holarchies can exhibit complex relationships. For example, scale-free networks, which characterize many forms of human interaction (Barabasi 2002; Buchanan 2002), can form in a manner in which smaller networks are holarchically combined into larger networks (Ravasz et al. 2002; Ravasz and Barabasi 2003). Many randomly organized networks also form holarchies, for example, amino acid interactions within protein molecules. In fact, in nature, all networks are formed by the interactions of holons of some kind, and most networks are in turn holarchically combined into higher forms of life.

Hierarchy: Fixed Roles. Individuals in institutional hierarchies are defined by particular functions they fulfill in the organization.

Holarchy: Multiple states. Many natural holarchies feature different kinds of interactions among members. For example, metabolic networks within cells are holarchical organizations of enzymes, receptors and other biological macromolecules, each of which has a characteristic function. But such networks can adopt different states in

which the functions of some members become more prominent, while those of others are reduced or eliminated. Within organisms, the roles of certain cells, tissues and other multicellular holons vary according to a variety of factors, both internal and external to the organism; in the brain, cells can take on new functions in response to injury of other cells. In all higher vertebrate societies, members adopt different roles in different situations.

Hierarchy: Power rankings. Individuals within a hierarchy can be distinguished according to how much influence they have. Those at one stage are ranked higher than those at a lower stage.

Holarchy: Egalitarian. In most natural holarchies, most individual members are equal or nearly equal in their functions and properties. In some holarchies, a few members are better connected to other members, and these better connections may result in enhanced properties. For example, the ability of individual atoms within a protein molecule to discriminate other individual atoms is restricted. In the brain, some neurons have more connections to other neurons than other members, and play a greater role in information processing. In human societies, there are frequently great disparities in wealth and power. But even in these examples, the great majority of individual members are roughly equal in their properties, functions or access to resources. Moreover, such inequalities that do exist among individual members of these holarchies are not necessarily a result of hierarchical organization *per se*. For example, they are featured in all scale-free networks, even those that are not hierarchically organized. [<https://blog.p2pfoundation.net/holarchy-vs-hierarchy-2/2010/11/08>< — retrieved 05 June 2023. The above was extracted from <https://www.integralworld.net/smith27.html><]

There is an even more modern improvement on the notion of hierarchy than the notion of holarchy, and that is the notion of a fractal. What the notion of holarchy does not emphasize is the self-similarity of each level or stage in the Great Chain/Nest of Being (GC/NB), but my so-called “fractality” notion does emphasize that feature of the Natural Sequence schema. This subject is covered in a following subsection of this Holarchy Principle section.

The Fractality Corollary to the Holarchy Principle

As documented in **Part V**, the span of a full human lifetime is one septenarian (seven step) time-cycle that correlates with the NS schema. There are time-cycles that are longer and there are time-cycles that are shorter than the span of a full human lifetime. The entire spectrum of septenaries from the shortest to the longest time-cycle in the Cosmos is commonly referred to as the “Great Chain/Nest of Being” (GC/NB), as discussed above. Each instantiation of the septenarian time cycle in the GC/NB has different qualities and characteristics due to differing internal and external conditions at that time scale, but all of the septenaries have a fundamental similarity, namely, the NS Attributes. As it so happens, this is what one sees in a so-called “fractal”. Many if not most of the septenaries reviewed in others Parts of this *Cosmogony* book recognize that this fractal pattern is present.

As usual, Wikipedia provides a definition and description of fractals, which is a phenomenon that applies to space as well as to time:

FRACTAL

In mathematics, a fractal is a geometric shape containing detailed structure at arbitrarily small scales, usually having a fractal dimension strictly exceeding the topological dimension. Many fractals appear similar at various scale,.... This exhibition of similar patterns at increasingly smaller scales is called self-similarity, also known as expanding symmetry or unfolding symmetry; if this replication is exactly the same at every scale ... the shape is called affine self-similar....

Chapter X-x has an extensive discussion of symmetry and of self-similarity. Basically and briefly, in terms of Tao's Template, those phenomena of nature are instantiations of Tao experiencing itself *as if* it were not itself.

Starting in the 17th century with notions of recursion [discussed in a subsequent section], fractals have moved through increasingly rigorous mathematical treatment

There is some disagreement among mathematicians about how the concept of a fractal should be formally defined. Mandelbrot himself ... simplified and expanded the definition to this: “A fractal is a rough or fragmented geometric shape that can be split into parts, each of which is (at least approximately) a reduced-size copy of the whole.”....

The consensus among mathematicians is that theoretical fractals are infinitely self-similar iterated and detailed mathematical constructs, of which many examples have been formulated and studied. Fractals are not limited to

geometric patterns [in space], but can also describe processes in time. Fractal patterns with various degrees of self-similarity have been rendered or studied in visual, physical, and aural media and found in nature, technology, art, architecture and law. Fractals are of particular relevance in the field of chaos theory because they show up in the geometric depictions of most chaotic processes (typically either as attractors or as boundaries between basins of attraction).

That fractalinity, as a self-similar iterated process in time, is found throughout the various stages of nature, speaks to the notion that the Paradox Principle, discussed in the previous section, is a primordial ontology.

INTRODUCTION

The feature of “self-similarity”, for instance, is easily understood by analogy to zooming in with a lens or other device that zooms in on digital images to uncover finer, previously invisible, new structure. If this is done on fractals, however, no new detail appears; nothing changes and the same pattern repeats over and over, or for some fractals, nearly the same pattern reappears over and over. Self-similarity itself is not necessarily counter-intuitive (e.g., people have pondered self-similarity informally such as in the infinite regress in parallel mirrors or the homunculus, the little man inside the head of the little man inside the head ...). The difference for fractals is that the pattern reproduced must be detailed.

This also leads to understanding a third feature, that fractals as mathematical equations are “nowhere differentiable”. In a concrete sense, this means fractals cannot be measured in traditional ways. To elaborate, in trying to find the length of a wavy non-fractal curve, one could find straight segments of some measuring tool small enough to lay end to end over the waves, where the pieces could get small enough to be considered to conform to the curve in the normal manner of measuring with a tape measure. But in measuring an infinitely “wiggly” fractal curve such as the Koch snowflake, one would never find a small enough straight segment to conform to the curve, because the jagged pattern would always re-appear, at arbitrarily small scales, essentially pulling a little more of the tape measure into the total length measured each time one attempted to fit it tighter and tighter to the curve. The result is that one must need infinite tape to perfectly cover the entire curve, i.e. the snowflake has an infinite perimeter.

The fractal is another instantiation of the notion of the finite and the infinite defining each other.

HISTORY

The history of fractals traces a path from chiefly theoretical studies to modern applications in computer graphics, with several notable people contributing canonical fractal forms along the way. A common theme in traditional African architecture is the use of fractal scaling, whereby small parts of the structure tend to look similar to larger parts, such as a circular village made of circular houses. According to Pickover, the mathematics behind fractals began to take shape in the 17th century when the mathematician and philosopher Gottfried Leibniz pondered recursive self-similarity (although he made the mistake of thinking that only the straight line was self-similar in this sense).

In his writings, Leibniz used the term “fractional exponents”, but lamented that “Geometry” did not yet know of them. Indeed, according to various historical accounts, after that point few mathematicians tackled the issues and the work of those who did remained obscured largely because of resistance to such unfamiliar emerging concepts, which were sometimes referred to as mathematical “monsters”. Thus, it was not until two centuries had passed that on July 18, 1872 Karl Weierstrass presented the first definition of a function with a graph that would today be considered a fractal, having the non-intuitive property of being everywhere continuous but nowhere differentiable at the Royal Prussian Academy of Sciences.

In addition, the quotient difference becomes arbitrarily large as the summation index increases. Not long after that, in 1883, Georg Cantor, who attended lectures by Weierstrass, published examples of subsets of the real line known as Cantor sets, which had unusual properties and are now recognized as fractals. Also in the last part of that century, Felix Klein and Henri Poincaré introduced a category of fractal that has come to be called “self-inverse” fractals.

One of the next milestones came in 1904, when Helge von Koch, extending ideas of Poincaré and dissatisfied with Weierstrass's abstract and analytic definition, gave a more geometric definition including hand-drawn images of a similar function, which is now called the Koch snowflake. Another milestone came a decade later in 1915, when Waclaw Sierpiński constructed his famous triangle then, one year later, his carpet. By 1918, two French mathematicians, Pierre Fatou and Gaston Julia, though working independently, arrived essentially simultaneously at results describing what is now seen as fractal behavior associated with mapping complex numbers and iterative functions and leading to further ideas about attractors and repellers (i.e., points that attract or repel other points), which have become very important in the study of fractals.

Very shortly after that work was submitted, by March 1918, Felix Hausdorff expanded the definition of "dimension", significantly for the evolution of the definition of fractals, to allow for sets to have non-integer dimensions. The idea of self-similar curves was taken further by Paul Lévy, who, in his 1938 paper *Plane or Space Curves and Surfaces Consisting of Parts Similar to the Whole*, described a new fractal curve, the Lévy C curve.

Different researchers have postulated that without the aid of modern computer graphics, early investigators were limited to what they could depict in manual drawings, so lacked the means to visualize the beauty and appreciate some of the implications of many of the patterns they had discovered (the Julia set, for instance, could only be visualized through a few iterations as very simple drawings). That changed, however, in the 1960s, when Benoit Mandelbrot started writing about self-similarity in papers such as *How Long Is the Coast of Britain? Statistical Self-Similarity and Fractional Dimension*, which built on earlier work by Lewis Fry Richardson.

In 1975 Mandelbrot solidified hundreds of years of thought and mathematical development in coining the word "fractal" and illustrated his mathematical definition with striking computer-constructed visualizations. These images, such as of his canonical Mandelbrot set, captured the popular imagination; many of them were based on recursion, leading to the popular meaning of the term "fractal".

In 1980, Loren Carpenter gave a presentation at the SIGGRAPH where he introduced his software for generating and rendering fractally generated landscapes.

Definition and characteristics

One often cited description that Mandelbrot published to describe geometric fractals is "a rough or fragmented geometric shape that can be split into parts, each of which is (at least approximately) a reduced-size copy of the whole"; this is generally helpful but limited. Authors disagree on the exact definition of fractal, but most usually elaborate on the basic ideas of self-similarity and the unusual relationship fractals have with the space they are embedded in.

One point agreed on is that fractal patterns are characterized by fractal dimensions, but whereas these numbers quantify complexity (i.e., changing detail with changing scale), they neither uniquely describe nor specify details of how to construct particular fractal patterns. In 1975 when Mandelbrot coined the word "fractal", he did so to denote an object whose Hausdorff–Besicovitch dimension is greater than its topological dimension. However, this requirement is not met by space-filling curves such as the Hilbert curve.

Because of the trouble involved in finding one definition for fractals, some argue that fractals should not be strictly defined at all. According to Falconer, fractals should be only generally characterized by a gestalt of the following features;

Self-similarity, which may include:

Exact self-similarity: identical at all scales, such as the Koch snowflake

Quasi self-similarity: approximates the same pattern at different scales; may contain small copies of the entire fractal in distorted and degenerate forms; e.g., the Mandelbrot set's satellites are approximations of the entire set, but not exact copies.

Statistical self-similarity: repeats a pattern stochastically so numerical or statistical measures are preserved across scales; e.g., randomly generated fractals like the well-known example of the coastline of Britain for which one would not expect to find a segment scaled and repeated as neatly as the repeated unit that defines fractals like the Koch snowflake.

Qualitative self-similarity: as in a time series

Multifractal scaling: characterized by more than one fractal dimension or scaling rule

Fine or detailed structure at arbitrarily small scales. A consequence of this structure is fractals may have emergent properties (related to the next criterion in this list).

Irregularity locally and globally that cannot easily be described in the language of traditional Euclidean geometry other than as the limit of a recursively defined sequence of stages. For images of fractal patterns, this has been expressed by phrases such as "smoothly piling up surfaces" and "swirls upon swirls"; see Common techniques for generating fractals.

As a group, these criteria form guidelines for excluding certain cases, such as those that may be self-similar without having other typically fractal features. A straight line, for instance, is self-similar but not fractal because it lacks detail, and is easily described in Euclidean language without a need for recursion.

Common techniques for generating fractals

Images of fractals can be created by fractal generating programs. Because of the butterfly effect, a small change in a single variable can have an unpredictable outcome.

Iterated function systems (IFS) – use fixed geometric replacement rules; may be stochastic or deterministic; e.g., Koch snowflake, Cantor set, Haferman carpet, Sierpinski carpet, Sierpinski gasket, Peano curve, Harter-Heighway dragon curve, T-square, Menger sponge

Strange attractors – use iterations of a map or solutions of a system of initial-value differential or difference equations that exhibit chaos (e.g., see multifractal image, or the logistic map)

L-systems – use string rewriting; may resemble branching patterns, such as in plants, biological cells (e.g., neurons and immune system cells), blood vessels, pulmonary structure, etc. or turtle graphics patterns such as space-filling curves and tilings

Escape-time fractals – use a formula or recurrence relation at each point in a space (such as the complex plane); usually quasi-self-similar; also known as "orbit" fractals; e.g., the Mandelbrot set, Julia set, Burning Ship fractal, Nova fractal and Lyapunov fractal. The 2d vector fields that are generated by one or two iterations of escape-time formulae also give rise to a fractal form when points (or pixel data) are passed through this field repeatedly.

Random fractals – use stochastic rules; e.g., Lévy flight, percolation clusters, self avoiding walks, fractal landscapes, trajectories of Brownian motion and the Brownian tree (i.e., dendritic fractals generated by modeling diffusion-limited aggregation or reaction-limited aggregation clusters).

A fractal generated by a finite subdivision rule for an alternating link

Finite subdivision rules – use a recursive topological algorithm for refining tilings[48] and they are similar to the process of cell division.[49] The iterative processes used in creating the Cantor set and the Sierpinski carpet are examples of finite subdivision rules, as is barycentric subdivision.

APPLICATIONS

Simulated fractals

Fractal patterns have been modeled extensively, albeit within a range of scales rather than infinitely, owing to the practical limits of physical time and space. Models may simulate theoretical fractals or natural phenomena with fractal features. The outputs of the modelling process may be highly artistic renderings, outputs for investigation, or benchmarks for fractal analysis. Some specific applications of fractals to technology are listed elsewhere. Images and other outputs of modelling are normally referred to as being "fractals" even if they do not have strictly fractal characteristics, such as when it is possible to zoom into a region of the fractal image that does not exhibit any fractal properties. Also, these may include calculation or display artifacts which are not characteristics of true fractals.

Modeled fractals may be sounds, digital images, electrochemical patterns, circadian rhythms, etc. Fractal patterns have been reconstructed in physical 3-dimensional space and virtually, often called "in silico" modeling. Models of fractals are generally created using fractal-generating software that implements techniques such as those outlined above. As one illustration, trees, ferns, cells of the nervous system, blood and lung vasculature, and other branching patterns in nature can be modeled on a computer by using recursive algorithms and L-systems techniques.

The recursive nature of some patterns is obvious in certain examples—a branch from a tree or a frond from a fern is a miniature replica of the whole: not identical, but similar in nature. Similarly, random fractals have been used to describe/create many highly irregular real-world objects. A limitation of modeling fractals is that resemblance of a fractal model to a natural phenomenon does not prove that the phenomenon being modeled is formed by a process similar to the modeling algorithms.

Natural phenomena with fractal features

Approximate fractals found in nature display self-similarity over extended, but finite, scale ranges. The connection between fractals and leaves, for instance, is currently being used to determine how much carbon is contained in trees. Phenomena known to have fractal features include:

Actin cytoskeleton; Algae; Animal coloration patterns; Blood vessels and pulmonary vessels; Brownian motion (generated by a one-dimensional Wiener process); Clouds and rainfall areas; Coastlines; Craters; Crystals; DNA; Dust grains; Earthquakes; Fault lines; Geometrical optics; Heart rates; Heart sounds; Lake shorelines and areas; Lightning bolts; Mountain goat horns; Polymers; Percolation; Mountain ranges; Ocean waves; Pineapple; Proteins; Psychedelic Experience; Purkinje cells; Rings of Saturn; River networks; Romanesco broccoli; Snowflakes; Soil pores; Surfaces in turbulent flows; Trees.

As if the above list of fractals in nature were not enough emphasis, then let me drive the point home: the Cosmos, from the micro-Cosmos to the macro-Cosmos, is built from the primordial self-reference, namely Tao experiencing itself as if it were not itself — **reproduction with variation and selection**.

Fractals in cell biology

Fractals often appear in the realm of living organisms where they arise through branching processes and other complex pattern formation. Ian Wong and co-workers have shown that migrating cells can form fractals by clustering and branching. Nerve cells function through processes at the cell surface, with phenomena that are enhanced by largely increasing the surface to volume ratio. As a consequence nerve cells often are found to form into fractal patterns. These processes are crucial in cell physiology and different pathologies.

Multiple subcellular structures also are found to assemble into fractals. Diego Krapf has shown that through branching processes the actin filaments in human cells assemble into fractal patterns. Similarly Matthias Weiss showed that the endoplasmic reticulum displays fractal features. The current understanding is that fractals are ubiquitous in cell biology, from proteins, to organelles, to whole cells.

In creative works

Since 1999 numerous scientific groups have performed fractal analysis on over 50 paintings created by Jackson Pollock by pouring paint directly onto horizontal canvasses.

Recently, fractal analysis has been used to achieve a 93% success rate in distinguishing real from imitation Pollocks. Cognitive neuroscientists have shown that Pollock's fractals induce the same stress-reduction in observers as computer-generated fractals and Nature's fractals.

Decalcomania, a technique used by artists such as Max Ernst, can produce fractal-like patterns. It involves pressing paint between two surfaces and pulling them apart.

Cyberneticist Ron Eglash has suggested that fractal geometry and mathematics are prevalent in African art, games, divination, trade, and architecture. Circular houses appear in circles of circles, rectangular houses in rectangles of rectangles, and so on. Such scaling patterns can also be found in African textiles, sculpture, and even cornrow hairstyles. Hokky Situngkir also suggested the similar properties in Indonesian traditional art, batik, and ornaments found in traditional houses.

Ethnomathematician Ron Eglash has discussed the planned layout of Benin city using fractals as the basis, not only in the city itself and the villages but even in the rooms of houses. He commented that "When Europeans first came to Africa, they considered the architecture very disorganised and thus primitive. It never occurred to them that the Africans might have been using a form of mathematics that they hadn't even discovered yet."

In a 1996 interview with Michael Silverblatt, David Foster Wallace admitted that the structure of the first draft of *Infinite Jest* he gave to his editor Michael Pietsch was inspired by fractals, specifically the Sierpinski triangle (a.k.a. Sierpinski gasket), but that the edited novel is "more like a lopsided Sierpinsky Gasket".

Some works by the Dutch artist M. C. Escher, such as *Circle Limit III*, contain shapes repeated to infinity that become smaller and smaller as they get near to the edges, in a pattern that would always look the same if zoomed in.

① **Recapitulation Theory**

So-called "recapitulation theory" is yet another instance where what I am calling the "Holarchy Principle" has gained some recognition, namely that biological evolution has correlations in psychological development:

The theory of recapitulation, also called the biogenetic law or embryological parallelism — often expressed using Ernst Haeckel's phrase "ontogeny recapitulates phylogeny" — is a historical hypothesis that the development of the embryo of an animal, from fertilization to gestation or hatching (ontogeny), goes through stages resembling or representing successive adult stages in the evolution of the animal's remote ancestors (phylogeny). It was formulated in the 1820s by Étienne Serres based on the work of Johann Friedrich Meckel, after whom it is also known as Meckel–Serres law. Since embryos also evolve in different ways, the shortcomings of the theory had been recognized by the early 20th century, and it had been relegated to "biological mythology" by the mid-20th century.

Even though recapitulation theory did not survive advancements in scientific investigation, as noted in the previous quote, the general notion of recapitulation has gained some traction in the recognition of a common pattern between the realms of biology and psychology, as noted in the following quote:

Analogies to recapitulation theory have been formulated in other fields, including cognitive development and music criticism.... In the late 20th century, studies of symbolism and learning in the field of cultural anthropology suggested that "While ontogeny does not generally recapitulate phylogeny in any direct sense (Gould 1977), both biological evolution and the stages in the child's cognitive development follow much the same progression of evolutionary stages as that suggested in the archaeological record (Borchert and Zihlman 1990, Bates 1979, Wynn 1979)" (Foster, Mary LeCron (1994). "Symbolism: the foundation of culture" in *Companion Encyclopedia of Anthropology*. pp. 386-387.) [https://en.wikipedia.org/wiki/Recapitulation_theory< — retrieved 05 June 2023]

Biological evolution is covered in **Part Four**, and developmental psychology is covered in **Part Five**, of this *Cosmogony* book. There you will see how both realms can be correlated with the Natural Sequence schema.

The Iteration Corollary to the Holarchy Principle

The Fibonacci Sequence, another Corollary to the Holarchy Principle

The notion of self-reference, initiated by the Tao, appears in mathematics, as one would reasonably expect since so much of nature can be modeled with math. One particular instance of this (more will follow in other subsections of this section on the Holarchy Principle), is the so-called Fibonacci Sequence. Basically and briefly, this is a sequence of numbers where the succeeding number is the sum of the two preceding numbers.

In mathematics, the Fibonacci sequence is a sequence in which each number is the sum of the two preceding ones. Numbers that are part of the Fibonacci sequence are known as Fibonacci numbers, commonly denoted F_n . The sequence commonly starts from 0 and 1, although some authors start the sequence from 1 and 1 or sometimes (as did Fibonacci) from 1 and 2. Starting from 0 and 1, the first few values in the sequence are:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144.

The logic and the math of the Fibonacci sequence in terms of Tao's Template is as follows: If zero be correlated with Tao, then the first "production" of Tao is not-Tao, and since the negation of a negation is an affirmation, then the first production of Taoness is Oneness, which subsequently produces a Twoness, which subsequently produces a Threeness, which subsequently produces All.

The Fibonacci numbers were first described in Indian mathematics, as early as 200 BC in work by Pingala on enumerating possible patterns of Sanskrit poetry formed from syllables of two lengths. They are named after the Italian mathematician Leonardo of Pisa, also known as Fibonacci, who introduced the sequence to Western European mathematics in his 1202 book *Liber Abaci*.

The next paragraph says that the Fibonacci sequence shows up unexpectedly in mathematics, but this is only unexpected if one does not realize that self-reference is *the* fundamental fact of existence and function sourced from Tao.

Fibonacci numbers appear unexpectedly often in mathematics, so much so that there is an entire journal dedicated to their study, the Fibonacci Quarterly. Applications of Fibonacci numbers include computer algorithms such as the Fibonacci search technique and the Fibonacci heap data structure, and graphs called Fibonacci cubes used for interconnecting parallel and distributed systems. They also appear in biological settings, such as branching in trees, the arrangement of leaves on a stem, the fruit sprouts of a pineapple, the flowering of an artichoke, and the arrangement of a pine cone's bracts, though they do not occur in all species.

Fibonacci numbers are also strongly related to the golden ratio: Binet's formula expresses the n th Fibonacci number in terms of n and the golden ratio, and implies that the ratio of two consecutive Fibonacci numbers tends to the golden ratio as n increases. Fibonacci numbers are also closely related to Lucas numbers, which obey the same recurrence relation and with the Fibonacci numbers form a complementary pair of Lucas sequences.

[>https://en.wikipedia.org/wiki/Fibonacci_sequence< — retrieved 14 November 2023]

The Recursion Corollary to the Holarchy Principle

"Recursion" is yet another name for a nested hierarchy of self-reference, self-reference being the process of Tao experiencing itself as if it were not itself, which creates space and time (and objectivity and subjectivity). All the 'points' or quanta in time and space are differentiated from all the other quanta of space and time. If Tao is thought of as the undifferentiated source of All, then the initial creation of Tao is to step 'outside' of Itself, so to speak, and view itself as the initial decentration or meta-cognition.

Wikipedia puts it this way:

Recursion occurs when the definition of a concept or process depends on a simpler version of itself. Recursion is used in a variety of disciplines ranging from linguistics to logic. The most common application of recursion is in mathematics and computer science, where a function being defined is applied within its own definition. While

this apparently defines an infinite number of instances (function values), it is often done in such a way that no infinite loop or infinite chain of references ("crock recursion") can occur.

A process that exhibits recursion is recursive.

Formal definitions

In mathematics and computer science, a class of objects or methods exhibits recursive behavior when it can be defined by two properties:

A simple base case (or cases) — a terminating scenario that does not use recursion to produce an answer

A recursive step — a set of rules that reduces all successive cases toward the base case.

For example, the following is a recursive definition of a person's ancestor. One's ancestor is either:

One's parent (base case), or

One's parent's ancestor (recursive step).

The Fibonacci sequence is another classic example of recursion:

$\text{Fib}(0) = 0$ as base case 1,

$\text{Fib}(1) = 1$ as base case 2,

For all integers $n > 1$, $\text{Fib}(n) = \text{Fib}(n - 1) + \text{Fib}(n - 2)$.

Many mathematical axioms are based upon recursive rules. For example, the formal definition of the natural numbers by the Peano axioms can be described as: "Zero is a natural number, and each natural number has a successor, which is also a natural number." [2] By this base case and recursive rule, one can generate the set of all natural numbers.

Other recursively defined mathematical objects include factorials, functions (e.g., recurrence relations), sets (e.g., Cantor ternary set), and fractals.

There are various more tongue-in-cheek definitions of recursion; see recursive humor.

Informal definition

Recently refreshed sourdough, bubbling through fermentation: the recipe calls for some sourdough left over from the last time the same recipe was made.

Recursion is the process a procedure goes through when one of the steps of the procedure involves invoking the procedure itself. A procedure that goes through recursion is said to be 'recursive'. [3]

To understand recursion, one must recognize the distinction between a procedure and the running of a procedure. A procedure is a set of steps based on a set of rules, while the running of a procedure involves actually following the rules and performing the steps.

Recursion is related to, but not the same as, a reference within the specification of a procedure to the execution of some other procedure.

When a procedure is defined as such, this immediately creates the possibility of an endless loop; recursion can only be properly used in a definition if the step in question is skipped in certain cases so that the procedure can complete. Recursion comes in three forms: direct, indirect, and circular. Direct recursion is when a function (A) invokes itself (A references A); indirect recursion occurs when one function (A) invokes (B), function (B) invokes function (C), function (C) invokes (D), etc., until one of the functions in the chain invokes an earlier one. Circular recursion occurs when function (A) and function (B) invoke each other. If an infinite loop occurs in direct, indirect, or circular recursion, it is said to be the condition of "crock recursion." There are basically two ways to prevent crock recursion, either limit the number of times a function may reference itself, or place an absolute limit on the depth of function calls, e.g. if there is a depth limit of 50, any time a procedure calls another, a counter is increased; when it exits, that counter is decreased. Once the counter reaches the limit (in this case, 50) no further procedure calls are allowed; if any attempt to call a 51st function is made, the operation is terminated. Using a recursion limit prevents only crock recursion; placing a call limit, in addition to halting crock recursion, may have the side effect of preventing the execution of legitimate complex procedures which are deeply nested, but not recursive.

But even if it is properly defined, a recursive procedure is not easy for humans to perform, as it requires distinguishing the new from the old, partially executed invocation of the procedure; this requires some administration as to how far various simultaneous instances of the procedures have progressed. For this reason, recursive definitions are very rare in everyday situations. [<https://en.wikipedia.org/wiki/Recursion>< retrieved 04 June 2023]

The Gestalt Corollary to the Hierarchy Principle

[[This section might fit better somewhere else, such as Chapter X-x: "It's About Time". This section is also muddled, and needs to find its place in Tao's Template, perhaps as part of the definition of the Tao as transcendent.]]

The German language word for a whole that is greater than the sum of its parts is *gestalt*. The reason that I include a section on this topic is that the Cosmos as a whole is a system that is made up of subsystems, all of which appear to be more than the sum of its sub-sub systems, and so on all up and down the GC/NB, per Chapter X-x "Reductionism + Emanationism = Existence". The following lengthy extraction from a website about design and perception of design is appropriate for this book because the Cosmos appears to be designed according to principles.

What are the Gestalt Principles?

Gestalt Principles are principles/laws of human perception that describe how humans group similar elements, recognize patterns, and simplify complex images when we perceive objects. Designers use the principles to organize content on websites and other interfaces so it is aesthetically pleasing and easy to understand.

Gestalt Principles — a Background

"*Gestalt*" is German for "unified whole". The first Gestalt Principles were devised in the 1920s by German psychologists Max Wertheimer, Kurt Koffka, and Wolfgang Kohler — who aimed to understand how humans typically gain meaningful perceptions from the chaotic stimuli around them. They identified a set of laws which address the natural compulsion to find order in disorder. According to this, the mind "informs" what the eye sees by perceiving a series of individual elements as a whole. Professionals in the then-growing industry of graphic design quickly adopted these principles, and designers have since used Gestalt Principles extensively to craft designs with well-placed elements that catch the eye as larger, whole images.

"The whole is other than the sum of the parts." —Kurt Koffka

[><https://www.interaction-design.org/literature/topics/gestalt-principles>< — retrieved 01 July 2023]

The notion to be noted here is that the gestalt principle applies to the entire Cosmos, not just human psychology, where the notion originated. Thus, what the cosmic subsystem called "human" does, as part of their built-in psychology, is actually a built-in component of the cosmic system as a whole. And beyond that, even the cosmic system as a whole is a gestalt, meaning that it is more than the sum of its subsystems. The point to be emphasized here is that, in terms of the NS schema, each successive stage includes all previous stages but transcends them with qualities all its own, and that the Cosmos as a whole has a transcendent component, meaning that it is every reaching beyond finity to infinity and eternity. Even though there is a beginning to time, there is no end.

[[Maxwell Ramstead has proposed another perspective, namely that the whole is *less* than the sum of its parts in a particular way. Basically and briefly, using our human experience as an example, as we are learning stuff (e.g. riding a bicycle), the learning takes place on a conscious level, but at some point what we have learned gets pushed to the subconscious (we are no longer meta-cognitive about what the body is doing). Look for something quotable from the internet. A lot could be said about this Principle this in the Live and Learn chapter, where learning is a process of ascending a ladder, where our consciousness is a like a 'layer' sandwiched between the subconscious 'layer(s)' and the superconscious 'layer(s)'.]]

Another name that I propose for the Gestalt Principle is the Meta Principle: there is always more....

The Meta Corollary? aka the Recursion Corollary?

- define recursion as reflection = self seeing self as not-self = becoming more = meta-cognition = the primordial creative event in spacetime and time space as Tao first creating a self, then a not self, then another self, ad infinitum ad eternum = the big bang from the undifferentiated singularity = decentering from the self to view the self as if it were not the self.
- There is always more, creativity is potentially inexhaustible.
- The Cardinal triad is the reflection of the Ordinal triad
- the Meta Principle is the Oneness produced the Twoness of Emergence from 'below' and Emanation from 'above'.
- Consult Godel – Escher – Bach for his description of recursion
- Consult Wikipedia for a description of recursion
-

Cornucopia

The notion of plenitude

Godel's Incompleteness Theorems

In other words, the Tao's Template ontology embraces contradiction in the Godelian sense: a formal mathematical system (such as the Cosmos) cannot be both complete and consistent, so, in order to be complete, a formal mathematical system must include inconsistency aka self-reference, and in TT-NS-PAS terms that means the Tao experiences itself as if it were not itself = Cosmos.

Tarsky's theorem

① The Transition Principle

The next principle to be discussed has to do with the fact that there are relatively distinct time-like stages in the history of the Cosmos. Per the Natural Sequence, there is progress or development or evolution from stage to stage. However, generally speaking, change in the structure of the Cosmos occurs in two phases: 1) the plateaus between transitions are *evolutionary*, and 2) the transitions are *revolutionary*. This means that within the stages themselves, progress is relatively slow and stable, but the stages are distinct because they are separated by troubled, turbulent, traumatic, tortured transitions. These transitions from one stage to the next stage are chaotic beyond the normal background creative spontaneity that is built into the Cosmos. In terms of the wording of Tao's Template, the transition happens when "the ____ produced the ____". Because this is a Cosmic phenomenon, I refer to it as the Transition Principle.

A review of the history of the Cosmos reveals a series of nested stages that can be identified, from the shortest time cycle to the longest time cycle. These transitions show up in many realms of nature, many of which are reviewed in the various Parts of this *Cosmogony* book. The following subsections introduce the reader to some of the instantiations of the Transition Principle in these various realms of inquiry. The Transition Principle

goes by various names because it occurs in so many realms. Let's take a look at them in the following subsections.

① **Quantum Jump**

The smallest scale to which the Transition Principle could perhaps be applied is the atomic realm, because it functions in terms of quanta, or discrete packets, of energy:

A quantum jump is the abrupt transition of a quantum system (atom, molecule, atomic nucleus) from one quantum state to another, from one energy level to another. When the system absorbs energy, there is a transition to a higher energy level (excitation); when the system loses energy, there is a transition to a lower energy level. The concept was introduced by Niels Bohr, in his 1913 Bohr model. A quantum jump is a phenomenon that is peculiar to quantum systems and distinguishes them from classical systems, where any transitions are performed gradually. In quantum mechanics, such jumps are associated with the non-unitary evolution of a quantum-mechanical system during measurement. A quantum jump can be accompanied by the emission or absorption of photons; energy transfer during a quantum jump can also occur by non-radiative resonant energy transfer or in collisions with other particles. In modern physics, the concept of a quantum jump is rarely used; as a rule scientists speak of transitions between quantum states or energy levels.

[>https://en.wikipedia.org/wiki/Quantum_jump< — retrieved — 06 June 2023]

The quantum principle — the notion that the Cosmos exists and functions as semi-discrete systems — found in its basic form at the atomic level, scales out and up to larger and longer systems. Next up from the atomic realm is the realm of chemistry:

① **Phase Transition**

This is the name for what happens in the realm of chemistry when a material changes from one “state” to another “state”:

In chemistry, thermodynamics, and many other related fields, phase transitions (or phase changes) are the physical processes of transition between a state of a medium, identified by some parameters, and another one, with different values of the parameters. Commonly the term is used to refer to changes among the basic states of matter: solid, liquid, and gas, as well as plasma in rare cases. For example, a phase of a thermodynamic system and the states of matter have uniform physical properties. During a phase transition of a given medium, certain properties of the medium change, often discontinuously, as a result of the change of external conditions, such as temperature, pressure, or others. For example, a liquid may become gas upon heating to the boiling point, resulting in an abrupt change in volume. The measurement of the external conditions at which the transformation occurs is termed the phase transition. Phase transitions commonly occur in nature and are used today in many technologies. [>https://en.wikipedia.org/wiki/Phase_transition< — retrieved 09 February 2022]

The next obvious major stage beyond chemistry is biology, and the name for the transitions in that realm is “punctuated equilibrium”:

① **Punctuated Equilibrium**

This is the name for what the fossil record shows in regard to biological evolution, namely that there are long periods in the geological record when species typically evolve slowly during a relatively stable and static era, and then there is a sudden transition to a new species:

In evolutionary biology, punctuated equilibrium (also called punctuated equilibria) is a theory that proposes that once a species appears in the fossil record, the population will become stable, showing little evolutionary change for most of its geological history. This state of little or no morphological change is called stasis. When significant evolutionary change occurs, the theory proposes that it is generally restricted to rare and geologically rapid events of branching speciation called cladogenesis. Cladogenesis is the process by which a species splits into two distinct species, rather than one species gradually transforming into another.

Punctuated equilibrium is commonly contrasted with phyletic gradualism, the idea that evolution generally occurs uniformly by the steady and gradual transformation of whole lineages (anagenesis).

In 1972, paleontologists Niles Eldredge and Stephen Jay Gould published a landmark paper developing their theory and called it punctuated equilibria. Their paper built upon Ernst Mayr's model of geographic speciation, I. Michael Lerner's theories of developmental and genetic homeostasis, and their own empirical research. Eldredge and Gould proposed that the degree of gradualism commonly attributed to Charles Darwin is virtually

nonexistent in the fossil record, and that stasis dominates the history of most fossil species.

[>https://en.wikipedia.org/wiki/Punctuated_equilibrium< — retrieved 09 February 2022]

The reason for the sudden changes within species is that their environment experiences a sudden change, such as a climate shift, a large meteor strike, widespread volcanic eruptions, or other widespread environmental disaster; species must change rapidly to adapt to the new environment or they will die out.

A sudden change in the environment is sometimes called a “tipping point”:

① **Tipping Point**

The description of a tipping point in the following quotation is about sudden climate changes, but the phenomenon can be generalized to any “system” (as defined in a previous section on General Systems Theory) capable of being severely perturbed:

A tipping point in the climate system is a critical threshold that, when exceeded, leads to large and often irreversible changes in the state of the system. The term ‘tipping point’ is used by climate scientists to identify vulnerable features of the climate system.... If they ‘tip’, they are likely to have severe impacts on human society. A danger is that if the tipping point in one system is crossed, this could lead to a cascade of other tipping points.
[>https://en.wikipedia.org/wiki/Tipping_points_in_the_climate_system< — retrieved 09 February 2022]

In an upcoming section on the Dialectic Principle, more is said about the relationships between one system embedded within another system.

Tipping points happen in systems of all sizes, from small and short to large and long. One small/short transition in a single organism and is called “metamorphosis”:

① **Metamorphosis**

Some biological entities go through some dramatic transitions during their life cycle, between birth and death:

Metamorphosis is a biological process by which an animal physically develops including birth or hatching, involving a conspicuous and relatively abrupt change in the animal’s body structure through cell growth and differentiation. Some insects, fish, amphibians, mollusks, crustaceans, cnidarians, echinoderms, and tunicates undergo metamorphosis, which is often accompanied by a change of nutrition source or behavior. Animals can be divided into species that undergo complete metamorphosis (“holometaboly”), incomplete metamorphosis (“hemimetaboly”), or no metamorphosis (“ametaboly”).

Scientific usage of the term is technically precise, and it is not applied to general aspects of cell growth, including rapid growth spurts. Generally organisms with a larva stage undergo metamorphosis, and during metamorphosis the organism loses larval characteristics. References to “metamorphosis” in mammals are imprecise and only colloquial, but historically idealist ideas of transformation and morphology, as in Goethe’s *Metamorphosis of Plants*, have influenced the development of ideas of evolution. [><https://en.wikipedia.org/wiki/Metamorphosis>< — retrieved 14 October 2022]

The Transition Principle applies to developmental stages of some individual organisms during their lifetimes, but it also applies to developmental stages of entire groups of entities, including humans:

① **Liminality**

This word might not be familiar to most people, but it certainly is to anthropologists. I would venture to say that most people are familiar with the phenomenon itself, because transitions from one condition to another are pervasive in human experience during any kind of maturation process.

In anthropology, liminality (from Latin *līmen* ‘a threshold’) is the quality of ambiguity or disorientation that occurs in the middle stage of a rite of passage, when participants no longer hold their pre-ritual status but have not yet begun the transition to the status they will hold when the rite is complete. During a rite’s liminal stage, participants “stand at the threshold” between their previous way of structuring their identity, time, or community, and a new way (which completing the rite establishes).

The concept of liminality was first developed in the early twentieth century by folklorist Arnold van Gennep and later taken up by Victor Turner. More recently, usage of the term has broadened to describe political and cultural change as well as rites. During liminal periods of all kinds, social hierarchies may be reversed or temporarily dissolved, continuity of tradition may become uncertain, and future outcomes once taken for granted may be thrown into doubt. The dissolution of order during liminality creates a fluid, malleable situation that enables new institutions and customs to become established. The term has also passed into popular usage and has been

expanded to include liminoid experiences that are more relevant to post-industrial society.

[><https://en.wikipedia.org/wiki/Liminality>< — retrieved 21 July 2023]

Using the term liminality, we see that the Transition Principle applies to developmental stages of individuals and groups and tribes and cultures and societies during their lifetimes, but it also applies to developmental stages of political entities of all types and sizes, but another term is commonly applied to that realm, namely “revolution”:

① **Revolution**

A political revolution is obviously just a particular type of liminal transition in the course of human events.

In political science, a revolution (Latin: *revolutio*, ‘a turn around’) is an attempt to achieve fundamental and relatively sudden change in political power and political organization. It typically involves a revolt against the government due to perceived oppression (political, social, economic) or political incompetence.

Revolutions have occurred throughout human history and vary widely in terms of methods, success or failure, duration, and motivating ideology. Their results include major changes in culture, economy, and socio-political institutions, usually in response to perceived overwhelming autocracy or plutocracy.

Scholarly debates about what does and does not constitute a revolution center on several issues. Early studies of revolutions primarily analyzed events in European history from a psychological perspective, but more modern examinations include global events and incorporate perspectives from several social sciences, including sociology and political science. Several generations of scholarly thought on revolutions have generated many competing theories and contributed much to the current understanding of this complex phenomenon.

[><https://en.wikipedia.org/wiki/Revolution>< — retrieved 21 July 2023]

Most people hope that they will not be caught up in some malevolent revolution that happens during their lifetime, but they might be okay with a benevolent revolution. Most people during their lifetime have a few little revolutions in their psyche, and this goes by the name of “identity crisis”:

① **Identity Crisis**

My guess is that you have personally experienced an “identity crisis” at several turning points in your life so far, so you will easily understand what this subsection is about:

In psychology, identity crisis is a stage theory of identity development where it involves resolution of a conflict over the 8 stages of the lifespan. The term was coined by German psychologist Erik Erikson.

The stage of psychosocial development in which identity crisis may occur is called the identity cohesion versus role confusion. During this stage, adolescents are faced with physical growth, sexual maturity, and integrating ideas of themselves and about what others think of them. Adolescents therefore form their self-image and endure the task of resolving the crisis of their basic ego identity. Successful resolution of the crisis depends on one’s progress through previous developmental stages, centering on issues such as trust, autonomy, and initiative.

Erikson’s own interest in identity began in childhood. Born Ashkenazic Jewish, Erikson felt that he was an outsider. His later studies of cultural life among the Yurok of northern California and the Sioux of South Dakota helped formalize Erikson’s ideas about identity development and identity crisis. Erikson described those going through an identity crisis as exhibiting confusion. [>https://en.wikipedia.org/wiki/Identity_crisis< — retrieved 14 October 2022]

People are said to have an “identity crisis” when they “do not know who they are any more”. The person remains as the same substance, but the personality undergoes substantial behavioral system, value system, and belief system changes from plateau to plateau. If people resolve the crisis in a healthy way, then the following plateau is relatively stable and productive; if people do not resolve the crisis in a healthy way, then the turbulence continues. Part Five, “Developmental Psychology”, of this *Cosmogony* book reviews more than a dozen models of human psychological maturation, and all of them recognize that people experience confusion when passing through the transitions.

Not just individual people, but groups of people can have an identity crisis, but in that case it gets a different name, “paradigm shift”:

① **Paradigm Shift**

This is the name that has been given to the transition from one scientific belief system to another. Thus, this transition is something that happens within human psychology:

A paradigm shift is a fundamental change in the basic concepts and experimental practices of a scientific discipline. It is a concept in the philosophy of science that was introduced and brought into the common lexicon by the American physicist and philosopher Thomas Kuhn. Even though Kuhn restricted the use of the term to the natural sciences, the concept of a paradigm shift has also been used in numerous non-scientific contexts to describe a profound change in a fundamental model or perception of events. Kuhn presented his notion of a paradigm shift in his influential book *The Structure of Scientific Revolutions* (1962). Kuhn contrasts paradigm shifts, which characterize a Scientific Revolution, to the activity of normal science, which he describes as scientific work done within a prevailing framework or paradigm. Paradigm shifts arise when the dominant paradigm under which normal science operates is rendered incompatible with new phenomena, facilitating the adoption of a new theory or paradigm.

[>https://en.wikipedia.org/wiki/Paradigm_shift< — retrieved 14 October 2022]

The Wikipedia article went on to list paradigm shifts in the natural sciences, the social sciences, and the applied sciences; as we know “sciences” investigate all levels and stages of the Cosmos. My perception is that humanity as a whole as well as many of its institutions are going through a paradigm shift at this time in history.

It is understood by some that a transition can be to a ‘higher’ state, not merely a different state, and this has its own realm of inquiry and its own name, a “metasystem transition”:

① **Metasystem Transition**

Some scientists and philosophers recognize that the Cosmos is making “progress” via its transitions from one state to another state:

A metasystem transition is the emergence, through evolution, of a higher level of organization or control.

A metasystem is formed by the integration of a number of initially independent components, such as molecules (as theorized for instance by hypercycles), cells, or individuals, and the emergence of a system steering or controlling their interactions. As such, the collective of components becomes a new, goal-directed individual, capable of acting in a coordinated way. This metasystem is more complex, more intelligent, and more flexible in its actions than the initial component systems. Prime examples are the origin of life, the transition from unicellular to multicellular organisms, the emergence of eusociality or symbolic thought. [= Motion > Emotion > Intellect]

The concept of metasystem transition was introduced by the cybernetician Valentin Turchin in his 1970 book *The Phenomenon of Science*, and developed among others by Francis Heylighen in the *Principia Cybernetica Project*. Another related idea, that systems (“operators”) evolve to become more complex by successive closures encapsulating components in a larger whole, is proposed in “the operator theory”, developed by Gerard Jagers op Akkerhuis.

Turchin has applied the concept of metasystem transition in the domain of computing, via the notion of metacompilation or supercompilation. A supercompiler is a compiler program that compiles its own code, thus increasing its own efficiency, producing a remarkable speedup in its execution.

[>https://en.wikipedia.org/wiki/Metasystem_transition< — retrieved 10 February 2024]

[[Explore Heylighen at >https://en.wikipedia.org/wiki/Francis_Heylighen< and his internet home page ><http://pcp.vub.ac.be/HEYL.html>< and self-organization at ><https://en.wikipedia.org/wiki/Self-organization><]]

The phenomenon of “emergence” is The basic idea is that the Cosmos “ratchets” ‘up’ by degrees to a ‘higher’ state in terms to some qualitative parameter, as well as ratchets toward a more integrated way of being.

It is not as if I am the first person to notice that radical transitions happen in many realms all up and down the Great Chain/Nest of Being. This has even been codified with a name of its own:

① **Critical Junction Theory**

This is the name that social scientists give to the radical transitions in their realm of concern:

Critical juncture theory focuses on critical junctures, i.e., large, rapid, discontinuous changes, and the long-term causal effect or historical legacy of these changes. Critical junctures are turning points that alter the course of evolution of some entity (e.g., a species, a society). Critical juncture theory seeks to explain both (1) the historical origin and maintenance of social order, and (2) the occurrence of social change through sudden, big leaps.

Critical juncture theory is not a general theory of social order and change. It emphasizes one kind of cause (involving a big, discontinuous change) and kind of effect (a persistent effect). Yet, it challenges some common assumptions in many approaches and theories in the social sciences. The idea that some changes are

discontinuous sets it up as an alternative to (1) “continuist” or “synechist” theories that assume that change is always gradual or that *natura non facit saltus* — Latin for “nature does not make jumps”. The idea that such discontinuous changes have a long-term impact stands in counterposition to (2) “presentist” explanations that only consider the possible causal effect of temporally proximate factors.

Theorizing about critical junctures began in the social sciences in the 1960s. Since then, it has been central to a body of research in the social sciences that is historically informed. Research on critical junctures in the social sciences is part of the broader tradition of comparative historical analysis and historical institutionalism. It is a tradition that spans political science, sociology, and economics. Within economics, it shares an interest in historically oriented research with the new economic history or cliometrics. Research on critical junctures is also part of the broader “historical turn” in the social sciences. The idea of episodes of discontinuous change, followed by periods of relative stability, was introduced in various fields of knowledge in the 1960s and early 1970s.

Since its launching in 1967, research on critical junctures has focused in part on developing a theoretical framework, which has evolved over time. In studies of society, some scholars use the term “punctuated equilibrium” model, and others the term “neo-episodic” model. Studies of knowledge continue to use the term “paradigm shift”. However, these terms can be treated as synonyms for critical juncture.

[>https://en.wikipedia.org/wiki/Critical_juncture_theory< — retrieved 14 October 2022]

The Wikipedia article went on to list and describe critical junctions in science, anthropology, politics, evolutionary biology, societies, economics, technology, institutions, historical eras, and religion. The Parts of this *Cosmogony* book cover some of the transitions in these realms. Beyond the mere descriptions of the stages and the transitions between them, the TT-NS-PAS presumes to provide a “theoretical framework” for them in terms of such fundamental phenomena as logic and mathematics. In other words, the TT-NS-PAS answers the question that scientists and philosophers typically ask, the WHY question.

① *Summary of the Transition Principle*

Surely you get the basic idea by now: for various reasons, all realms in the Great Chain/Nest of Being typically undergo radical transformations during their lifetimes.

One of the reasons for these transitions within a realm is that “shift happens” exterior to the realm, and the realm must make adaptive adjustments if it is to survive and thrive. What forces the transitions is that there is a coupled interaction between a realm and adjacent realms. Hence my name for another principle of the Natural Sequence scheme, the Dialectic Principle.

The Dialectic Principle (the One produced the Two and Vice Versa)

Over time, changes happen in internal realms, and changes happen in external realms. The Dialectic Principle is simply the notion that internal and external realms are not totally isolated from each other, so consequently they provoke changes in each other. Internal realms are separated from external realms by a membrane of some kind — a boundary of some kind is what defines a realm — and the membrane is typically porous, meaning that there is communication of information from one side of the membrane to the other; the information flows both ways.

In terms of Tao’s Template, the Dialectic Principle appears in Chapter 42 of the *Tao Te Ching* as “All things carry the Yin and embrace the Yang, and through the blending of the Chi they achieve harmony”. In the terminology of the Natural Sequence (NS) schema, this is where Ordinal + Cardinal = Neutral. The Dialectic Principle is a derivative of the **Relationalism (Twoness) Ontology**, the notion that everything exists (in space) and functions (in time) by comparison and contrast with its reciprocal complement; refer to the section “Relationalism + Substantialism = Existence” in **Chapter I-x**, “Yin + Yang = Chi”. Basically and briefly, according to the Relationalist ontology, there is no existence and function without a self and an environment. In the Substantialist (Oneness) ontology, the source of all has no defining characteristics; other descriptive words for that are homogeneous, ambiguous, potential rather than actual — both cataphatic and apophatic theology are Substantialist.

This word “dialectic” might not be familiar to all readers of this *Cosmogony* book; it is a philosophical word, and there are other with a similar meaning, used for the same basic concept applied to different fields of inquiry. This section of this chapter reviews many of those other words after a review of the meaning of the word dialectic.

Simply and briefly, the Dialectic Principle is the notion that there exists a self and there exists a not-self (or other-self), and the two interact with each other, and the interaction provides impetus — not just to change, but — to develop, to improve, to evolve the self and the not-self to a ‘higher’ level or ‘later’ stage in the Great Chain/Nest of Being. The notion of self versus not-self is predicated on the notion of the Holarchy Principle discussed previously, namely that the Cosmos exists as space-like levels and functions as time-like stages. The *Cosmology* book was focused more on space-like levels (being, noun), whereas this *Cosmogony* book is focused more on time-like stages (doing, verb). Per the Holarchy Principle, levels and stages have self/not-self boundaries between them. These boundaries can be viewed (from an Ordinal point of view) as *separating* the levels and stages, or these boundaries can be viewed (from a Cardinal point of view) as *joining* the levels and stages. However one views them, in terms of time-like stages, the interaction between space-like levels, across the boundaries, results in a transition between time-like stages, from one stage to the next more-developed stage in the Great Chain/Nest of Being; the discussion of this phenomenon is documented in the prior section on the Transition Principle.

The dialectic interaction between “nature” and “nurture” determines the characteristics and qualities of each stage. The basic idea is that “it takes two to tango”; without the interaction of self and not-self, no progress is made. This principle embodies a deep philosophical insight about how the cosmic system as a whole, and its subsystems, ‘dance’ through cycles of time. That is to say, as a coherent system develops over the course of its existence, different internal subsystems come ‘on line’, so to speak. At the same time, the developing system enlarges and changes its environment, and this external system provides feedback to the internal system. Thus, back and forth and round and round we go in an ascending spiral of in the Action, Inspiration, and Expression dimensions as the inner world processes and assimilates the outer world, and *vice versa*.

So how does the Dialectic Principle relate to the NS schema? Each stage in the septenarian cycle typically starts out with what could be called the egocentric “me” stage. This is because the system is focused on dealing with, and hopefully resolving, what could be called the “identity crisis” at the start of a new stage; refer to the section on the Transition Principle. If the identity crisis is in fact resolved in a healthy way, then the system can refocus on the socio-centric so-called “we” stage, during the stable plateau phase of the stage. In the NS schema, the “me” phase correlates with the triad of Ordinal levels of the NS septenary, and the “we” phase correlates with the triad of Cardinal stages of the NS septenary. Each stage within the Ordinal and Cardinal phases also has a “me” phase in the triad of Ordinal sub-stages and a “we” triad of Cardinal sub-stages.

With that little review and preview behind us, let’s now delve into the Dialectic Principle as it is understood and taught in various branches of science and philosophy. *After that there is documentation about Dialogue, then Enactivism, then xxx*

Relationalism (Twoness): The self exists on the boundary between two “substances”, the outer and the inner worlds.

Agent–Arena Relationships

>https://evolutionism.miraheze.org/wiki/Agent-Arena_relationship<

Content > < context.

The Three Gunas

[[><https://en.wikipedia.org/wiki/Guna>< a cursory reading of this Wikipedia article indicates that this ancient Hindu philosophical idea is equivalent to the dialectic principle of Cardinal + Ordinal = Neutral, but this should not just be my idea; it should be found elsewhere.]]

Innate qualities and tendencies are key ancient concepts in Indian literature. Maitrayaniya Upanishad is one of the earliest texts making an explicit reference to Hindu trinity of Brahma, Vishnu and Shiva and linking them to their Guna — as creator/activity, preserver/purity, destroyer/recycler respectively. The idea of three types of guṇa, innate nature and forces that together transform and keep changing the world is, however, found in numerous earlier and later Indian texts.

It is easy to correlate the trinity of Hindu deities with the Dialectic Attributes: Brahma = creator = Positivity = Cardinality, Shiva = destroyer = Negativity = Ordinality, and Vishnu = preserver = Neutrality. It is not so easy to correlate the Gunas with the Dialectic Attributes:

In Samkhya philosophy, a *guṇa* is one of three "attributes, tendencies, qualities": *sattva*, *rajas* and *tamas*. This category of *guṇas* has been widely adopted by various schools of Hinduism for categorizing behavior and natural phenomena. The three qualities are:

- *Sattva* is the *guṇa* of balance, harmony, goodness, purity, universal-ism, holism, construction, creativity, positivity, peacefulness, and virtue. [Neutral]
- *Rajas* is the *guṇa* of passion, activity, neither good nor bad and sometimes either, self-centeredness, egoism, individualization, drivenness, movement, and dynamism. [Cardinal]
- *Tamas* is the *guṇa* of imbalance, disorder, chaos, anxiety, impurity, destruction, delusion, negativity, dullness or inactivity, apathy, inertia or lethargy, violence, viciousness, and ignorance. [Ordinal]

In Indian philosophy, these qualities are not considered present in an either-or fashion. Rather, everyone and everything has all three, only in different proportions and in different contexts. The living being or substance is viewed as the net result of the joint effect of these three qualities.

Words to describe Cardinal and Ordinal and Neutral are found in the descriptions of the three *Gunas*, but if they are about the same thing, then many of the descriptive words should be moved to a different *Guna*.

Dialectic

Wikipedia has an extensive article on the subject of dialectics. Simply and briefly stated, dialectics is the name that philosophers use for what I am calling the "Dialectic Principle" in this *Cosmogony* book. In terms of Tao's Template, this is the developmental step where "the Two produced the Three". One reason to quote this article at length is to show how the Dialectic Principle is pervasive in many realms, which is why it is proper to elevate it to the exalted status of a fundamental "principle" of the Cosmos, the 2 > 3 Principle of TT.

This word hearkens back to the work of Fichte and Hegel, two German philosophers from a couple hundred years ago. You might have heard of "thesis, antithesis, synthesis". This is the notion that progress is made in the cosmic system and its subsystems, including in human life, by the reconciliation of positive versus negative complementary contraries that work through their issues with each other until they arrive at a neutral state, and then the cycle of reconciling contraries repeats *ad æternum*. In the NS-PAS schema, "thesis" is an Ordinal or negative assertion that is countered by its "antithesis", a Cardinal or positive assertion, such that the two combine into a Neutral state ... until the harmony is disrupted at the beginning of the next septenary with the appearance of another Ordinal/negative assertion.

With that brief introduction to dialecticism behind us, let's review the Wikipedia article on the subject.

INTRODUCTION

Dialectic (Greek: διαλεκτική, *dialektikḗ*; related to dialogue; German: *Dialektik*), also known as the dialectical method, is a discourse between two or more people holding different points of view about a subject but wishing to establish the truth through reasoned argumentation. Dialectic resembles debate, but the concept excludes subjective elements such as emotional appeal and the modern pejorative sense of rhetoric. Dialectic may thus be contrasted with both the *eristic*, which refers to argument that aims to successfully dispute another's argument (rather than searching for truth), and the *didactic* method, wherein one side of the conversation teaches the other. Dialectic is alternatively known as *minor logic*, as opposed to *major logic* or *critique*.

That introductory paragraph is important in that it makes a point that I want to emphasize, namely that the dialectic process is a means for both the system and the subsystem to find and embody a higher or greater 'truth' than they had before they engaged in the process of dialectic interaction.

Within Hegelianism, the word dialectic has the specialized meaning of a contradiction between ideas that serves as the determining factor in their relationship....

Basically and briefly, the dialectic process resolves differences. A typical reader of this *Cosmogony* book might be well aware that this works between people or groups of people, but might not realize that it is a cosmic phenomenon that exists and functions within and among all subsystems of time and space.

Dialectic tends to imply a process of evolution and so does not naturally fit within classical logics, but was given some formalism in the twentieth century. The emphasis on process is particularly marked in Hegelian dialectic, and even more so in Marxist dialectical logic, which tried to account for the evolution of ideas over longer time periods in the real world.

Thus, the entire Cosmos is evolving via the dialectic process. There is no need to remind the reader that the Natural Sequence schema is about evolution, but I just did it anyway.

WESTERN DIALECTICAL FORMS

There is a variety of meanings of dialectic or dialectics within Western philosophy.

Classical philosophy

In classical philosophy, dialectic (διαλεκτική) is a form of reasoning based upon dialogue of arguments and counter-arguments, advocating propositions (theses) and counter-propositions (antitheses). The outcome of such a dialectic might be the refutation of a relevant proposition, or of a synthesis, or a combination of the opposing assertions, or a qualitative improvement of the dialogue.

That quote was about people having disputes, and it could be restated as this, that when there are two opposing notions, the resolution of the disagreement could be that one or the other is wrong, or that both are wrong, or that both are right at a higher level or later stage of understanding. In terms of the NS schema, the latter outcome is preferred, meaning that a duality resolves into a unity at the next higher level or next later stage of development.

The Wikipedia article continues with a history of dialectics in the sense of humans arguing with each other in ancient and medieval times, but that is irrelevant to this subsection, so I will not quote and comment on it here. My purpose in this subsection is merely to describe and explain the general principle, which applies to domains reviewed throughout subsequent Parts of this book. In other words, dialectics is not just a conversational process that human disputants engage in as they aspire to arrive at greater and higher truths. Rather, it is the fundamental process of the Tao and its subsystems as it and they learn about itself and themselves. That notion is relevant to this book, so I resume discussion of dialectics where the story is picked up by modern philosophers.

Hegelian dialectic

The concept of dialectics was given new life at the start of the 19th century by Georg Wilhelm Friedrich Hegel (following Johann Gottlieb Fichte), whose dialectical model of nature and of history made dialectic a fundamental aspect of the nature of reality

Hegelian dialectic, usually presented in a threefold manner, was stated by Heinrich Moritz Chalybäus as comprising three dialectical stages of development: a thesis, giving rise to its reaction; an antithesis, which contradicts or negates the thesis; and the tension between the two being resolved by means of a synthesis. Although this model is often named after Hegel, he never used that specific formulation. Hegel ascribed that terminology to Kant. Carrying on Kant's work, Fichte greatly elaborated on the synthesis model and popularized it.

On the other hand, Hegel did use a three-valued logical model that is very similar to the antithesis model, but Hegel's most usual terms were: Abstract-Negative-Concrete. Hegel used this writing model as a backbone to accompany his points in many of his works.

The formula, thesis-antithesis-synthesis, does not explain why the thesis requires an antithesis. However, the formula, abstract-negative-concrete, suggests a flaw, or perhaps an incompleteness, in any initial thesis — it is too abstract and lacks the negative of trial, error, and experience. For Hegel, the concrete, the synthesis, the absolute, must always pass through the phase of the negative, in the journey to completion, that is, mediation. This is the essence of what is popularly called Hegelian dialectics.

According to the German philosopher Walter Kaufmann:

Fichte introduced into German philosophy the three-step of thesis, antithesis, and synthesis, using these three terms. Schelling took up this terminology. Hegel did not. He never once used these three terms together to designate three stages in an argument or account in any of his books. And they do not help us understand his Phenomenology, his Logic, or his philosophy of history; they impede any open-minded comprehension of what he does by forcing it into a scheme which was available to him and which he deliberately spurned [...] The mechanical formalism [...] Hegel derides expressly and at some length in the preface to the Phenomenology.

Kaufmann also cites Hegel's criticism of the triad model commonly misattributed to him, adding that "the only place where Hegel uses the three terms together occurs in his lectures on the history of philosophy, on the last page but one of the sections on Kant — where Hegel roundly reproaches Kant for having 'everywhere posited thesis, antithesis, synthesis'".

To describe the activity of overcoming the negative, Hegel also often used the term *Aufhebung*, variously translated into English as "sublation" or "overcoming", to conceive of the working of the dialectic. Roughly, the

term indicates preserving the useful portion of an idea, thing, society, etc., while moving beyond its limitations. (Jacques Derrida's preferred French translation of the term was *relever*.)

In the Logic, for instance, Hegel describes a dialectic of existence: first, existence must be posited as pure Being (*Sein*); but pure Being, upon examination, is found to be indistinguishable from Nothing (*Nichts*). When it is realized that what is coming into being is, at the same time, also returning to nothing (in life, for example, one's living is also a dying), both Being and Nothing are united as Becoming.

As in the Socratic dialectic, Hegel claimed to proceed by making implicit contradictions explicit: each stage of the process is the product of contradictions inherent or implicit in the preceding stage. For Hegel, the whole of history is one tremendous dialectic, major stages of which chart a progression from self-alienation as slavery to self-unification and realization as the rational constitutional state of free and equal citizens. The Hegelian dialectic cannot be mechanically applied for any chosen thesis. Critics argue that the selection of any antithesis, other than the logical negation of the thesis, is subjective. Then, if the logical negation is used as the antithesis, there is no rigorous way to derive a synthesis. In practice, when an antithesis is selected to suit the user's subjective purpose, the resulting "contradictions" are rhetorical, not logical, and the resulting synthesis is not rigorously defensible against a multitude of other possible syntheses. The problem with the Fichtean "thesis–antithesis–synthesis" model is that it implies that contradictions or negations come from outside of things. Hegel's point is that they are inherent in and internal to things. This conception of dialectics derives ultimately from Heraclitus.

Hegel stated that the purpose of dialectics is "to study things in their own being and movement and thus to demonstrate the finitude of the partial categories of understanding."

One important dialectical principle for Hegel is the transition from quantity to quality, which he terms the Measure. The measure is the qualitative quantum, the quantum is the existence of quantity.

The identity between quantity and quality, which is found in Measure, is at first only implicit, and not yet explicitly realized. In other words, these two categories, which unite in Measure, each claim an independent authority. On the one hand, the quantitative features of existence may be altered, without affecting its quality. On the other hand, this increase and diminution, immaterial though it be, has its limit, by exceeding which the quality suffers change. [...] But if the quantity present in measure exceeds a certain limit, the quality corresponding to it is also put in abeyance. This however is not a negation of quality altogether, but only of this definite quality, the place of which is at once occupied by another. This process of measure, which appears alternately as a mere change in quantity, and then as a sudden revulsion of quantity into quality, may be envisaged under the figure of a nodal (knotted) line.

As an example, Hegel mentions the states of aggregation of water: "Thus the temperature of water is, in the first place, a point of no consequence in respect of its liquidity: still with the increase or diminution of the temperature of the liquid water, there comes a point where this state of cohesion suffers a qualitative change, and the water is converted into steam or ice". As other examples Hegel mentions the reaching of a point where a single additional grain makes a heap of wheat; or where the bald tail is produced, if we continue plucking out single hairs.

Another important principle for Hegel is the negation of the negation, which he also terms *Aufhebung* (sublation): Something is only what it is in its relation to another, but by the negation of the negation this something incorporates the other into itself. The dialectical movement involves two moments that negate each other, something and its other. As a result of the negation of the negation, "something becomes its other; this other is itself something; therefore it likewise becomes an other, and so on *ad infinitum*". Something in its passage into other only joins with itself, it is self-related. In becoming there are two moments: coming-to-be and ceasing-to-be: by sublation, i.e., negation of the negation, being passes over into nothing, it ceases to be, but something new shows up, is coming to be. What is sublated (*aufgehoben*) on the one hand ceases to be and is put to an end, but on the other hand it is preserved and maintained. In dialectics, a totality transforms itself; it is self-related, then self-forgetful, relieving the original tension.

That passage is all rather abstract Refer to the section "Relationalism + Substantialism = Existence" in **Chapter X-x**.

The Wikipedia article continued with a lengthy discussion of Karl Marx's so-called "dialectical materialism", which has something to do with soci-economic class struggle down through history, among other things. In my opinion, the relevant point to be learned from Marx's insight is simply this: wherever and whenever there are differences between systems and/or subsystems of any kind interacting with each other, both or all sides should look for a win-win resolution rather than a win-lose resolution, because win-win solutions move the

interacting systems onward and upward whereas win-lose solutions delay or suppress progress, and can even lead to the demise of the system or systems.

Marx's cohort Engels saw that dialecticism applies to systems beyond human interactions

Friedrich Engels proposed that Nature is dialectical, thus, in *Anti-Dühring* he said that the negation of negation is:

A very simple process, which is taking place everywhere and every day, which any child can understand as soon as it is stripped of the veil of mystery in which it was enveloped by the old idealist philosophy.

In *Dialectics of Nature*, Engels said:

Probably the same gentlemen who up to now have decried the transformation of quantity into quality as mysticism and incomprehensible transcendentalism will now declare that it is indeed something quite self-evident, trivial, and commonplace, which they have long employed, and so they have been taught nothing new. But to have formulated for the first time in its universally valid form a general law of development of Nature, society, and thought, will always remain an act of historic importance.

Class struggle is the primary contradiction to be resolved by Marxist dialectics, because of its central role in the social and political lives of a society. Nonetheless, Marx and Marxists developed the concept of class struggle to comprehend the dialectical contradictions between mental and manual labor, and between town and country. Hence, philosophic contradiction is central to the development of dialectics – the progress from quantity to quality, the acceleration of gradual social change; the negation of the initial development of the status quo; the negation of that negation; and the high-level recurrence of features of the original status quo.

In the USSR, Progress Publishers issued anthologies of dialectical materialism by Lenin, wherein he also quotes Marx and Engels:

As the most comprehensive and profound doctrine of development, and the richest in content, Hegelian dialectics was considered by Marx and Engels the greatest achievement of classical German philosophy.... "The great basic thought", Engels writes, "that the world is not to be comprehended as a complex of ready-made things, but as a complex of processes, in which the things, apparently stable no less than their mind images in our heads, the concepts, go through an uninterrupted change of coming into being and passing away... this great fundamental thought has, especially since the time of Hegel, so thoroughly permeated ordinary consciousness that, in its generality, it is now scarcely ever contradicted. But, to acknowledge this fundamental thought in words, and to apply it in reality in detail to each domain of investigation, are two different things.... For dialectical philosophy nothing is final, absolute, sacred. It reveals the transitory character of everything and in everything; nothing can endure before it, except the uninterrupted process of becoming and of passing away, of endless ascendancy from the lower to the higher. And dialectical philosophy, itself, is nothing more than the mere reflection of this process in the thinking brain." Thus, according to Marx, dialectics is "the science of the general laws of motion both of the external world and of human thought".

Lenin describes his dialectical understanding of the concept of development:

A development that repeats, as it were, stages that have already been passed, but repeats them in a different way, on a higher basis ("the negation of the negation"), a development, so to speak, that proceeds in spirals, not in a straight line; a development by leaps, catastrophes, and revolutions; "breaks in continuity"; the transformation of quantity into quality; inner impulses towards development, imparted by the contradiction and conflict of the various forces and tendencies acting on a given body, or within a given phenomenon, or within a given society; the interdependence and the closest and indissoluble connection between all aspects of any phenomenon (history constantly revealing ever new aspects), a connection that provides a uniform, and universal process of motion, one that follows definite laws – these are some of the features of dialectics as a doctrine of development that is richer than the conventional one.[47]

An example of the influence of Marxist dialectic in the European tradition is Jean-Paul Sartre's 1960 book *Critique of Dialectical Reason*. Sartre stated:

Existentialism, like Marxism, addresses itself to experience in order to discover there concrete syntheses. It can conceive of these syntheses only within a moving, dialectical totalisation, which is nothing else but history or—from the strictly cultural point of view adopted here—'philosophy-becoming-the world'.[48]

Dialectical naturalism

Dialectical naturalism is a term coined by American philosopher Murray Bookchin to describe the philosophical underpinnings of the political program of social ecology. Dialectical naturalism explores the complex interrelationship between social problems, and the direct consequences they have on the ecological impact of human society. Bookchin offered dialectical naturalism as a contrast to what he saw as the “empyrean, basically antinaturalistic dialectical idealism” of Hegel, and “the wooden, often scientistic dialectical materialism of orthodox Marxists”.

THEOLOGICAL DIALECTICAL FORMS

Dialectical theology

Neo-orthodoxy, in Europe also known as theology of crisis and dialectical theology, is an approach to theology in Protestantism that was developed in the aftermath of the First World War (1914–1918). It is characterized as a reaction against doctrines of 19th-century liberal theology and a more positive reevaluation of the teachings of the Reformation, much of which had been in decline (especially in western Europe) since the late 18th century. It is primarily associated with two Swiss professors and pastors, Karl Barth (1886–1968) and Emil Brunner (1899–1966), even though Barth himself expressed his unease in the use of the term.

In dialectical theology the difference and opposition between God and human beings is stressed in such a way that all human attempts at overcoming this opposition through moral, religious or philosophical idealism must be characterized as ‘sin’. In the death of Christ humanity is negated and overcome, but this judgment also points forwards to the resurrection in which humanity is reestablished in Christ. For Barth this meant that only through God’s ‘no’ to everything human can his ‘yes’ be perceived. Applied to traditional themes of Protestant theology, such as double predestination, this means that election and reprobation cannot be viewed as a quantitative limitation of God’s action. Rather it must be seen as its “qualitative definition”. As Christ bore the rejection as well as the election of God for all humanity, every person is subject to both aspects of God’s double predestination.

Dialectic prominently figured in Bernard Lonergan’s philosophy, in his books *Insight* and *Method in Theology*. Michael Shute wrote about Lonergan’s use of dialectic in *The Origins of Lonergan’s Notion of the Dialectic of History*. For Lonergan, dialectic is both individual and operative in community. Simply described, it is a dynamic process that results in something new:

For the sake of greater precision, let us say that a dialectic is a concrete unfolding of linked but opposed principles of change. Thus there will be a dialectic if (1) there is an aggregate of events of a determinate character, (2) the events may be traced to either or both of two principles, (3) the principles are opposed yet bound together, and (4) they are modified by the changes that successively result from them.

Dialectic is one of the eight functional specialties Lonergan envisaged for theology to bring this discipline into the modern world. Lonergan believed that the lack of an agreed method among scholars had inhibited substantive agreement from being reached and progress from being made compared to the natural sciences. Karl Rahner, S.J., however, criticized Lonergan’s theological method in a short article entitled “Some Critical Thoughts on ‘Functional Specialties in Theology’” where he stated: “Lonergan’s theological methodology seems to me to be so generic that it really fits every science, and hence is not the methodology of theology as such, but only a very general methodology of science.”

CRITICISMS

Karl Popper has attacked the dialectic repeatedly. In 1937, he wrote and delivered a paper entitled “What Is Dialectic?” in which he attacked the dialectical method for its willingness “to put up with contradictions”. Popper concluded the essay with these words: “The whole development of dialectic should be a warning against the dangers inherent in philosophical system-building. It should remind us that philosophy should not be made a basis for any sort of scientific system and that philosophers should be much more modest in their claims. One task which they can fulfill quite usefully is the study of the critical methods of science” (Ibid., p. 335).

In chapter 12 of volume 2 of *The Open Society and Its Enemies* (1944; 5th rev. ed., 1966), Popper unleashed a famous attack on Hegelian dialectics in which he held that Hegel’s thought was to some degree responsible for facilitating the rise of fascism in Europe by encouraging and justifying irrationalism. (This was unjust in the view of some philosophers, such as Walter Kaufmann.) In section 17 of his 1961 “addenda” to *The Open Society*, entitled “Facts, Standards and Truth: A Further Criticism of Relativism”, Popper refused to moderate his criticism of the Hegelian dialectic, arguing that it “played a major role in the downfall of the liberal movement in Germany [...] by contributing to historicism and to an identification of might and right, encouraged totalitarian modes of thought. [...] [And] undermined and eventually lowered the traditional standards of intellectual responsibility and honesty”.

The philosopher of science and physicist Mario Bunge repeatedly criticized Hegelian and Marxian dialectics, calling them “fuzzy and remote from science” and a “disastrous legacy”. He concluded: “The so-called laws of dialectics, such as formulated by Engels (1940, 1954) and Lenin (1947, 1981), are false insofar as they are intelligible.”

Formalism

Since the late 20th century, European and American logicians have attempted to provide mathematical foundations for dialectic through formalisation, although logic has been related to dialectic since ancient times. There have been pre-formal and partially-formal treatises on argument and dialectic, from authors such as Stephen Toulmin (*The Uses of Argument*, 1958), Nicholas Rescher (*Dialectics: A Controversy-Oriented Approach to the Theory of Knowledge*, 1977), and Frans H. van Eemeren and Rob Grootendorst (pragma-dialectics, 1980s). One can include works of the communities of informal logic and paraconsistent logic.

Defeasibility

Building on theories of defeasible reasoning (see John L. Pollock), systems have been built that define well-formedness of arguments, rules governing the process of introducing arguments based on fixed assumptions, and rules for shifting burden. Many of these logics appear in the special area of artificial intelligence and law, though the computer scientists' interest in formalizing dialectic originates in a desire to build decision support and computer-supported collaborative work systems.

Dialog games

Dialectic itself can be formalised as moves in a game, where an advocate for the truth of a proposition and an opponent argue. Such games can provide a semantics of logic, one that is very general in applicability.

Mathematics

Mathematician William Lawvere interpreted dialectics in the setting of categorical logic in terms of adjunctions between idempotent monads. This perspective may be useful in the context of theoretical computer science where the duality between syntax and semantics can be interpreted as a dialectic in this sense. For example, the Curry-Howard equivalence is such an adjunction or more generally the duality between closed monoidal categories and their internal logic. [<https://en.wikipedia.org/wiki/Dialectic> — retrieved 25 July 2022]

Following are some words that cover specific instantiations of the general Dialectic Principle, in more limited domains of the Cosmos.

Dialogue

Simply and briefly stated, “dialogue” is one name that philosophers use for the interaction between a self and a not-self or another self. The common use of this term refers to discussions between two people, but philosophers extend and apply the use of this word to a number of phenomena that they see as analogous to human conversation. One reason for me to quote the following Wikipedia article on dialogue is to show how the Dialectic Principle is pervasive in many realms studied by scientists, historians, and philosophers — which is why it is proper for me to elevate it to the exalted status of a fundamental “principle” of the Cosmos, the 2 > 3 [?, 3 > 2 > 1?] Stage of Tao’s Template.

[[Edit/trim this Wikipedia article down considerably and provide commentary relevant to this NS book.]]

INTRODUCTION

Dialogue (sometimes spelled dialog in American English) is a written or spoken conversational exchange between two or more people, and a literary and theatrical form that depicts such an exchange. As a philosophical or didactic device, it is chiefly associated in the West with the Socratic dialogue as developed by Plato, but antecedents are also found in other traditions including Indian literature. The term dialogue stems from the Greek διάλογος (*dialogos*, conversation); its roots are διά (*dia*: through) and λόγος (*logos*: speech, reason). The first extant author who uses the term is Plato, in whose works it is closely associated with the art of dialectic. Latin took over the word as *dialogus*.

Notice that the term *dialogue* covers more phenomena than a couple of people having a conversation; elevated to a general principle, it extends into literature, theater, philosophy, didactics (interactive instruction) — and dialectics, which was reviewed in the previous subsection.

AS GENRE

Antiquity and the Middle Ages

Dialogue as a genre in the Middle East and Asia dates back to ancient works, such as Sumerian disputations preserved in copies from the late third millennium BC, Rigvedic dialogue hymns and the Mahabharata.

The use of the word “disputations” is the first, but not the last, clue in this article that the Dialectic Principle as embodied in the term “dialogue” has to do with the interaction of, and the resolution of, contraries. The word “argument” is used in the next paragraph in its philosophical sense as the assertion of a point of view which is in comparison and contrast to some other point of view:

In the East, in 13th century Japan, dialogue was used in important philosophical works. In the 1200s, Nichiren Daishonin wrote some of his important writings in dialogue form, describing a meeting between two characters in order to present his argument and theory ... while in other writings he used a question and answer format, without the narrative scenario....

In the West, Plato (c. 437 BC – c. 347 BC) has commonly been credited with the systematic use of dialogue as an independent literary form.... Plato further simplified the form and reduced it to pure argumentative conversation, while leaving intact the amusing element of character-drawing. By about 400 BC he had perfected the Socratic dialogue. All his extant writings, except the Apology and Epistles, use this form....

Modern period to the present

In the 20th century, philosophical treatments of dialogue emerged from thinkers including Mikhail Bakhtin, Paulo Freire, Martin Buber, and David Bohm. Although diverging in many details, these thinkers have proposed a holistic concept of dialogue. Educators such as Freire and Ramón Flecha have also developed a body of theory and techniques for using egalitarian dialogue as a pedagogical tool.

AS TOPIC

Martin Buber assigns dialogue a pivotal position in his theology. His most influential work is titled *I and Thou*. Buber cherishes and promotes dialogue not as some purposive attempt to reach conclusions or express mere points of view, but as the very prerequisite of authentic relationship between man and man, and between man and God. Buber's thought centers on “true dialogue”, which is characterized by openness, honesty, and mutual commitment.

The Second Vatican Council placed a major emphasis on dialogue with the World. Most of the Council's documents involve some kind of dialogue : dialogue with other religions (*Nostra aetate*), dialogue with other Christians (*Unitatis Redintegratio*), dialogue with modern society (*Gaudium et spes*) and dialogue with political authorities (*Dignitatis Humanae*). However, in the English translations of these texts, “dialogue” was used to translate two Latin words with distinct meanings, colloquium (“discussion”) and dialogus (“dialogue”). The choice of terminology appears to have been strongly influenced by Buber's thought.

The physicist David Bohm originated a related form of dialogue where a group of people talk together in order to explore their assumptions of thinking, meaning, communication, and social effects. This group consists of ten to thirty people who meet for a few hours regularly or a few continuous days. In a Bohm dialogue, dialoguers agree to leave behind debate tactics that attempt to convince and, instead, talk from their own experience on subjects that are improvised on the spot.

In his influential works, Russian philosopher Mikhail Bakhtin provided an extralinguistic methodology for analysing the nature and meaning of dialogue:

Dialogic relations have a specific nature: they can be reduced neither to the purely logical (even if dialectical) nor to the purely linguistic (compositional-syntactic) They are possible only between complete utterances of various speaking subjects... Where there is no word and no language, there can be no dialogic relations; they cannot exist among objects or logical quantities (concepts, judgments, and so forth). Dialogic relations presuppose a language, but they do not reside within the system of language. They are impossible among elements of a language.

The Brazilian educationalist Paulo Freire, known for developing popular education, advanced dialogue as a type of pedagogy. Freire held that dialogued communication allowed students and teachers to learn from one another in an environment characterized by respect and equality. A great advocate for oppressed peoples, Freire was concerned with praxis—action that is informed and linked to people's values. Dialogued pedagogy was not only about deepening understanding; it was also about making positive changes in the world: to make it better.

AS PRACTICE

Dialogue is used as a practice in a variety of settings, from education to business. Influential theorists of dialogal education include Paulo Freire and Ramon Flecha.

In the United States, an early form of dialogic learning emerged in the Great Books movement of the early to mid-20th century, which emphasized egalitarian dialogues in small classes as a way of understanding the foundational texts of the Western canon. Institutions that continue to follow a version of this model include the Great Books Foundation, Shimer College in Chicago, and St. John's College in Annapolis and Santa Fe.

Egalitarian dialogue

Egalitarian dialogue is a concept in dialogic learning. It may be defined as a dialogue in which contributions are considered according to the validity of their reasoning, instead of according to the status or position of power of those who make them.

Structured dialogue

Structured dialogue represents a class of dialogue practices developed as a means of orienting the dialogic discourse toward problem understanding and consensual action. Whereas most traditional dialogue practices are unstructured or semi-structured, such conversational modes have been observed as insufficient for the coordination of multiple perspectives in a problem area. A disciplined form of dialogue, where participants agree to follow a dialogue framework or a facilitator, enables groups to address complex shared problems.

Aleco Christakis (who created structured dialogue design) and John N. Warfield (who created science of generic design) were two of the leading developers of this school of dialogue. The rationale for engaging structured dialogue follows the observation that a rigorous bottom-up democratic form of dialogue must be structured to ensure that a sufficient variety of stakeholders represents the problem system of concern, and that their voices and contributions are equally balanced in the dialogic process.

Structured dialogue is employed for complex problems including peacemaking (e.g., Civil Society Dialogue project in Cyprus) and indigenous community development., as well as government and social policy formulation.

In one deployment, structured dialogue is (according to a European Union definition) "a means of mutual communication between governments and administrations including EU institutions and young people. The aim is to get young people's contribution towards the formulation of policies relevant to young peoples lives." The application of structured dialogue requires one to differentiate the meanings of discussion and deliberation.

Groups such as Worldwide Marriage Encounter and Retrouvaille use dialogue as a communication tool for married couples. Both groups teach a dialogue method that helps couples learn more about each other in non-threatening postures, which helps to foster growth in the married relationship.

Dialogical leadership

The German philosopher and classicist Karl-Martin Dietz emphasizes the original meaning of dialogue (from Greek dia-logos, i.e. 'two words'), which goes back to Heraclitus: "The logos [...] answers to the question of the world as a whole and how everything in it is connected. Logos is the one principle at work, that gives order to the manifold in the world." For Dietz, dialogue means "a kind of thinking, acting and speaking, which the logos "passes through"" Therefore, talking to each other is merely one part of "dialogue". Acting dialogically means directing someone's attention to another one and to reality at the same time.

Against this background and together with Thomas Kracht, Karl-Martin Dietz developed what he termed "dialogical leadership" as a form of organizational management. In several German enterprises and organisations it replaced the traditional human resource management, e.g. in the German drugstore chain dm-drogerie markt. Separately, and earlier to Thomas Kracht and Karl-Martin Dietz, Rens van Loon published multiple works on the concept of dialogical leadership, starting with a chapter in the 2003 book *The Organization as Story*.

Moral dialogues

Moral dialogues are social processes which allow societies or communities to form new shared moral understandings. Moral dialogues have the capacity to modify the moral positions of a sufficient number of people to generate widespread approval for actions and policies that previously had little support or were considered morally inappropriate by many. Communitarian philosopher Amitai Etzioni has developed an analytical framework which—modeling historical examples—outlines the reoccurring components of moral dialogues. Elements of moral dialogues include: establishing a moral baseline; sociological dialogue starters which initiate the process of developing new shared moral understandings; the linking of multiple groups' discussions in the form of "megalogues"; distinguishing the distinct attributes of the moral dialogue (apart from rational

deliberations or culture wars); dramatization to call widespread attention to the issue at hand; and, closure through the establishment of a new shared moral understanding. Moral dialogues allow people of a given community to determine what is morally acceptable to a majority of people within the community.

[><https://en.wikipedia.org/wiki/Dialogue>< — retrieved 25 July 2022]

The reason for discussing dialogue in this subsection on the Dialectic Principle is that dialogue is something that the typical person understands because they engage in it as a part of their daily lives, during their entire lives, for the purpose of learning and teaching, for the purpose of evolving their own understanding of themselves and other people and the world they live in. What the typical person might not realize, if they not philosophically or scientifically sophisticated, is that the general notion of 'dialogue' can be considered as a metaphor; it can be elevated and expanded to include interactions between a self and another self and a not self for the purpose of increasing and developing knowledge. And that 'self' is any subsystem of the cosmic system; hence, the Dialectic Principle.

Although the word dialogue itself as commonly used does not cover the Dialectic Principle, there is another word that does, but it is probably not familiar to the typical person, as the word dialogue is.

Enactivism

Enactivism is a position in cognitive science that argues that cognition arises through a dynamic interaction between an acting organism and its environment. It claims that the environment of an organism is brought about, or enacted, by the active exercise of that organism's sensorimotor processes. "The key point, then, is that the species brings forth and specifies its own domain of problems ...this domain does not exist "out there" in an environment that acts as a landing pad for organisms that somehow drop or parachute into the world. Instead, living beings and their environments stand in relation to each other through mutual specification or codetermination" (p. 198). "Organisms do not passively receive information from their environments, which they then translate into internal representations. Natural cognitive systems...participate in the generation of meaning ...engaging in transformational and not merely informational interactions: they enact a world." These authors suggest that the increasing emphasis upon enactive terminology presages a new era in thinking about cognitive science. How the actions involved in enactivism relate to age-old questions about free will remains a topic of active debate.

The term 'enactivism' is close in meaning to 'enaction', defined as "the manner in which a subject of perception creatively matches its actions to the requirements of its situation". The introduction of the term enaction in this context is attributed to Francisco Varela, Evan Thompson, and Eleanor Rosch in *The Embodied Mind* (1991), who proposed the name to "emphasize the growing conviction that cognition is not the representation of a pre-given world by a pre-given mind but is rather the enactment of a world and a mind on the basis of a history of the variety of actions that a being in the world performs". This was further developed by Thompson and others, to place emphasis upon the idea that experience of the world is a result of mutual interaction between the sensorimotor capacities of the organism and its environment. However, some writers maintain that there remains a need for some degree of the mediating function of representation in this new approach to the science of the mind.

The initial emphasis of enactivism upon sensorimotor skills has been criticized as "cognitively marginal", but it has been extended to apply to higher level cognitive activities, such as social interactions. "In the enactive view,... knowledge is constructed: it is constructed by an agent through its sensorimotor interactions with its environment, co-constructed between and within living species through their meaningful interaction with each other. In its most abstract form, knowledge is co-constructed between human individuals in socio-linguistic interactions...Science is a particular form of social knowledge construction...[that] allows us to perceive and predict events beyond our immediate cognitive grasp...and also to construct further, even more powerful scientific knowledge."

Enactivism is closely related to situated cognition and embodied cognition, and is presented as an alternative to cognitivism, computationalism, and Cartesian dualism. [><https://en.wikipedia.org/wiki/Enactivism>< — retrieved ?

The Wikipedia article quoted above describes and explains enactivism as if it only applied to living things interacting with their environment and co-creating each other, but the notion can be expanded to include the

so-called “measurement problem” in quantum physics. For instance, Lee Smolin and the so-called “auto-didactic universe” hypothesis. Or John Wheeler and the “self-excited” universe. The point is that the One becomes the Two by a process of, in mathematical terms, addition and subtraction and multiplication and division.

Autopoietic Enactivism

Orientalia: Mutual Arising

The Lotus and the Quantum book

Opponent Processing

Opponent processes are reciprocal mechanism in which one aspect of a system simultaneously inhibits the functioning of another and vice versa.

The basic concept of reciprocal feedback has been used in the development of a number of [opponent-process theories](#):

Co-Evolution

Me-We

Plateau Corollary to the Dialectic Principle

this is the inherent tendency of the Cosmos as a whole to seek a dynamic equilibrium between self and not-self.

Concluding Comments on the Dialectic Principle

What I am calling the “Dialectic Principle” in this *Cosmogony* book is what the Michaelian teachings refer to as “Monads”, and what Gurdjieff referred to as “The Law of Three” — refer to chapters by those names in this NS book.

“If you want to give God a good laugh, tell Her your plans.” –Unity Church aphorism. The individual human contribution to the development of the Cosmos via the Dialectic Principle is not nothing, but it ain’t very much.

No Man is an Island Poem

The Taijitu Tango Principle

[[Does this belong here, or elsewhere?]]

As chapter 42 of the Tao Teh Ching says, “Tao produced the One, the One produced the Two, the Two produced the Three, the Three produced all things. All things carry the Yin and embrace the Yang, and through the blending of the Chi they achieve harmony.” The Cosmos as a whole (Oneness) is balanced or symmetrical, but then it is divided (Twoness) into an unbalanced, asymmetrical yin and yang, and then both the yin and the yang are split three ways (Threeness). Add this all up and you have the Canonical Septenary. According to the Taijitu tango Principle, there is a yin/yang and a yang/yin balance or symmetry in the Septenary as a whole. Recall from discussion in other chapters of this *History* book that the TTP refers to a paragraph in the “Michael Math” chapter of *More Messages from Michael*: “You can perceive that [from the point of view of space, being, noun] while one is ordinal and seven is cardinal, that [from the point of view of time, doing, verb] the first half is cardinal and the last half is ordinal — in other words, the pattern ‘doubles back on itself’. This is what is implied by

the ‘yin-yang’ symbol, and it would probably be of use to keep the ‘yin-yang’ in mind while considering what we tell you of the function of levels and numbers.” [MMFM, p. 189] One way to explain what this means in terms of the Natural Sequence schema in regard to Life-Stages is that the lifetime starts out with the most vitality and ends with the least vitality and is therefore *entropic*, thus Cardinal Action and Origination Process (Birth Milestone) progresses to Ordinal Action and Termination Process (Death Milestone), but on the other hand the Life-Stages are also the opposite — *syntropic* — in that they start out with an emphasis on the earlier–lower–outer Moving Center and end with an emphasis on the later–higher–inner Excitation Center.

[[Borrowed description from the *History* book, needing to be integrated here into a single coherent and flowing narrative, with additional explanatory comments:]]

Volume 1, titled *The Tao of Cosmology*, lays the foundation of my septology. That book is a meditation on Chapter 42 of Lao Tzu’s book *Tao Te Ching*, which says:

Tao produced the One; the One produced the Two; the Two produced the Three; the Three produced All things. All things carry the Yin and embrace the Yang; through the blending of the Chi they achieve harmony.

That Volume explains what I am calling “Tao’s Template”. It explains Tao’s Template in terms of logic, mathematics, physics, metaphysics, mythology, and mysticism. All of these realms are manifestations of the primeval archetypes and principles as revealed in the quotation above, namely, Tao → Oneness → Twoness → Threeness → All, and Yin + Yang = Chi. This is the structural framework of all reality systems; this is the algorithm that generates reality systems. Table 1Bb below presents this schema and this formula in graphic form.

So, Tao’s Template, revealed in an ancient sacred text, introduces to us *principles* of Oneness and Twoness and Threeness and Allness and Yin and Yang and Chi. Why do I bring these principles into this chapter on PTs? Because in subsequent sections I point out that these principles are found in PTs over and over again, one way or another, in every case. When psychologists look for or see a way to organize their classification schemes, the pattern typically reduces to these fundamental principles. It is the same situation with the Overleaf System, because the Overleaf System is a faithful instantiation and representation of Tao’s Template. Other PTs might have *some* of the pattern revealed in Tao’s Template, but not *all*; only the Overleaf System has it all. It is important to me that you see and understand that; it will enhance and deepen your appreciation of the Michaels’ gift to MT students.

The following table is a graphic representation of Tao’s Template:

Table 1Bb — TAO’S TEMPLATE in BASIC FORM						
Yin			Chi	Yang		
First	Second	Third	All	Threeness	Twoness	Oneness
Seventh — Sevenness						

My comments on this table are as follows:

- Tao itself has a Twoness about it: it is both outside the boundary of the table (“transcendent”) and inside the boundary of the table (“immanent”). The transcendent side of Tao is undifferentiated and insubstantial. One and Two and Three are produced from the substantial side of Tao. More is said about this subject in Chapter 4N in Part Four, “Casting Concerns”.
- The three aspects of the nature of Yin (= Ordinality in the MT) are embodied in the words “First — Second — Third” on the left side of “All” in the Table. Notice that Ordinality is *quantitative* and has its numerical components characterized as a *sequence*.
- The three aspects of the nature of Yang (= Cardinality in the MT) are embodied in the words ‘Threeness — Twoness — Oneness’ on the right side of ‘All’ in the table. Notice that Cardinality is *qualitative* and has its numerical components characterized as *principles*.
- The formula from Tao’s Template is “Yin + Yang = Chi”. All things are made up of Chi, the immanent, substantial side of Tao. All things — all reality systems — are built out of this numerical structure and this interplay of Yin and Yang. “All things” includes the Overleaf System.

At this point in the exposition, it is expedient to introduce an elaboration of Tao's Template that I refer to as the Taijitu Tango Principle (TTP). I was made aware of the TTP when I read the "Michael Math" chapter of Chelsea Quinn Yarbro's book *More Messages from Michael*. The relevant passage says this:

You can perceive that [from the point of view of space, being, noun] while one is ordinal and seven is cardinal, that [from the point of view of time, doing, verb] the first half is cardinal and the last half is ordinal — in other words, the pattern "doubles back on itself". This is what is implied by the "yin-yang" symbol, and it would probably be of use to keep the "yin-yang" in mind while considering what we tell you of the function of levels and numbers." [MMFM, p. 189]



This is one of the deepest philosophical ideas that there is, and one that is not easily grasped. The implications and ramifications of the Taijitu Tango Principle are elaborated in subsequent places in this book (and my other books) where appropriate, but for here, note how it alters Table 1Bb above into Table 1Bc below. The basic idea here is that the yin contains the yang and *vice versa*, as the black contains the white and *vice versa* in the Taijitu symbol.

Table 1Bc — TAIJITU TANGO in TAO'S TEMPLATE						
Yin / Yang			Chi	Yang / Yin		
First	Second	Third	All	Threeness	Twoness	Oneness
Oneness	Twoness	Threeness	All	Third	Second	First
Seventh — Sevenness						

The oriental name for the yin-yang symbol is "taijitu". As for "tango", this alludes to the aphorism that "it takes two to tango". These phrases becomes a Principle when one knows about and understands the deep philosophical insight called "relationalism" (><https://en.wikipedia.org/wiki/Relationalism><). Basically and briefly, relationalism states that everything is known because it is defined by its opposite. The Taijitu symbol graphically represents this philosophy by showing an interrelationship of yin and yang. This is not just an idea in the mind of philosophers. The most fundamental yin-yang dichotomy in the physical world is that between space-noun-being and time-verb-doing. Translating into the terms of the Natural Sequence schem, yin = Ordinal and yang = Cardinal. Per the Taijitu Tango Principle, Ordinality and Cardinality run counter to each other in the septenary. In other words, Cardinal-Space-Noun-Being starts out with an Ordinal-most component and ends with a Cardinal-most component, whereas Ordinal-Time-Verb-Doing starts out with a Cardinal-most component and ends with an Ordinal-most component.

[[Borrowed description from the *History* book, needing to be integrated here into a single coherent and flowing narrative, with additional explanatory comments:]]

The subject of the "Taijitu Tango Principle" (TTP) has appeared in other chapters of this *History* book, but it is also appropriate to this chapter on Casting concerns. Many of my concerns about Casting are driven by statements in *MMFM-MM*, and this is no exception. Let's take a close look at the relevant passages.

You can perceive that while [the number] one is ordinal and [the number] seven is Cardinal, that the first half [of the septenary] is cardinal and the last half [of the septenary] is ordinal — in other words, the pattern "doubles back on itself". This is what is implied by the "yin-yang" symbol, and it would probably be of use to keep the "yin-yang" in mind while considering what we tell you of the function of levels and numbers.

As the levels and numbers reveal functions, let us discuss this in terms of a cadre. The first-cast entity [in a Cadre] is of course the cardinal-most [location in the septenary] while also of the most ordinal number [in the septenary]. The seventh-cast entity is the most ordinal [location in the septenary] in casting yet is also the most cardinal — that is, number seven — in number. [MMFM, pp. 189–190]

In the Chinese language, the yin-yang symbol has the name "Taijitu". The symbol is so well known in the Western world that there is hardly any need to reproduce it here, but I do it anyway. Notice the perfect symmetry of the figure, the balance and equality in the opposition of white and black. The concern that I have about the statement above is that the Michaels did not themselves "keep the yin-yang in mind" as they explained the "function of levels and numbers". My concerns about "the function of Levels" were addressed in Chapter 4K above,



“The Names of the Levels”. My concerns about “the function of numbers” are expressed in this chapter, in this subsection. The situation is that I agree with both of the paragraphs quoted above; my question is, why did the Michaels not adhere to those pronouncements in the *MMFM*–*MM* chapter? Why did the Michaels espouse the MMS, which does not conform to the TTP, rather than the NS, which does conform to the TTP? Yes, it *might* be that Casting actually happened per the MMS, so that is why the Michael’s said what they did. But, what concerns me is that these assertions contradict each other.

To begin to sort out the contradiction, let’s carefully parse the statements about the concept of what I refer to as the “Cardinality–Ordinality Ratio (COR)” principle embodied in the septenary and introduced in *MMFM*–*MM*. (Previously I have said that *everything* this side of the immanent Tao exists and functions as a COR, as discussed in my book *The Tao of Cosmology*: Space and Time are a COR; Subjectivity and Objectivity are a COR; all other conjugate variables are a COR. In fact, all that exists and functions this side of the One is *ratio*, a fraction, because manifestation is of Twoness, which is a ratio where the denominator and the numerator of the fraction must add up to Oneness. In this chapter, recall from prior statements that Spark versus Tao is a COR: spiritual development grows from the Spark to Tao.) The COR is just another way of expressing the Taijitu Tango Principle.

In both of the paragraphs of the quotation above, the COR of each step of the septenary is said to be *reciprocal*. By “reciprocal” I mean that as Cardinality increases, Ordinality decreases, and *vice versa*. If we list the COR as fractions, the COR of the septenarian sequence is this: $1/7 > 2/6 > 3/5 > 4/4 > 5/3 > 6/2 > 7/1$; add the numerator to the denominator and you get the number 8 in every case. I refer to this principle of reciprocity as the Taijitu Tango Principle because of this metaphorical ‘dance’ of yin and yang, of Ordinality and Cardinality — ‘it takes two to tango’. You can see this reciprocity principle depicted graphically in the Taijitu symbol: scan from left to right in seven steps and notice that as the black increases the white decreases, and *vice versa*.

The NS dances the TTP; the MMS does not, by its own admission. Take a look at this paragraph, which alleges to explain the MMS, also found in the *MMFM*–*MM* chapter:

In most instances [2 out of 3] the numbers of the polarities [Axes] add up to seven, which in the positive pole brings +Inculcation [the alleged name of the Positive Pole of Level Seven]; the exception, that of the Action polarity [Axis], is compensated for with the interaction of Warrior and Scholar — three and four — essences, and the nature of the mid-cycle [an alleged zone between Levels Three and Four], which is reflected in this interaction. [*MMFM*, p. 212]

So here we are presented with a situation where a clumsy dance step was invented that discombobulates the TTP. Instead of the COR adding up to 8 as in the NS, two out of four ratios in the MMS are said to add up to seven as in $1\backslash6$ (Inspiration Axis) and $2\backslash5$ (Expression Axis). This rule has two exceptions, namely $3\backslash4$ (sorta Action Axis) and $7\backslash7$ (kinda Assimilation Axis). This specious numerology is put forward as a rationale for the MMS. By this means, *MMFM*–*MM* would have you believe that the MMS is a *structural* matter in Casting, rather than what I perceive it to be, a matter of *choice*. If there is any validity to the MMS, to me it means that the planetary Logos of humanity, the Oversoul, *chose* to deploy its lesser Composites according to the MMS rather than the normal, default, symmetrical, reciprocal TTP–NS. I suggest that the alleged numerical, structural considerations for the MMS found in this quoted passage are bogus.

And why might the Logos/Oversoul have chosen to Cast per the MMS? The following rationale was presented in detail in my *Natural Sequence* book, but I summarize it here in the context of the Casting of Roles in the unnatural MMS rather than the natural NS:

1. The NS position of Warrior is *numero uno*, #1. If Warriors were also Cast in the #1 position, that would make them even more insufferably controlling and combative than they are by nature. How about let’s Cast them in the #3 natural Artisan position, thus mellowing them out a bit and channeling their energy into creative and productive endeavors.
2. The NS position of Server is *numero dos*, #2. How about let’s Cast them in the #1 natural Warrior position, thus giving them more influence and impact in the world, which presumably will make the world a better place, considering that the Server is the “heart” of humanity.
3. The NS position of Artisan is *numero tres*, #3. If Artisans were also Cast in the #3 position, that would make them even more insufferably intellectual and calculating than they are by nature. How about let’s Cast them in the #2 naturally Server position, thus melting their hearts and making

them more warm and fuzzy, which is a good thing for humanity. By combining head and heart, they might even be more creative.

The above numbered points seem to me like a better rationale for the MMS than the anti-TTP numerology is, and it was not I who thought it up. The gist of this rationale for the MMS versus the NS was proposed on page 185 of Hoodwin's book *TJOYS* (1995), but it was removed in the second edition (*JOYS*, 2013).

I can sort of accept the Casting of Roles per the MMS, but I am reluctant to accept the Casting of Rays in other than the NS because the spectrum of Rays is an unalterable, fundamental *structure*, the same as the TTP ratio, whereas the Casting of a Role somewhere on the spectrum — to tweak its Cardinality or Ordinality into an unnatural place for incarnational purposes on the Physical Plane — is a matter of *choice*. This means that I doubt that, on the Astral Plane, the Positions in Cadences follow the MMS rather than the NS; it means that I doubt that the Cadences in the Greater Cadences follow the MMS rather than the NS; and so on up the sizes of Composites to the Oversoul.

The issue regarding NS vs MMS was the first of my concerns about Casting that I discovered in my study of the *MMFM*–*MM* chapter. There are others, as listed above; I review those in the following sections.

[[Borrowed description from the *History* book, needing to be integrated here into a single coherent and flowing narrative, with additional explanatory comments.]]

The Dimensionality Principle [Threeness]

DIMENSIONALITY: In the NS and in many other DevPsy models, the ascent up the stages consists of three (or four) dimensions, which in developmental psychology are referred to with such terms as sensory–behavioral, emotional–social, and cognitive–abstract, and consciousness–ego. In the NS, these dimensions are referred to as 1-D Action in general and more specifically the Motion Center, 2-D Inspiration in general and more specifically the Emotion Center, and 3-D Expression in general and more specifically the Intellect Center, and P-D Assimilation in general and more specifically the Impulse Center. In this schema, the transition zone between stages could be referred to as 0-D, Zero Dimensional, and there is a central Neutral zone between the Ordinal “me” and the Cardinal “we” stages of the cycle; see below.

<https://www.integralworld.net/smith27.html> “The Dimensions of Experience”

Cartesian Coordinate System

Triadic Dialectic

><https://www.linkedin.com/pulse/triadic-structures-hegel-peirce-freud-lacan-bojan-radej><

Charles Sanders Peirce

John Vervaeke's Four Ways of Knowing

John Vervaeke's 4P ways of knowing refer to a taxonomy of different kinds of knowing, which he proposes as a way to understand and differentiate various forms of cognition. The 4P's are:

Participatory knowing: This type of knowing refers to knowing how to act in the world, being able to participate in it, and being able to engage with it. It involves a sense of agency and action, and is closely tied to the concept of flow states.

Perspectival knowing: This type of knowing involves seeing the world from a particular perspective, and understanding it in relation to one's own experiences, biases, and assumptions. It is closely tied to the concept of affordances, which are the real relations between an individual and the environment that allow for certain actions or interactions to take place.

Procedural knowing: This type of knowing involves knowing how to do things, and having a sense of skill and competence. It is closely tied to the concept of semantic memory, which is the ability to remember abstracted facts that are not bound up with a particular perspective or state of mind.

Propositional knowing: This type of knowing involves knowing that something is the case, and having a sense of truth or fact. It is closely tied to the concept of propositional processing, which involves the processing of abstracted facts and information.

These 4P's are not mutually exclusive, and often overlap or blend together in complex ways. Vervaeke's work suggests that a balanced and integrated approach to knowing involves cultivating all four types of knowing, and being aware of the different ways in which we come to know the world. [Browser AI answer — 19 May 2024]

Terrence Deacon

TD too CSP to a whole new level

Iconic > Indexical > Symbolic = Plant > Animal > Human

[[graph these Principles as a table with comments.]]

✓ Fractality Principle in Esoterica

One of the principles mentioned in the previous section is the Fractality Principle, which is the notion that the Cosmic holarchy is a stack of levels and stages that repeats at all scales, from the smallest to the largest in terms of space and from the slowest to the fastest in terms of time. It so happens that esoteric teachings subscribe to that principle, and one of its names from ancient times has been "The Great Chain of Being" discussed in Part One, in **Chapter X-x**. In some modern day esoteric teachings, the principle has the name, "Rounds". Let's take a look at that:

Rounds

A round, in the esoteric cosmology [cosmogony] of Theosophy, Anthroposophy, and Rosicrucianism, is a cosmic cycle or sequence by which an evolving reincarnating being passes through the various stages of existence as the Earth, the Solar System, or the Cosmos comes into and passes out of manifestation.

Theosophy

In Theosophy, the whole process is very simple. A round is a process in a planetary chain, according to which a life cycle or life-wave of souls or monads begins its evolutionary journey on the first and most subtle or spiritual of the series of seven globes; then finishing its evolution there, proceeds to the next, and so on, to the densest or most manifest globe (usually called globe D), which in our case is the gross, physical Earth. From there it proceeds on the ascending arc, through increasingly more ethereal globes. Each of these globes are in coadunition [the union (as of dissimilar substances) in one body or mass] with the physical Earth, though they are not in consubstantiation with it [the planes are different reality systems]. Each of these stages is called a round, and during this time the reincarnating life wave has passed through seven Root Races.

For more about planetary chains, see: >https://theosophy.wiki/en/Planetary_Chain<.

For more about globes, see: ><https://theosophy.wiki/en/Globe><.

For more about root races, see: ><https://theosophy.wiki/en/Root-Race><.

When the life wave has gone through all seven globes of the planetary chain, it has completed one planetary round or globe *manvantara* [lifespan]. This is followed by the dissolution of the planetary chain in a *nirvana* (which is not the same as what Buddhism calls *nirvana* because it is not permanent); this [rest] period between physical manifestation is called *pralaya* in Hinduism. Finally, a new round begins, in which consciousness is now more developed than in the preceding round.

In the Michaelian teachings, the entire cycle of fragmentation of the immanent Tao to the reintegration of the immanent Tao is called a Grand Cycle. The word “grand” was added to make a distinction to a lesser cycle, that of reincarnation, which only applies to the Physical Plane, and to which the phrase “Soul Age/Worldview” applies.

Seven such planetary rounds (or forty-nine globe rounds) represents one *kalpa* (day of Brahma) or *manvantara*. This is followed by a higher “*nirvana*” or *pralaya*, which is the *pralaya* of that planetary chain. This lasts until a new planetary chain forms with its various life waves.

Seven such planetary chains and their *pralayas* constitute a solar *manvantara*, after which the Solar System is dissolved in a cosmic *pralaya*, before the cycle begins anew.

This elaborate cosmology, first formulated by Blavatsky, was also taught by de Purucker, Leadbeater, and Alice Bailey.

The point that I want to make here is that the Fractality Principle is found in Theosophy: it espouses a nested septenarian Natural Sequence cycles all ‘up’ and ‘down’ the being and doing of the Cosmos.

The theosophy wiki article continues:

Anthroposophy

Rudolf Steiner retained the basic concept of root races and sevenfold cycles within cycles, but his description is considerably simpler, concentrating only on the seven cycles of the present Solar System. Each of these cycles constitutes a coming into being and passing out of being of the solar system, and each is divided into seven rounds, upon which man passes through seven root races. Each of Steiner’s seven rounds is related to a metamorphosis of the Earth:

1. Ancient Saturn: During the Ancient Saturn round, the life wave of human beings underwent the mineral stage, endowed only with a physical vehicle.
2. Ancient Sun: During the Ancient Sun round, human beings underwent the plant stage, being endowed with a physical and an etheric vehicle.
3. Ancient Moon: During the Ancient Moon round, human beings underwent the animal stage, endowed with a physical, an etheric, and an astral vehicle. Meanwhile, the present Angels were undergoing the human stage, while the present Archangels were undergoing the Angel stage, and so on.
4. Earth: During the Earth round, human beings undergo the man stage.
5. Jupiter: During the Jupiter round, human beings will undergo the soul man stage.
6. Venus: During the Venus round, human beings will undergo the higher soul man stage.
7. Vulcan: During the Vulcan round, human beings will undergo the spiritual man stage.

For Steiner, the animal, vegetable, and mineral kingdoms represent “cast off” elements of the human entity from previous rounds. These teachings have been incorporated into the Anthroposophical Society that Steiner founded.

This Anthroposophical conception of Cosmic evolution is somewhat reminiscent of Arthur Young’s *Reflexive Universe* notion reviewed in [Part Four, in Chapter IV-X](#).

The theosophy wiki article continues:

Rosicrucian

According to Max Heindel’s Rosicrucian writings about the scheme of evolution, in the beginning of a Day of Manifestation a certain collective Great Being, God, limits Himself to a certain portion of space, in which He elects to create a Solar System for the evolution of added self-consciousness. In God there are contained hosts of glorious Hierarchies and lesser beings of every grade of intelligence and stage of consciousness, from omniscience to an unconsciousness deeper than that of the deepest trance condition. During the current period of manifestation these various grades of beings are working to acquire more experience than they possessed at the beginning of this period of existence. Those who, in previous manifestations, have attained to the highest degree of development work on those who have not yet evolved any consciousness.

The period of time devoted to the attainment of self-consciousness and to the building of the vehicles through which the spirit in man manifests, is called “Involution”. The succeeding period of existence, during which the individual human being develops self-consciousness into divine omniscience, is called “Evolution”. Every evolving being has within him a “force” which makes evolution not to be a mere unfoldment of latent germinal possibilities but a process where each individual differs from that of every other. This force, called “Epigenesis”

provides the element of originality and gives scope to the creative ability which the evolving being is to cultivate in order that he may become a God.

Heindel states that in the Solar System, God's Habitation, there are seven Worlds differentiated by God, within Himself, one after another. These Worlds have each a different "measure" and rate of vibration and are not separated by space or distance, as is the earth from the other planets. They are states of matter, of varying density and vibration (as are the solids, liquids, and gases of the physical Earth). These Worlds are not instantaneously created at the beginning of a day of Manifestation, nor do they last until the end. The evolutionary scheme is carried through five of these Worlds in seven great Periods of manifestation, during which the evolving virgin spirit becomes first human and, then, a God. The highest Worlds are created first, and as involution is to slowly carry the life into denser and denser matter for the building of forms, the finer Worlds gradually condense and new Worlds are differentiated within God to furnish the necessary links between Himself and the Worlds which have consolidated. In due time the point of greatest density, the nadir of materiality, is reached. From that point the life begins to ascend into higher Worlds, as evolution proceeds. That leaves the denser Worlds depopulated, one by one. When the purpose has been served for which a particular World was created, God ends its existence, which has become superfluous, by ceasing within Himself the particular activity which brought into being and sustained that World. [[https://en.wikipedia.org/wiki/Round_\(Theosophy\)](https://en.wikipedia.org/wiki/Round_(Theosophy)) — retrieved 12 October 2020]

More is said about Rosicrucian cosmology in other chapters of this Part, and in other Parts. As one can reasonably expect according to the doctrine of Perennialism — which states that many cosmologies are consistent across many esoteric teachings — their various septenaries consistently follow the Natural Sequence schema.

Summary

The following is a condensation of the full treatment of the cascade of principles found in the Tao of Cosmology.

NOTES FROM KARL FRISTON INTERVIEW BY CURT JAIMUNGAL IN "THEORIES OF EVERYTHING" PODCAST
<https://www.youtube.com/watch?v=SWtFU1Lit3M>

[[In the *Tao of Cosmology* book, a good way to present the cascade of ideas (Ta0 > One > Two > Three > All) would be to provide a synopsis of the whole story arc, then provide a definition and description of basic terms from philosophy and theology, and then tell the story in detail as found in the work of logicians, scientists, philosophers, theologians, and mystics, in many chapters. The following might be the seed of the story arc of *Cosmogony*. The synopsis from *Cosmology* could be duplicated in this *Cosmogony* book.]]

Causality is another name for time. Ultimately causality is circular, which creates time, which appears to progress, not just to change to a different state but to evolve or transform or emerge to a qualitatively 'higher' stage. (Or a lower stage if you believe entropy rules, rather than negentropy, or rather than that time exists and functions on the boundary of entropy and negentropy, the boundary between past and future, the boundary between inside and outside. Sensing and signaling in self and environment is just another name for the Dialectic Principle discussed above.)

John Conway's "Game of Life": Cellular automata: 'cells' in a 2-D grid 'sense and signal' their existence or non-existence to know the current state and the laws of the game tell each cell what to do on the next iteration of the game. Amazing and unexpected and unpredictable things happen.

In terms of 3-D dimensionality, think of what happens in a cell swimming in an environment or in proximity to many other cells in an organism. The cell has a membrane; the cell has its internal identity, and the environment has its identity also. Neither the internal nor the external identities are static; they are both moving targets. Based on internal identity, the membrane selectively lets information in and selectively sends information out, and via this agent-arena interaction, cell and environment adjust to each other to increase fitness on both sides of the membrane. Obviously, this is the Dialectic/Feedback/Transition Principles.

The so-called "Markov Blanket" is the mathematical model for what the membrane does. In other sections, Enactivism and Relationalism are discussed. The idea here is that "relation" is more ontologically primitive than "relata". (Iain McGilchrist has a lot to say about this in his book *The Matter with Things*. I first heard about it in Wilber's *Spectrum of Consciousness*, which referred to the book *Laws of Form* by George Spencer-Brown.) (Have a section on the Principle of Least Action = the Goal of the Cosmos is Equilibrium, with the Positive Pole +Suspension versus the Negative Pole of -Inertia. The best way forward is a balance between both conservatism and progressivism, with a slight edge to progressivism, otherwise the system spirals down to

stagnation with is hardly better than death.) All interaction between a self and a not-self are reciprocal exchanges because Relationalism is true.

In living systems, self and environment must be complex enough to be able to have and modify a model of self and environment. The function of self and not-self systems is to modify the model to achieve a state that is most effective and efficient, thus increasing the likelihood of survival – survival of the fittest/most adaptable. (Materialist science only allows modeling systems to have a memory, but mysticism science allows modeling systems to have an imagination. Both sciences work together because Relationalism is true.) This shows up in non-living systems as the collapse/reduction of the wave function (objective collapse theories), and in the interaction of animate and inanimate systems in Bayesian interpretations of Quantum Mechanics (such as Qbism), and in the Transactional Interpretation by John Cramer as embellished by Ruth Kastner, ‘handshake’ between influence from the future = teleology and memory of the past for the sake of consistency in the creative now.

Models have a memory and they have a predictive capacity. The goal (teleology) is to minimize errors, to model ever more accurately, such that the model grows, both in the internal system and in the external system. (Thus the Cosmos turns itself beginning for end and top for bottom and inside for outside; the created evolves to become the creator.)

Friston’s concept of the “Free Energy Principle” is that the Cosmos aims toward synchronization of inner and outer systems recursively and reflectively in order to minimize “free” events, which is to say “unpredictable”, “surprising” chaotic events. (Talk about information theory here, where there are two poles to absence of information, the +Chaos pole (random noise as only static on radio between station or only snow on TV screen between stations) and the -Void pole (total uniformity = single tone, or total absence = silence). Entropy and neg-entropy figure in here.

(Paradox: Ancient Buddhist and Taoist mysticism: Tao experiencing itself AS IF it were not itself (maya, Brahman and Atman). Bernardo Kastrup’s so-called “analytic idealism”. The primordial schism is between self and no-self, the known and the unknown, the immanent and the transcendent. The next step in the cascade is the schism between self and other-self, which is also unknown to the self. The unknown becomes like a ‘black-box’ that needs to be “reverse engineered” by interacting with it iteratively, mutual ratchet. What is unknown to the self is not unknown to the unknown itself. The scientific endeavor is to explore and experiment as one approaches the truth asymptotically.

Lagrangian mechanics took the place of Newtonian mechanics because it was simpler conceptually and mathematically. (Research Feynman “path integral”).

The goal of the Cosmos is to minimize the ignorance created by the primordial schism between self and primarily the no-self and secondarily the other-self. That statement was framed in terms of information theory, of noise versus signal. The membrane of the self is like a veil that hides the other-self. The whole of epistemology is about how to maximize the process of the self learning about the hidden other-self, and vice-versa. Each fragment of the Cosmos wants to learn about all the other fragments of the Cosmos via recursive investigation and testing and retesting that updates the model. (Talk about Bayesian updating of models to improve predictability. Talk about the spectrum between total chaos (randomness) and total determinism and probability in general.)

Machine learning in giant computers: feed them with massive amounts of data that is too complex for a human mind to fathom, apply some sorting algorithm to discern a pattern that is invisible to humans. By examining the consequences of moves in thousands of games, this is one way to converge on the best next move in Chess and Go games.

Psychologically, it is best to stay engaged with the world and other people because the feedback keeps us saner than we might otherwise be in isolation, left to our own devices. “Reality check”.

All fragments of the Cosmos exist and function on the need to perpetuate the fragment and the progeny fragments. The Goal of accurate models is to minimize cognitive dissonance and/or “surprise” by gathering evidence, maximize accurate knowledge. To do this, cognitive scientists have discovered that the homunculus module guesses at what is going to happen next, and updates the model based on what actually happens, internally and/or externally via Bayesian intuitions.

(Lee Smolin’s so-called “autodidactic universe”; Carlo Rovelli’s so-called “Relational Quantum Mechanics”; John Wheeler’s “self-excited circuit”; and so on.)

Scientists pretend there is an objective view of the world (ontology), but while the self is a fragment of the world there is only increasingly better epistemology about the unknown ontology. The self has biases that filter in or attract data that prefers to confirm its biases, but one is better to be loose but not too loose in one's attachment to one's biased perceptions and perspective. In other words, it is mostly okay to find your niche in the world and maximize your survivability and thriving in that niche.

There is a nested hierarchy of learning modules in the brain, and in the world. It is the faculty of so-called "relevance realization" per John Vervaeke that helps us make sense and make meaning in our preferred niche.

Holarchy Principle = models nested within models per the great chain/nest of being.

Internal self = modular brain talking to itself, two hemispheres and triune levels.

The ultimate Self is the so-called "immanent/cataphatic" aspect of deity which is always updating-changing-journing, but there is a so-called "transcendent/apophatic" non-self deity that is permanent, unchanging and Absolute against which the immanent evolvable deity is compared per the primordial relationalism.

Humans appear to have the unique ability to propose counterfactuals in their exploration of self versus not-self and other-self. If abused, this faculty can lead to an unhealthy ego-death or nihilism, so be careful. The ego self is useful while incarnate; although mysticism can be a healthy glimpse that there is more to this world than meets the eye. So, keep your egotistical membrane clear and clean so that it has a healthy relationship with the world: it lets in and sends out accurate senses and signals to update the internal and external models in a maximally effective and efficient process. The evolutionary imperative is to balance Analysis and Synthesis, Evolution and Involution, Termination and Origination on the way to Assimilation. To expand your horizons, then meditation (emptying the mind) and concentration (focusing the mind) are useful when used in balance and moderation.

Bad Gurus are extreme, unbalanced, therefore dysfunctional aka unhealthy in relating to the world.

Quick review of the time-structure of the universe:

1. Tao's Template provides the key components of the Canonical Septenary: Ordinal/Cardinal Action, etc...
- 2.





Chapter I-x

LIVE AND LEARN

Ever since the primordial forgetting, when the immanent aspect of Tao began to experience itself 'as if' it were not itself, the created Cosmos has been constantly learning more and more about its creator self, the other half. In that process, the immanent Tao becomes more than it would have been had it not originally forgotten itself, because it is always 'groping in the darkness', as it were, evermore reaching for the transcendent Tao to discover more. Scientists, philosophers, and mystics have been figuring out and/or personally experiencing how this learning process happens at all levels of the Cosmos. If one is allowed to anthropomorphize the Tao, then it could be said that even the Tao is not omniscient, and It knows that it is not omniscient, and it knows that it never has been and never will be omniscient. At least, we can say that about the immanent Tao, which, you will recall from previous definitions and descriptions, is the manifest source of the Cosmos in time and space. However, you will also recall that we cannot say anything meaningful about the transcendent Tao. All fragments of the immanent Tao, including our human selves, are also 'living and learning' all the time.

My purpose with this chapter is to show that not only that animate (Cardinal) realm of the Cosmos is learning, but also the inanimate (Ordinal) realm of the Cosmos is learning, and that the inanimate graduates into the animate in its learning process, and that the inanimate and animate are the duality in the philosophy of dual aspect monism, and that the Monad is "consciousness", defined as that which is learning by making and breaking distinctions. Another name for learning is evolution, and evolution means that the Cosmos is not merely changing or transforming without learning, it is transcending itself. We know this as entropy and syntropy.

[[Review the function of the Cosmos as Tao's everywhere and always learning: The basic idea is that Tao first has to forget what it thinks it knows in order to learn new stuff in an eternal forward upward outward spiral of learning — same as ourselves:]]

1. The philosophy of Dual Aspect Monism yields the Reciprocal Principle: there is a complementarity near the foundation of the Cosmos, where Two is the same as $\frac{1}{2}$, depending on Point of View, Cardinal or Ordinal respectively.
2. Tao's Template where the One produced the Two = Self creating a self and another self = a subject and an object = a known and an unknown
3. Heisenberg's Uncertainty Principle: [explain conjugate variables] the Cosmos depends on the inability to discern reciprocal components. [explain Leibniz's "Principle of the Identity of Indiscernibles"]
4. Friston's Free Energy Principle = the feedback of self and not self interacting in order to learn about each other in order to first survive (in the Ordinal, inanimate stages) and then to thrive (in the Cardinal, animate stages) of Cosmic evolution.]]
5. Socrates: *anamnesis* = life is 'remembering' what the immanent Tao 'forgot'.
>[https://en.wikipedia.org/wiki/Anamnesis_\(philosophy\)](https://en.wikipedia.org/wiki/Anamnesis_(philosophy))<
6. Curiosity (epistemic foraging) is an ontological primitive; it goes "all the way down" for sure in living things that have a subjectivity (to ensure their survival in a hostile world), and perhaps even in the inanimate cosmos before "life" emerged.
7. ?Epistemology (what and how we learn about reality) also goes "all the way down" to the immanent Tao; the only ontology (ultimate reality) is the transcendent Tao, the *noumenon* that is inconceivable toward which the conceivable yearns, the *potentia*, the source?

8. From beginning to end, from bottom to top, from outside to inside, each fragment of Tao and indeed the immanent Tao Itself, yearns to expand the boundary of the known into the unknown.

The Unknown Unknown

One of Donald Rumsfeld's contributions to the mainstreaming of a particular philosophical wisdom is the notion that there is such a thing as unknown unknowns, as distinct from known unknowns. That is to say, as the Cosmos learns, it transforms what it knows to be unknown into what it knows, because it was seeking the answer to a particular question. This is what happens on the interface between the known and the unknown. However, there is now, and presumably always will be, a region of unknown unknowns somewhere beyond the known unknowns.

= the Absolute Absolute, about which nothing can be said.

The Known Unknown

= the Absolute, about which it can only be said that it is compared and contrasted with the Relative.

P versus NP

The P versus NP problem is a fundamental question in computer science and mathematics that has been open for decades. It is considered one of the most important unsolved problems in computer science and mathematics.

In simple terms, the P versus NP problem asks whether every problem whose solution can be quickly verified can also be quickly solved. In other words, it asks whether every problem that can be solved in polynomial time (P) can also be solved in polynomial time by a deterministic algorithm.

Here are some key points about the P versus NP problem:

P (Polynomial Time): A problem is said to be in P if it can be solved in polynomial time, which means that the time it takes to solve the problem increases polynomially [x with a big ^{exponent}] with the size of the input.

NP (Nondeterministic Polynomial Time): A problem is said to be in NP if it can be solved in nondeterministic polynomial time, which means that a non-deterministic algorithm can solve the problem in polynomial time. A non-deterministic algorithm is one that can try all possible solutions in parallel and accept the first one that works.

The P versus NP problem is important because it has implications for many areas of computer science and mathematics, including:

Cryptography: If $P=NP$, it would mean that there are efficient algorithms for solving many problems that are currently considered to be difficult to solve, which would break many encryption algorithms.

Optimization: If $P=NP$, it would mean that many optimization problems can be solved efficiently, which would have significant implications for fields such as operations research and logistics.

Computer Science: If $P=NP$, it would mean that many problems that are currently considered to be intractable can be solved efficiently, which would have significant implications for many areas of computer science.

Despite much effort, no one has been able to prove or disprove that $P=NP$. The problem is considered to be one of the most challenging open problems in computer science and mathematics. [AI generated — 06 May 2024]

What I see when I consider this, and the point that I want to make about the unsolved $P=NP$ problem, is that it applies not just to math and computation; it applies to the entire Cosmos. It shows up as the difficulty if not impossibility regarding reversibility of stuff in complex systems: the more complex the system (e.g. the Cosmos) the more difficult to solve (figure out), and the deeper the unknowns are to whatever discovery and explanation process are applied.

Colloquially, this means that: it is the journey, not the destination, that is important.

An "assumption" (meaning a premise or axiom that is Godelian incomplete; it cannot be proved yea or nay) of Tao's Template ontology is that the universe is not a fully deterministic system (meaning that chaos and randomness are ontologically and fundamentally real), such that cause-effect relations are not the whole situation. It is my further speculation that the Transcendent Tao might know the final "answer", but the Immanent Tao Itself is asymptotically approaching infinity and eternity in trying to figure out what is going

on with this whole creation thing; the “problem” of existence versus non-existence has no known end within the system.

Godelian Incompleteness

This Godelian Incompleteness and that P=NP problem can be compared with Wolfram’s notion of computational irreducibility:

Computational Irreducibility

[[Brief bio of Wolfram]]

Computational irreducibility is one of the main ideas proposed by Stephen Wolfram in his 2002 book *A New Kind of Science*, although the concept goes back to [his] studies from the 1980s.

The idea

Many physical systems are complex enough that they cannot be effectively measured. Even simpler programs contain a great diversity of behavior. Therefore no model can predict, using only initial conditions, exactly what will occur in a given physical system before an experiment is conducted. Because of this problem of undecidability in the formal language of computation, Wolfram terms this inability to “shortcut” a system (or “program”), or otherwise describe its behavior in a simple way, “computational irreducibility”. The idea demonstrates that there are occurrences where theory’s predictions are effectively not possible. Wolfram states several phenomena are normally computationally irreducible.

Computational irreducibility explains observed limitations of existing mainstream science. In cases of computational irreducibility, only observation and experiment can be used.

Implications

- There is no easy theory for any behavior that seems complex.
- Complex behavior features can be captured with models that have simple underlying structures.
- An overall system’s behavior based on simple structures can still exhibit behavior indescribable by reasonably “simple” laws.

Analysis

Navot Israeli and Nigel Goldenfeld found that some less complex systems behaved simply and predictably (thus, they allowed approximations). However, more complex systems were still computationally irreducible and unpredictable. It is unknown what conditions would allow complex phenomena to be described simply and predictably.

Compatibilism

Marius Krumm and Markus P Muller tie computational irreducibility to Compatibilism. They refine concepts via the intermediate requirement of a new concept called computational sourcehood that demands essentially full and almost-exact representation of features associated with problem or process represented, and a full no-shortcut computation. The approach simplifies conceptualization of the issue via the No Shortcuts metaphor. This may be analogized to the process of cooking, where all the ingredients in a recipe are required as well as following the ‘cooking schedule’ to obtain the desired end product. This parallels the issues of the profound distinctions between similarity and identity. [https://en.wikipedia.org/wiki/Computational_irreducibility — retrieved 06 May 2024]

Assuming that the Cosmos is a computation of some kind, as Wolfram does, then there is no shortcut to achieving the goal and purpose of what the Cosmos (aka the Immanent Tao) is doing: everything is significant to Tao; everything that exists and happens is meaningful to Tao; nothing is wasted as far as Tao is concerned.

Even if the Cosmos is a closed finite system that is algorithmically or formulaically deterministic, the determination cannot be shortened. However, evidence documented above (Godelian incompleteness) suggests that the Cosmos is open-ended, and that the tension between finity and infinity (the Dialectic Principle in one of its many instantiations), aka the tension between Transcendent Tao and Immanent Tao, aka the tension between Chaos and Order, aka the tension between the Unknown and the Known, that is the fundamental ontology.

Amnesia + Anamnesia = Enrichment

The crudest outline of this subsection is:

- Oriental notion that Brahman goes to sleep and ‘dreams’ and/or ‘forgets’ who/what It is ...
- Socratic/Platonic notion that “learning” is a process of *anamnesis* = the Greek word for remembering what was forgotten with each successive fragmentation of the Absolute into Ideal forms or archetypal hypostases and so on ad infinitum ad eternum...
- Transcendent Tao is continually ‘enriched’ by this recursive process of forgetting (dis-membering?) and re-membering.

?Egyptian myth of the dismembering of Osiris, reassembling by Isis, reconstitution of Osiris in Horus?

[[The fragmentation/dismember versus de-fragmentation/re-member metaphor in philosophy and mythology should be described and explained in a separate section from the forget/remember metaphor.]]

Conjugate Variables

Quote Wikipedia on the subject of this subsection. E.g., Heisenberg uncertainty principle: the reciprocal relationship between position and momentum: the more accurately one conjugate variable is measured or forced, the more ambiguous becomes the other conjugate variable. This phenomenon is an instantiation of Twoness. In the context of this chapter, this is the battle between the known and the unknown that was initiated at the creation of Twoness from Oneness.

The Known

The known is the boundary between the self and the not-self. There are unknowns about both the external not-self and the internal self

Cartesian Coordinate System (god’s eye view) versus Polar (self-centered) Coordinate System

The role of the observer in QM (measurement problem) versus GR (reference frame).

“the view from nowhere” versus the view from the self

Copernican Principle (no special place and time) versus the Selfhood Principle (everything/everytime unique)

The Ontological Status of Probability

When I type the title of this section into an internet search engine, I do not get back a link to a Wikipedia article, so I want to resort to other sources, but, so far, I have find none that explain it the way it is explained in the Process/Aspect System ontology, which has three dimensions of subjective time in a reciprocal relationship with three dimensions of objective space. Not even Dewey Larson’s Reciprocal System of Theory is aware of this. (Figuring this out awaits a completion of the *Tao of Cosmology* book.)

Basically and briefly, in the logical and mathematical foundations of the NS-PAS schema, where “consciousness” or “pan-experientialism” is said to be fundamental, the ontological most-primitive, the ultimate Monad or Oneness, everything exists and functions because of the notion that there are differences in Point of View (PoV). From the POV of a self, the self is “subjective” and the not-self is “objective”. “probability” is what abstract Cardinal 3-D time/space looks like from the Ordinal 3-space/1-time domain where our human consciousness is embedded in a physical body.

Stochastic Gradient Descent

To the Known Self, the Unknown Not-self first appears as surprising random chaos. In animate systems (such as our human selves) the Known seeks to learn about, aka inculcate, the Unknown (via our sensory apparatus). Inanimate objects at the level of atoms also ‘sense’ the environment via exchange of photons and electrons in the three dimensions of space (classical physics chemistry) and the three dimensions of time (quantum physics with probability and superposition and entanglement).

Assembly Theory

The point of this section near the beginning of this chapter on learning is to begin to show that it is natural (built into its time/space structure) that the Cosmos increase in complexity as time passes, leading up to living beings, and then the complexity continues to increase via the evolution of life. It is just one of many sections showing that the Cosmos starts out in a singularity (Oneness) then bifurcates (Twoness), then trifurcates (Threeness), and then the differentiation continues *ad infinitum ad eternum*.

Introduction

Assembly theory is a hypothesis that characterizes object complexity. When applied to molecule complexity, its authors claim it to be the first technique that is experimentally verifiable, unlike other molecular complexity algorithms that lack experimental measure. The theory was developed as a means to detect evidence of extraterrestrial life from data gathered by astronomical observations or probes.

Background

The hypothesis was proposed by Leroy Cronin and developed by the team he leads at the University of Glasgow, then extended in collaboration with a team at Arizona State University led by Sara Imari Walker. [The problem it aimed to solve is that:] It is difficult to identify chemical signatures that are unique to life. For example, the Viking lander biological experiments detected molecules that could be explained by either living or natural non-living processes.

Assembly theory outputs how complex a given object is as a function of the number of independent parts and their abundances. To calculate how complex an item is, it is recursively divided into its component parts. The 'assembly index' is defined as the shortest path to put the object back together.

For example, the word 'abracadabra' contains 5 unique letters (a, b, c, d and r) and is 11 symbols long. It can be assembled from its constituents as a + b --> ab + r --> abr + a --> abra + c --> abrac + a --> abraca + d --> abracad + abra --> abracadabra, because 'abra' was already constructed at an earlier stage. Because this requires 7 steps, the assembly index is 7. The string 'abcdefghijkl' has no repeats so has an assembly index of 10.

While other approaches can provide a measure of complexity, the researchers claim that assembly theory's molecular assembly number is the first to be measurable experimentally. They argue that the molecular assembly number can be used to gauge the improbability that a complex molecule was created without life, with a higher number of steps corresponding to a higher improbability. This method could be implemented in a fragmentation tandem mass spectrometry instrument to search for biosignatures. Leroy Cronin stated "Our system is the first falsifiable hypothesis for life detection and is based on the idea that only living systems can produce complex molecules that could not form randomly in any abundance, and this allows us to sidestep the problem of defining life."

The theory was extended to map chemical space with molecular assembly trees. These trees were formed by arranging constituent pieces in size order. When two or more molecules have common units, their trees are combined, including the two target molecules and various hybrids.

[>https://en.wikipedia.org/wiki/Assembly_theory< — retrieved 25 June 2023]

Elsewhere (e.g. ><https://www.nature.com/articles/s41467-021-23258-x><) it is said that life has a molecular assembly (MA) index of greater than about 15.

When asked "what makes certain pathways [in chemical evolution] 'selected'" in Assembly Theory, astrobiologist Sara Imara Walker answered:

If I were wildly conjecturing, I'd say that there's a sort of force that moves objects through assembly space to generate higher assembly objects, which is why the biosphere evolved complexity over time. But I don't know if it's a force like in standard physics, we're trying to think about that. My intuition is that life is the physics that builds and grows possibility spaces. There's some sort of driving force that the universe is trying to explore in order to make as many objects as it can. It's trying to maximize the number of things that exist, and life is the way of doing that. [New Scientist magazine, 24 June 2023, p. 35]

To me, this means that the universe has a teleology in its holistic evolution that makes the emergence of life inevitable, in the same sense that gravity of small masses inevitably draw to itself more particles, accreting

ever-larger entities in what are called asteroids and planets and stars and galaxies and so on. The life force picks up from there and makes biological entities.

So now that the question of the measure of complexity for life has been answered, the next question that can reasonably be asked is, how likely is it that chemical evolution will lead to biology

Bootstrapping Existence

[[This section maybe belongs elsewhere, or it might not be worth saving.]]

Because ...

Introduction

In general, bootstrapping usually refers to a self-starting process that is supposed to continue or grow without external input.

Etymology

Tall boots may have a tab, loop or handle at the top known as a bootstrap, allowing one to use fingers or a boot hook tool to help pulling the boots on. The saying "to pull oneself up by one's bootstraps" was already in use during the 19th century as an example of an impossible task. The idiom dates at least to 1834, when it appeared in the *Workingman's Advocate*: "It is conjectured that Mr. Murphee will now be enabled to hand himself over the Cumberland river or a barn yard fence by the straps of his boots." In 1860 it appeared in a comment on philosophy of mind: "The attempt of the mind to analyze itself [is] an effort analogous to one who would lift himself by his own bootstraps." Bootstrap as a metaphor, meaning to better oneself by one's own unaided efforts, was in use in 1922. This metaphor spawned additional metaphors for a series of self-sustaining processes that proceed without external help.

The term is sometimes attributed to a story in Rudolf Erich Raspe's *The Surprising Adventures of Baron Munchausen*, but in that story Baron Munchausen pulls himself (and his horse) out of a swamp by his hair (specifically, his pigtail), not by his bootstraps — and no explicit reference to bootstraps has been found elsewhere in the various versions of the Munchausen tales. [<https://en.wikipedia.org/wiki/Bootstrapping> — retrieved 14 June 2023]

The point to be emphasized here in the context of this *Cosmogony* book is that whatever it was that bootstrapped existence out of non-existence (if there was such an historical event), or bootstrapped order out of chaos (if there was such an historical event) or bootstrapped finitude out of infinitude (if there was such an historical event) is mysterious. Mystics tell us that the deity itself is as astonished at awareness versus self-awareness versus other-awareness as philosophers are. In other words, the experience of astonishment is pervasive at the bottom and the top of the Cosmos.

[[Explore Heylighen at https://en.wikipedia.org/wiki/Francis_Heylighen and his internet home page <http://pcp.vub.ac.be/HEYL.html> and self-organization at <https://en.wikipedia.org/wiki/Self-organization>]]

Hugh Everett: "Relative State" formulation of Quantum Mechanics

John Wheeler: Participatory Universe

Feedback Principle

Eric Jantsch — The Self-organizing Universe

Ilya Prigogine — Order out of Chaos

Douglas Hofstadter — Godel, Escher, Bach

Biological Evolution

Karl Friston — The Free Energy Principle (FEP)

Upon first hearing that phrase, one might suppose that it has something to do with perpetual motion, or that it means that energy wants to be free of constraints, but neither of those is the case. Rather, it refers to the notion that sentient subsets of the Cosmos, from top to bottom and from beginning to end, do not like “surprises” because surprises threaten their continued existence. In order to prevent surprises, sentient systems on both sides of the membrane that separate them have senses that monitor the boundary; built into each system is a prediction engine that constantly compares what it expects to happen against what actually happens, and makes adjustments accordingly, to make more accurate predictions. In other words, life is all about mitigation of ignorance, aka improved knowledge, that inner and outer systems have of each other. The FEP requires the function of both memory of the past and imagination of the future. FEP incorporates elements of biological evolution such as variation, selection, and heredity — refer to previous section. It has been proposed that the FEP might be one of the most basic principles of the Cosmos.

This section is related to a previous section, “Assembly Theory”, in that a system must have evolved to a certain level of complexity in order to be “alive”, hence subject to biological evolution and the FEP.

Also, the fact that a membrane separating inner and outer living systems is a necessary component of the FEP, indicates that we are dealing with Threeness in Tao’s Template, aka three-dimensionality, which is the ultimate abstraction here.

As usual, Wikipedia provides us with an introduction to the subject.

Introduction

The free energy principle is a mathematical principle in biophysics and cognitive science (especially Bayesian approaches to brain function, but also some approaches to artificial intelligence). It describes a formal account of the representational capacities of physical systems: that is, why things that exist look as if they track properties of the systems to which they are coupled. It establishes that the dynamics of physical systems minimize a quantity known as surprisal (which is just the negative log probability of some outcome); or equivalently, its variational upper bound, called free energy. The principle is formally related to variational Bayesian methods and was originally introduced by Karl Friston as an explanation for embodied perception–action loops in neuroscience, where it is also known as active inference.

Bayesian stuff is reviewed in a subsequent section. Basically and briefly, a fellow by the name of Thomas Bayes, who lived in the 18th Century, described a mathematical formulation of how it is that people (and other systems) update their understanding of how the world works as new information is acquired.

The free energy principle models the behavior of systems that are distinct from, but coupled to, another system (e.g., an embedding environment), where the degrees of freedom that implement the interface between the two systems is known as a Markov blanket. More formally, the free energy principle says that if a system has a “particular partition” (i.e., into particles, with their Markov blankets), then subsets of that system will track the statistical structure of other subsets (which are known as internal and external states or paths of a system).

The free energy principle is based on the Bayesian idea of the brain as an “inference engine”. Under the free energy principle, systems pursue paths of least surprise, or equivalently, minimize the difference between predictions based on their model of the world and their sense and associated perception. This difference is quantified by variational free energy and is minimized by continuous correction of the world model of the system, or by making the world more like the predictions of the system. By actively changing the world to make it closer to the expected state, systems can also minimize the free energy of the system. Friston assumes this to be the principle of all biological reaction. Friston also believes his principle applies to mental disorders as well as to artificial intelligence. AI implementations based on the active inference principle have shown advantages over other methods.

The free energy principle is a mathematical principle of information physics: much like the principle of maximum entropy or the principle of least action, it is true on mathematical grounds. To attempt to falsify the free energy principle is a category mistake, akin to trying to falsify calculus by making empirical observations. (One cannot invalidate a mathematical theory in this way; instead, one would need to derive a formal contradiction from the theory.) In a 2018 interview, Friston explained what it entails for the free energy principle to not be subject to falsification: “I think it is useful to make a fundamental distinction at this point — that we can appeal to later. The distinction is between a state and process theory; i.e., the difference between a normative principle that things may or may not conform to, and a process theory or hypothesis about how that principle is realized. Under this distinction, the free energy principle stands in stark distinction to things like predictive coding and the Bayesian brain hypothesis. This is because the free energy principle is what it is — a principle. Like Hamilton’s principle of stationary action, it cannot be falsified. It cannot be disproven. In fact, there’s not much you can do with it, unless you ask whether measurable systems conform to the principle. On the other hand, hypotheses that the brain performs some form of Bayesian inference or predictive coding are what they are — hypotheses. These hypotheses may or may not be supported by empirical evidence.” There are many examples of these hypotheses being supported by empirical evidence.

Background

The notion that self-organising biological systems — like a cell or brain — can be understood as minimizing variational free energy is based upon Helmholtz’s work on unconscious inference and subsequent treatments in psychology and machine learning. Variational free energy is a function of observations and a probability density over their hidden causes. This variational density is defined in relation to a probabilistic model that generates predicted observations from hypothesized causes. In this setting, free energy provides an approximation to Bayesian model evidence. Therefore, its minimisation can be seen as a Bayesian inference process. When a system actively makes observations to minimise free energy, it implicitly performs active inference and maximises the evidence for its model of the world.

However, free energy is also an upper bound on the self-information of outcomes, where the long-term average of surprise is entropy. This means that if a system acts to minimise free energy, it will implicitly place an upper bound on the entropy of the outcomes — or sensory states — it samples.

Relationship to other theories

Active inference is closely related to the good regulator theorem and related accounts of self-organisation, such as self-assembly, pattern formation, autopoiesis and practopoiesis. It addresses the themes considered in cybernetics, synergetics and embodied cognition. Because free energy can be expressed as the expected energy of observations under the variational density minus its entropy, it is also related to the maximum entropy principle. Finally, because the time average of energy is action, the principle of minimum variational free energy is a principle of least action. Active inference allowing for scale invariance has also been applied to other theories and domains. For instance, it has been applied to sociology, linguistics and communication, semiotics, and epidemiology among others. [https://en.wikipedia.org/wiki/Free_energy_principle — retrieved 25 June 2023]

The Autodidactic Universe

THE AUTODIDACTIC UNIVERSE ABSTRACT (2021)

We present an approach to cosmology in which the Universe learns its own physical laws. It does so by exploring a landscape of possible laws, which we express as a certain class of matrix models. We discover maps that put

each of these matrix models in correspondence with both a gauge/gravity theory and a mathematical model of a learning machine, such as a deep recurrent, cyclic neural network. This establishes a correspondence between each solution of the physical theory and a run of a neural network. This correspondence is not an equivalence, partly because gauge theories emerge from $N \rightarrow \infty$ limits of the matrix models, whereas the same limits of the neural networks used here are not well-defined. We discuss in detail what it means to say that learning takes place in autodidactic systems, where there is no supervision. We propose that if the neural network model can be said to learn without supervision, the same can be said for the corresponding physical theory. We consider other protocols for autodidactic physical systems, such as optimization of graph variety, subset-replication using self-attention and look-ahead, geometrogenesis guided by reinforcement learning, structural learning using renormalization group techniques, and extensions. These protocols together provide a number of directions in which to explore the origin of physical laws based on putting machine learning architectures in correspondence with physical theories. [<https://arxiv.org/abs/2104.03902.pdf>]

The proposal is that the entire inanimate universe and its subsystems such as computers are thought to learn in basically the same way that animate biological brains are thought to learn.

This paper is quite technical for what might be a typical reader of this *Cosmogony* book, so I searched the internet for a summary

Active Inference

Bayesian Learning

When I reviewed Wikipedia for this topic, I found that it was too technical for my purposes, so I searched the internet and found the following. Basically and briefly, Bayesianism is just the application of mathematics to the process of decision-making when there are both knowns and unknowns in the equation. In other words, Bayesianism is about applying intelligence, scientific and philosophical principles, to our human learning endeavors:

BAYESIAN THINKING: A PRIMER

In the 17th century, mathematician and philosopher Thomas Bayes developed a way of thinking that has been both misunderstood and misused for centuries. In this article, we will explore what Bayesian thinking is, why it's so powerful, how it can be used to make better decisions and understand the world around us better.

1. What is Bayesian thinking

Bayes theorem provides an equation for updating a hypothesis based on new evidence. Bayesian thinking has been successfully applied to fields outside of statistics including education, philosophy, economics and law. To put it simply, it's a mental model which allows you which allows you to adapt your thinking reactively to new evidence.

"Critical thinking is an active and ongoing process. It requires that we all think like Bayesians, updating our knowledge as new information comes in." Daniel J. Levitin,

While Alan Turing is most known for using the Bayes theorem to crack the German Enigma code during World War II, the theory has a wide range of applications in a wide range of disciplines in today's modern world. However, the understanding that underpins this seemingly complex idea (like with all arithmetic and statistics) is actually rather straightforward. In truth, we are continuously implementing this theorem in our daily lives without even knowing it.

This mental model works in contrast to another statistical method called frequentism which determines how frequently some event occurs within a certain time period and then predicts future events using this information.

2. How does Bayesian thinking work?

Many professions, such as physicians and judges, are expected to make critical decisions based on data. When evaluating a positive mammography screening, for example, Bayesian conclusions are frequently required. Several empirical studies have revealed poor judgments and even cognitive illusions among medical professionals who need to apply Bayesian thinking (Hoffrage et al., 2000; Operskalski and Barbey, 2016).

When analyzing evidence based on a fragmented DNA sample, jury mis-convictions or acquittals may result from a lack of statistical comprehension in general and erroneous Bayesian reasoning in particular. As in the instance of Sally Clark, these faults might put innocent lives in jeopardy (Schneps and Colmez, 2013; Barker, 2017).

Statistical data in probability format, i.e. fractions or percentages representing the possibility of a certain occurrence, such as the prevalence of breast cancer in the population, is frequently presented to these professions.

3. Examples of Bayesian thinking

Bayesian thinking is a form of statistical reasoning. It involves calculating and updating probabilities as new information becomes available to make the best possible predictions.

Bayes' Theorem states that: "The probability of an event happening A, given that it has happened B, is equal to the probability of the event happening B, given that it has happened A times the probability of both events occurring together divided by the sum total for all possibilities."

For example, if you have observed 100 people with red hair and blue eyes then you would be justified in assuming that there are more people with red hair than without red hair because your sample size is large enough to justify this assumption. If on occasion you observe a person with red hair and blue eyes, you would be justified in believing that there are also people without red hair who have blue eyes because there isn't enough data to make an accurate prediction.

Three statistics are supplied when Bayesian conclusions are required: [1] the base rate (or *a priori* probability), [2] sensitivity, and [3] false alarm rate.

Take, for example, the probability of heroin addiction: [1] A random person in a population has a 0.01 percent probability of being addicted to heroin (base rate). [2] If someone randomly selected from this group is addicted to heroin, they will have new needle pricks (sensitivity). [3] If a non-heroin user is picked at random from this group, there is a 0.19 percent chance of having fresh needle pricks (false alarm rate). What is the likelihood that a person with fresh needle pricks is addicted to heroin (posterior probability)? In reality, just 4% of participants in a comprehensive meta-analysis (McDowell and Jacobs, 2017) are capable of making the necessary conclusions to arrive at the correct conclusion. The majority of people struggle, which can lead to catastrophic errors. The most common problem is a misapprehension of the base rate. The outcome, determined using the Bayes method, is just 5% given the probabilistic information (low base rate, high sensitivity, and low false alarm rate). To most people, this appears to be a shockingly low figure.

However, there are several limitations to Bayes theorem.

- It doesn't tell you anything new.
- It may not be applicable in every situation (i.e., there needs to be some existing evidence).
- It also doesn't tell you how likely it is that a hypothesis will be true — Bayes theorem only tells us the probability of some event given our existing evidence.

Conclusion

Bayesian thinking is a type of cognitive reasoning that has been around for centuries. The idea behind Bayesian decision-making is to update your beliefs about the world based on new information you've encountered. If you are trying to decide between two options, it means updating your belief in one option if there's evidence against it and increasing your belief in the other because of what you've learned.

"Under Bayes' theorem, no theory is perfect. Rather, it is a work in progress, always subject to further refinement and testing." — Nate Silver

It also means changing how much uncertainty or risk you think each choice entails (maybe one seems riskier than before). You can apply this type of reasoning in many aspects of life: from solving math problems to deciding whether or not to buy something on Amazon. [<https://www.theknowledge.io/bayesian-thinking/>] — retrieved 26 October 2023]

Universal Darwinism

This section is yet another instantiation of the notion that the Cosmos is a system in which its subsystems are constantly learning via interaction with each other, in this case via a three-fold process that consists of 1) variation, 2) selection, and 3) heredity. Wikipedia provides an introduction. *[[How does UD compare and contrast with the Dialectic Principle, which is also a three-fold process? How does this compare and contrast with Don Hoffman’s ‘conscious agents’ said by him to be at the foundation of the Cosmos, which is also a three-fold process? How does this compare and contrast with the Law of Increasing Functional Information reviewed in the next section, which has three types of Functions?]]*

Introduction

Universal Darwinism, also known as generalized Darwinism, universal selection theory, or Darwinian metaphysics, is a variety of approaches that extend the theory of Darwinism beyond its original domain of biological evolution on Earth. Universal Darwinism aims to formulate a generalized version of the mechanisms of variation, selection and heredity proposed by Charles Darwin, so that they can apply to explain evolution in a wide variety of other domains, including psychology, linguistics, economics, culture, medicine, computer science, and physics.

Universal Darwinism (UD), if true, would seem to indicate that the inanimate domain is a learning system that shares the same principle or principles of evolution as the animate domain. And yes, that is what the notion is saying.

The claim made for UD is similar to the claim made for the “Free Energy Principle” discussed in a previous section of this chapter, namely that UD is *the* fundamental principle of the evolutionary function of the Cosmos through time. *[[Compare and contrast the two.]]* Many of those domains are discussed in other Parts of this *Natural Sequence* book.

Basic mechanisms

At the most fundamental level, Charles Darwin’s theory of evolution states that organisms evolve and adapt to their environment by an iterative process. This process can be conceived as an evolutionary algorithm that searches the space of possible forms (the fitness landscape) for the ones that are best adapted. The process has three components:

variation of a given form or template. This is usually (but not necessarily) considered to be blind or random, and happens typically by mutation or recombination.

selection of the fittest variants, i.e. those that are best suited to survive and reproduce in their given environment. The unfit variants are eliminated.

heredity or retention, meaning that the features of the fit variants are retained and passed on, e.g. in offspring.

After those fit variants are retained, they can again undergo variation, either directly or in their offspring, starting a new round of the iteration. The overall mechanism is similar to the problem-solving procedures of trial-and-error or generate-and-test: evolution can be seen as searching for the best solution for the problem of how to survive and reproduce by generating new trials, testing how well they perform, eliminating the failures, and retaining the successes.

It seems as if the Cosmos as a whole has goals, aka a ‘teleology’, that being 1) to survive, and beyond that 2) to improve, and beyond that to 3) proliferate. This UD goal is also a property of its subsystems, inanimate and animate.

UD may have a vague resemblance to the Dimensions of the NS-PAS schema in that self-perpetuation could conceivably correlate with 1-D Action, self-improvement could conceivably correlate with 2-D Inspiration, and self-proliferation could conceivably correlate with 3-D Expression:

The generalization made in “universal” Darwinism is to replace “organism” by any recognizable pattern, phenomenon, or system. The first requirement is that the pattern can “survive” (maintain, be retained) long enough or “reproduce” (replicate, be copied) sufficiently frequently so as not to disappear immediately. This is

the heredity component: the information in the pattern must be retained or passed on. The second requirement is that during survival and reproduction variation (small changes in the pattern) can occur [= Expression]. The final requirement is that there is a selective “preference” so that certain variants tend to survive or reproduce “better” than others [= Inspiration]. If these conditions are met, then, by the logic of natural selection, the pattern will evolve towards more adapted forms.

Examples of patterns that have been postulated to undergo variation and selection, and thus adaptation, are genes, ideas (memes), theories, technologies, neurons and their connections, words, computer programs, firms, antibodies, institutions, law and judicial systems, quantum states, and even whole universes.

Note that some of these phenomena consist of a conscious system, such as a human, intentionally evolving a subsystem. My preferred notion, elaborated throughout this *Natural Sequence* book, is that the Cosmos is itself a conscious system that is evolving, and its subsystems all the way down partake of that fundamental process.

This is not just my crank or crackpot idea:

History and development

Conceptually, “evolutionary theorizing about cultural, social, and economic phenomena” preceded Darwin, but was still lacking the concept of natural selection. Darwin himself, together with subsequent 19th-century thinkers such as Herbert Spencer [polymath], Thorstein Veblen [economist, sociologist], James Mark Baldwin [philosopher, psychologist], and William James [philosopher, psychologist, historian], was quick to apply the idea of selection to other domains, such as language, psychology, society, and culture....

Starting in the 1950s, Donald T. Campbell was one of the first and most influential authors to revive the tradition, and to formulate a generalized Darwinian algorithm directly applicable to phenomena outside of biology. In this, he was inspired by William Ross Ashby’s view of self-organization and intelligence as fundamental processes of selection. His aim was to explain the development of science and other forms of knowledge by focusing on the variation and selection of ideas and theories, thus laying the basis for the domain of evolutionary epistemology. In the 1990s, Campbell’s formulation of the mechanism of “blind-variation-and-selective-retention” (BVSr) was further developed and extended to other domains under the labels of “universal selection theory” or “universal selectionism” by his disciples Gary Cziko, Mark Bickhard, and Francis Heylighen.

As you will recall from reading elsewhere in this book, epistemology is the branch of philosophy that is concerned with the question of how it is that we know what we know. In the context of the thesis of this *Natural Sequence* book — namely that Tao is experiencing itself as if it were not itself — then Tao’s epistemology is the notion that the Cosmos is all about learning.

Richard Dawkins may have first coined the term “universal Darwinism” in 1983 to describe his conjecture that any possible life forms existing outside the solar system would evolve by natural selection just as they do on Earth. This conjecture was also presented in 1983 in a paper entitled “The Darwinian Dynamic” that dealt with the evolution of order in living systems and certain nonliving physical systems. It was suggested “that ‘life’, wherever it might exist in the universe, evolves according to the same dynamical law” termed the Darwinian dynamic. Henry Plotkin in his 1997 book on Darwin machines makes the link between universal Darwinism and Campbell’s evolutionary epistemology. Susan Blackmore, in her 1999 book *The Meme Machine*, devotes a chapter titled ‘Universal Darwinism’ to a discussion of the applicability of the Darwinian process to a wide range of scientific subject matters.

Order is the antithesis of disorder, or chaos, which is discussed in **Chapter X-x** Basically and briefly, the Cosmos as a whole appears to be a creative interaction of chaos and order. UD says the same thing about the Cosmos because evolving systems have both goals, to continue to exist as an integrity or identity, and a goal to learn about the ever-changing environment to which it must adapt or adjust in order to continue to exist and function. Chaos can enter into the process of UD in the component called “variation”. These can be random variations in a system that is subject to some chaos, or it can be intentional variations introduced into a system by a conscious agent as trial-and-error attempts to improve a system under the agent’s supervision. More is said about the interaction of “Agent and Arena” in a subsection by that name in **Chapter X-x.**

The philosopher of mind Daniel Dennett, in his 1995 book *Darwin’s Dangerous Idea*, developed the idea of a Darwinian process, involving variation, selection, and retention, as a generic algorithm that is substrate-neutral and could be applied to many fields of knowledge outside of biology. He described the idea of natural selection as a “universal acid” that cannot be contained in any vessel, as it seeps through the walls and spreads ever further, touching and transforming ever more domains....

In agreement with Dennett's prediction, over the past decades the Darwinian perspective has spread ever more widely, in particular across the social sciences as the foundation for numerous schools of study including memetics, evolutionary economics, evolutionary psychology, evolutionary anthropology, neural Darwinism, and evolutionary linguistics. Researchers have postulated Darwinian processes as operating at the foundations of physics, cosmology, and chemistry via the theories of quantum Darwinism, observation selection effects, and cosmological natural selection. Similar mechanisms are extensively applied in computer science in the domains of genetic algorithms and evolutionary computation, which develop solutions to complex problems via a process of variation and selection.

Author D. B. Kelley has formulated one of the most all-encompassing approaches to universal Darwinism. In his 2013 book *The Origin of Phenomena*, he holds that natural selection involves not the preservation of favored races in the struggle for life, as shown by Darwin, but the preservation of favored systems in contention for existence. The fundamental mechanism behind all such stability and evolution is therefore what Kelley calls "survival of the fittest systems". Because all systems are cyclical, the Darwinian processes of iteration, variation and selection are operative not only among species but among all natural phenomena both large-scale and small. Kelley thus maintains that, since the Big Bang especially, the universe has evolved from a highly chaotic state to one that is now highly ordered with many stable phenomena, naturally selected.

This UD notion is consistent with this *Cosmogony* book.

Examples of universal Darwinist theories

The following approaches can all be seen as exemplifying a generalization of Darwinian ideas outside of their original domain of biology. These "Darwinian extensions" can be grouped in two categories, depending on whether they discuss implications of biological (genetic) evolution in other disciplines (e.g. medicine or psychology), or discuss processes of variation and selection of entities other than genes (e.g. computer programs, firms or ideas). However, there is no strict separation possible, since most of these approaches (e.g. in sociology, psychology and linguistics) consider both genetic and non-genetic (e.g. cultural) aspects of evolution, as well as the interactions between them (see e.g. gene-culture coevolution).

[>https://en.wikipedia.org/wiki/Universal_Darwinism< — retrieved 28 June 2023]

The Wikipedia article continues with a list of UD applied to the domains listed previously, and others besides. Many other Wikipedia articles are dedicated to those domains; the reader is free to pursue those references.

This *Natural Sequence* book reviews some of those domains.

Gene-based Darwinian extensions

- Evolutionary psychology assumes that our emotions, preferences and cognitive mechanisms are the product of natural selection
- Evolutionary educational psychology applies evolutionary psychology to education
- Evolutionary developmental psychology applies evolutionary psychology to cognitive development
- Darwinian Happiness applies evolutionary psychology to understand the optimal conditions for human well-being
- Darwinian literary studies tries to understand the characters and plots of narrative on the basis of evolutionary psychology
- Evolutionary aesthetics applies evolutionary psychology to explain our sense of beauty, especially for landscapes and human bodies
- Evolutionary musicology applies evolutionary aesthetics to music
- Evolutionary anthropology studies the evolution of human beings
- Sociobiology proposes that social systems in animals and humans are the product of Darwinian biological evolution
- Human behavioral ecology investigates how human behavior has become adapted to its environment via variation and selection
- Evolutionary epistemology of mechanisms studies how our abilities to gather knowledge (perception, cognition) have evolved
- Evolutionary medicine investigates the origin of diseases by looking at the evolution both of the human body and of its parasites

- Paleolithic diet proposes that the most healthy nutrition is the one to which our hunter-gatherer ancestors have adapted over millions of years
- Paleolithic lifestyle generalizes the paleolithic diet to include exercise, behavior and exposure to the environment
- Molecular evolution studies evolution at the level of DNA, RNA and proteins
- Biosocial criminology studies crime using several different approaches that include genetics and evolutionary psychology
- Evolutionary linguistics studies the evolution of language, biologically as well as culturally

Other Darwinian extensions

- Quantum Darwinism sees the emergence of classical states in physics as a natural selection of the most stable quantum properties
- Cosmological natural selection hypothesizes that universes reproduce and are selected for having fundamental constants that maximize “fitness”
- Complex adaptive systems models the dynamics of complex systems in part on the basis of the variation and selection of its components
- Evolutionary computation is a Darwinian approach to the generation of adapted computer programs
- Genetic algorithms, a subset of evolutionary computation, models variation by “genetic” operators (mutation and recombination)
- Evolutionary robotics applies Darwinian algorithms to the design of autonomous robots
- Artificial life uses Darwinian algorithms to let organism-like computer agents evolve in a software simulation
- Evolutionary art uses variation and selection to produce works of art
- Evolutionary music does the same for works of music
- Clonal selection theory sees the creation of adapted antibodies in the immune system as a process of variation and selection
- Neural Darwinism proposes that neurons and their synapses are selectively pruned during brain development
- Evolutionary epistemology of theories assumes that scientific theories develop through variation and selection
- Memetics is a theory of the variation, transmission, and selection of cultural items, such as ideas, fashions, and traditions
- Dual inheritance theory a framework for cultural evolution developed largely independently of memetics
- Cultural selection theory is a theory of cultural evolution related to memetics
- Cultural materialism is an anthropological approach that contends that the physical world impacts and sets constraints on human behavior.
- Environmental determinism is a social science theory that proposes that it is the environment that ultimately determines human culture.
- Evolutionary economics studies the variation and selection of economic phenomena, such as commodities, technologies, institutions and organizations.
- Evolutionary ethics investigates the origin of morality, and uses Darwinian foundations to formulate ethical values
- Big History is the science-based narrative integrating the history of the universe, earth, life, and humanity. Scholars consider Universal Darwinism to be a possible unifying theme for the discipline.

The UD conceptual framework has such a comprehensive explanatory power that it has a reasonable claim to be a universal principle at the bedrock of the function of the Cosmos.

Books

- Campbell, John. *Universal Darwinism: the path of knowledge.*
- Czikó, Gary. *Without Miracles: Universal Selection Theory and the Second Darwinian Revolution.*
- Hodgson, Geoffrey Martin; Knudsen, Thorbjorn. *Darwin’s Conjecture: The Search for General Principles of Social and Economic Evolution.*

- Kelley, D. B. *The Origin of Everything via Universal Selection, or the Preservation of Favored Systems in Contention for Existence.*
- Plotkin, Henry. *Evolutionary Worlds without End.*
- Plotkin, Henry. *Darwin Machines and the Nature of Knowledge.*
- Dennett, Daniel. *Darwin's Dangerous Idea.*
- *On the Roles and Functions of Evolving Systems*

Increasing Functional Information: a New Law of Nature

The original paper that presented the notion that science had overlooked a law of nature, every bit as fundamental as gravity, can be found here: ><https://www.pnas.org/doi/abs/10.1073/pnas.2310223120><. When the paper was published in late 2023 it made such a splash that numerous other science news websites had something to say about it:

<https://www.sci.news/physics/law-of-increasing-functional-information-12369.html>

<https://phys.org/news/2023-10-scientists-philosophers-nature-evolutionary-law.html>

<https://neurosciencenews.com/evolution-law-neuroscience-24950/>

<https://as.cornell.edu/news/natures-missing-evolutionary-law-identified>

<https://www.sciencealert.com/missing-law-of-nature-found-that-describes-the-way-all-things-evolve>

<https://www.nature.com/articles/423689a>

<https://www.axios.com/2023/10/22/evolution-complexity-law>

Basically and briefly, scientists and philosophers have identified the “Law of Increasing Functional Information” as nature’s missing *evolutionary* law. This law states that **complex natural systems evolve to states of greater [1] patterning, [2] diversity, and [3] complexity, regardless of whether the system is living or nonliving.** Only a small fraction of all these configurations survive in a process called “selection for function”. This law is not limited to life on Earth, but also occurs in other massively complex systems such as planets, stars, atoms, minerals, and more.

Simply stated, as with other “laws” or “principles” of the Cosmos, one of its being/doing functions is to learn about the unknown = self and not-self and other-self ...

Summary and Conclusion to “Living and Learning”

Basically and briefly, the logos of the Cosmos is experiencing and experimenting all the time, evolving via optimizing variables and parameters for surviving and thriving.

The point that is made in this chapter was that one cannot really understand physics and chemistry without biology and psychology as well as *vice versa*

physis Greek letter phi, *psyche* Greek letter psi; look for phi-psy websites





Chapter I-x

ITS ABOUT TIME

[[These sections might not merit a chapter of their own. The alternative is to add these sections to (some) other chapter. Somewhere in this book or the Cosmology book maybe discuss that some cosmologists regard space as fundamentally objective (Block Universe) and time as subjective, whereas others regard time as fundamental and space as emergent or derivative.]]

As noted in **previous/other** chapters of this Introduction, the “Process/Aspect System” (PAS) is its name in terms of psychology, but in terms of physics it can otherwise be called the “Time/Space System”, because “Processes” are the names for what happens in “Time” and “Aspects” are the names for what exists in “Space”. My book *The Tao of Cosmology* emphasizes a discussion of the structure of the Cosmos in terms of space, whereas this *Tao of Cosmogony* book emphasizes a discussion of the structure of the Cosmos in terms of time.

My axiomatic text, Chapter 42 of the Tao Te Ching, has the notion of time as its theme:

Tao produced the One; the One produced the Two, the Two produced the Three, the Three produced All things.

All things carry the Yin and embrace the Yang, and through the blending of the Chi they achieve harmony.

Recall that I refer to this as Tao’s Template (TT). The underlined words are all process words, processes being functions of the time component of the orderly structure of the Cosmos as distinct from the space component.

It is not as if others than myself have not already given a lot of thought to the nature and structure of time as we experience it; their work is summarized in various Wi, one on so-called “process philosophy” and another on so-called “process theology”; these theories about the nature of time are reviewed in this chapter. **Specific instantiations of the seven Processes are discussed in other Parts of this book.**

Dynamism

[[With some thought, I should be able to make something out of this.]]

Dynamism is a general name for a group of philosophical views concerning the nature of matter. However different they may be in other respects, all these views agree in making matter consist essentially of simple and indivisible units, [space-like being-noun] substances, or [time-like doing-verb] forces. Dynamism is sometimes used to denote systems that admit not only matter and [space-like being-noun] extension, but also [time-like doing-verb] determinations, tendencies, and forces intrinsic and essential to matter. More properly, however, it means exclusive systems that do away with the dualism of matter and force by reducing the former to the latter. The word was coined by Thomas Carlyle, who contrasted dynamism with mechanism.

The way that I understand the philosophical view of the “nature of matter” within the Tao’s Template ontology is to combine Spencer Brown’s notion in *The Laws of Form* that via the Larsonian physics notion of the Oneness of motion

Leibniz’s formulation

Dynamism is the metaphysics of Gottfried Leibniz (1646–1716) that reconciles hylomorphic substance theory with mechanistic atomism by way of a pre-established harmony, and which was later developed by Christian Wolff (1679–1754) as a metaphysical cosmology. The major thesis for Leibniz follows as a consequences of his monad, that: “the nature of every substance carries a general expression of the whole universe. [The monad provides] the concept of an individual substance that contains ... all its phenomena, such that nothing can happen to substance that is not generated from its own ground ... but in conformity to what happens to

another"... Whereby Leibniz "counters the tendency inherent in Cartesian and Spinozistic rationalism toward an "isolationist" interpretation of the ontological independence of substance... Leibniz's account of substantial force aims to furnish the complete metaphysical groundwork for a science of dynamics".

In the opening paragraph of *Specimen Dynamicum* (1692), Leibniz begins by clarifying his intention to supersede the Cartesian account of corporeal substance by asserting the priority of [time-like] force over [space-like extension... This allows him to affirm that the Aristotelian principle of form is needed for the philosophical account of nature. He does this in view of four main facets of his doctrine of force: (1) the characterization of force (*vis naturae*) as that which is constitutive of substance itself; (2) the concern to sharply distinguish this concept of force from the Scholastic notion of *potentia*; (3) the correlative interpretation of force in terms of *conatus* or *nisus*, i.e., as something between mere potency and completed act; and (4) the affirmation of the fundamental correctness of Aristotle's own concept of form as *entelechy*, and Leibniz's corresponding attempt to make this concept fully intelligible.

By superseding the Cartesian concept of corporeal substance and by advocating the Aristotelian principle of form, Leibniz sets the stage for an interpretation of material being in terms different from those of inert matter and externally communicated motion. Leibniz thus retains what he takes to be the rational core of the Aristotelian conception of substance. In effect, Leibniz's theory of force involves the rehabilitation and reconstruction of the matter-form composite as the pivotal concept of the metaphysics of corporeal nature. Leibniz's concern to revive the Aristotelian explanatory scheme by means of the concept of substantial force underlies his description of the structural and material features of the aggregation of monads and corporeal interaction. He holds that the following four ontological expressions of substantial force constitute the nature of a complete corporeal substance and supply the grounds of all corporeal interaction: primitive active force, primitive passive force, derivative active force, and derivative passive force.

The analysis of primitive active force (*vis activa primitiva*) yields the fundamental metaphysical principle that substance perdures through all processes of phenomenally manifested corporeal interaction [and] the basis of the identity of any particular body through the alterations that it undergoes as the result of its interactions with other bodies. It also provides for the continuity and conservation of action within corporeal nature as a whole. Primitive passive force (*vis passiva primitiva*) is the ground of corporeal extension, by which a body appears as material mass [and capacity] to resist changes in its state of motion and to hinder penetration by other bodies... Derivative active force (*vis activa derivativa*) results from the modification or limitation of primitive force... that takes the form of the phenomenally manifested conflict of physical bodies... subject to distribution by virtue of this conflict. It therefore does not perdure in any single body during the course of its interaction with other corporeal substances. Since it is comprehensible as the internal action [when] acted upon by some other body or bodies, [with] the capacity to resist... penetration and changes in their states of motion. Derivative passive force (*vis passiva derivativa*) is the purely quantitative modification of primitive passive force [known] in terms of the measures of any material mass's resistance to penetration and change in its state of motion.

Leibniz insists that primitive force pertains solely to completely general causes. As a strictly metaphysical principle, it is the object of purely rational apprehension. It is thus not linked immediately to the actual laws of corporeal interaction in the phenomenal realm. On the other hand, derivative force does pertain directly to such observable interaction. Its analysis leads to the systematic formulation of the fundamental laws of corporeal dynamics. These are laws of action that are known not only by reason, but are also proved by the evidence of the senses. [Jeffrey Edwards, "Leibniz's Aristotelian Dynamism and the Idea of a Transition from Metaphysics to Corporeal Nature" in *Substance, Force, and the Possibility of Knowledge: On Kant's Philosophy of Material Nature*]

20th century and contemporary use

Elements of Dynamism can be found in the works of Henri Bergson, and in more contemporary works, such as the process philosophy of Alfred North Whitehead in terms of relations, as well as the systems theory of Ludwig von Bertalanffy and William Ross Ashby. The Basque philosopher Xavier Zubiri, most notably in his works, "On Essence" and "Dynamic Structure of Reality" details of several dynamisms inherent in the universe, beginning with variation, then onto alteration, selfhood, self-possession, living-together, onto Dynamism as a Mode of Being-in-

the-world. It is a response to the Philosophy of Spirit via Hegel in addition to reductionists and Heidegger.[5] This concept also has resonances with the Object-oriented ontology and Speculative Realism schools of philosophy. [[https://en.wikipedia.org/wiki/Dynamism_\(metaphysics\)<—retrieved 24 June 2023](https://en.wikipedia.org/wiki/Dynamism_(metaphysics)<—retrieved%2024%20June%202023%5D)]

① Process Philosophy

Recall that, according to the ontology of Tao's Template ("The Tao produced the One; the One Produced the Two"), space and time are equally basic, they being a primordial instantiations of Twoness. Contrary to that notion, process philosophy proposes that the abstract notion of time is more fundamental than the abstract notion of space:

PROCESS PHILOSOPHY

Process philosophy, also ontology of becoming, or processism, is an approach in philosophy that identifies processes, changes, or shifting relationships as the only real experience of everyday living. In opposition to the classical view of change as illusory (as argued by [ancient Greek philosopher] Parmenides) or accidental (as argued by [ancient Greek philosopher] Aristotle), process philosophy posits transient occasions of change or becoming as the only fundamental things of the ordinary everyday real world.

If I were to recast that statement in some terms from Tao's Template, I would say that "ontology" is the word that philosophers have given to the study of what is primary (One), as distinct from what is secondary (Two), which is to say that the secondary is derived from the primary. In process philosophy, time is primary and space is secondary. Some ancient Greek philosophers had the opposite notion, namely that space is primary and time is secondary:

Since the time of Plato and Aristotle, classical ontology has posited ordinary world reality as constituted of enduring [space-like] substances, to which [time-like] transient processes are ontologically subordinate, if they are not denied. If Socrates changes, becoming sick, Socrates is still the same (the substance of Socrates being the same), and change (his sickness) only glides over his substance: change is accidental, and devoid of primary reality, whereas the substance is essential.

The reason that I refer to "enduring substance" as "space-like" is because, in our "ordinary everyday real world" experience, space seems to exist as an abstract thing all at once, whereas time seems to function as an abstract thing that does not last:

In physics, Ilya Prigogine distinguishes between the "physics of [space-like] being" and the "physics of [time-like] becoming". Process philosophy covers not just scientific intuitions and experiences, but can be used as a conceptual bridge to facilitate discussions among religion, philosophy, and science.

As with process philosophy, my books are also intended to describe some of the "conceptual bridges between religion, philosophy, and science"; the basic notion being that outer and inner, space and time realms mirror each other. So far as I know, process philosophy does not propose that particular notion, but it proposes other notions.

The Wikipedia article continues:

History

In ancient Greek thought, Heraclitus proclaimed that the basic [primary] nature of all things is change [over time]. The quotation from Heraclitus appears in Plato's [book] *Cratylus* twice; in 401d as:

"All entities move and nothing remains still"

and in 402a as:

"Everything changes and nothing remains still ... and ... you cannot step twice into the same stream"

Heraclitus considered fire as the most fundamental element:

"All things are an interchange for fire, and fire for all things, just like [the exchange of] goods for gold and gold for goods."

The following is an interpretation of Heraclitus's concepts into modern terms by Nicholas Rescher:

"...reality is not a constellation of things at all, but one of processes. The fundamental "stuff" of the world is not material substance, but volatile flux, namely "fire", and all things are versions thereof (*puros tropai*). Process is fundamental: the river is not an object, but a continuing flow; the sun is not a thing, but an enduring fire. Everything is a matter of process, of activity, of change (*panta rhei*)."

An early expression of this viewpoint is in Heraclitus's fragments. He posits strife (conflict), as the underlying basis of all reality defined by change. The balance and opposition in strife were the foundations of change and stability in the flux of existence.

Heraclitus's notion of "interchange, strife, conflict, balance, opposition" equates with the notion, in Tao's Template, of yin and yang doing their harmonizing process: "... through the blending of the Chi they achieve harmony".

The way I understand Heraclitus's notion, sometimes abbreviated as "all is flux", is the way that Dewey Larson (refer to [Chapter Xx In Part X](#)) taught me to understand it, in a book named *Nothing But Motion*. Basically and briefly, Larson's notion of the creation and evolution of the universe is entirely consistent with Tao's Template, as follows: Tao = at Rest > Tao produced the One = uniform Motion with respect to Rest > the One produced the Two = Motion has two reciprocal components, space and time > Two produced the Three = three orthogonal or perpendicular geometric dimensions of space and time. (0) Rest and (1) Motion and (2) Space/Time and (3) Dimensions constitute the most primitive abstract ontology or fundamental organizing principles or basic conceptual framework that we understand in our minds and that underlies All things = concrete and abstract phenomena that we perceive with our science and philosophy. According to Larson, when there is some variation, deviation, distortion in the ratios and relationships of these ontological abstractions, only then do the phenomena become "concrete", meaning that they appear to our physical senses as various forms of externalities such as matter and energy and fields. In the Process/Aspect System, the external objective physical universe is said to exist and function in space/time, whereas the internal subjective psychological universe is said to function and exist in time/space, and it is said that internal phenomena appear as thoughts and emotions and behavioral motivations and such. In the Process/Aspect System, physics is about external Being/Doing, and psychology is about internal Doing/Being; the two mirror each other.

In Heraclitean philosophy it was said that time (becoming, verb) is more fundamental than space, whereas in Democritean philosophy (another pre-Socratic Greek: ><https://en.wikipedia.org/wiki/Democritus><) it was said that "atoms in the void" were the fundamental ontology. Thus, according to Democritus, space (being, noun) is more fundamental than time. Unlike both of those ancient Greek philosophers, it is axiomatic in my Process/Aspect System framework that space and time are on an equal ontological footing, neither being more fundamental or primitive than the other: simply stated, the One produced the Two. Perhaps the reason that some philosophers and cosmologists perceive time as more fundamental than space is because, in the mainstream physics community, time is usually regarded as one-dimensional and space as three-dimensional. When one understands that time, as well as space, is three-dimensional — as Larson and some other non-mainstream physicists do — then we see that space and time look identical in every way from the perspective of the One that produced the Two. The notion that time is three-dimensional is discussed at length in my book *The Tao of Cosmology*.

After a detour into modern European philosophers Hegel, Nietzsche, and Kierkegaard — irrelevant to the discussion here — the Wikipedia article continues:

Twentieth century

In the early twentieth century, the philosophy of mathematics was undertaken to develop mathematics as an airtight, axiomatic system in which every truth could be derived logically from a set of axioms [unproven but self-evident assumptions, postulates]. In the foundations of mathematics, this project is variously understood as logicism or as part of the formalist program of David Hilbert. Alfred North Whitehead and Bertrand Russell attempted to complete, or at least facilitate, this program with their seminal book *Principia Mathematica*, which purported to build a logically consistent set theory on which to found mathematics. After this, Whitehead extended his interest to natural science, which he held needed a deeper philosophical basis. He intuited that natural science was struggling to overcome a traditional ontology of timeless material substances that does not suit natural phenomena. According to Whitehead, material is more properly understood as 'process'. In 1929, he produced the most famous work of process philosophy, *Process and Reality*, continuing the work begun by Hegel but describing a more complex and fluid dynamic ontology.

The work of Hegel is discussed in [Chapter X-x](#), "Thesis + Antithesis = Synthesis". Basically and briefly, Hegel and some of his contemporary philosophers had the notion that [history \[is that all?\]](#) was driven forward by the process of resolving complementary or "dialectic" notions. Whitehead [extended](#) that notion to time itself. The Tao's Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix embody those notions in their structural framework.

The Wikipedia article continues:

Process thought describes truth as [time-like] “movement” in and through [space-like] substance (Hegelian truth), rather than substances as fixed concepts or “things” (Aristotelian truth). Since Whitehead, process thought is distinguished from Hegel in that it describes entities that arise or coalesce in becoming, rather than being simply dialectically [via opposition] determined from prior posited determinates. These entities are referred to as complexes of occasions of experience. It is also distinguished in being not necessarily conflictual or oppositional in operation. Process may be integrative, destructive, or both together, allowing for aspects of interdependence, influence, and confluence, and addressing coherence in universal as well as particular developments, i.e., those aspects not befitting Hegel’s system. Additionally, instances of determinate occasions of experience, while always ephemeral, are nonetheless seen as important to define the type and continuity of those occasions of experience that flow from or relate to them.

The Process/Aspect System matrix proposes seven Processes, three pairs of complementary Processes and one Process that is the gestalt of the six. Thereby it also goes beyond Hegel, and even beyond Whitehead, in that it specifies the nature of three fundamental dimensions of ‘theses’ and ‘antitheses’ and one dimension of overall ‘synthesis’. These seven Processes all work and play during the progression of time, sometimes dialectically and sometimes not.

The Wikipedia article continues:

Whitehead’s Process and Reality

Alfred North Whitehead began teaching and writing on process and metaphysics when he joined Harvard University in 1924. In his book *Science and the Modern World* (1925), Whitehead noted that the human intuitions and experiences of science, aesthetics, ethics, and religion influence the worldview of a community, but that in the last several centuries science dominates Western culture. Whitehead sought a holistic, comprehensive cosmology that provides a systematic descriptive theory of the world which can be used for the diverse human intuitions gained through ethical, aesthetic, religious, and scientific experiences, and not just the scientific. Whitehead’s influences were not restricted to philosophers or physicists or mathematicians. He was influenced by the French philosopher Henri Bergson (1859–1941), whom he credits along with William James and John Dewey in the preface to *Process and Reality*.

My aspiration for the Tao’s Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix is that they can serve the same function that Whitehead sought for his process theory. I am no Whitehead or Bergson or James, but I am a humble messenger of a grand synthesis of scientific and philosophical thought, the Tao’s Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix. My claim is that it “stands on the shoulders” of other giant schemas, such as those of Whitehead and Bergson and James. *[[I might or might not review the work of those giants in this or another book. If I do, refer to chapter and verse here.]]*

The Wikipedia article continues:

Process metaphysics

The process metaphysics elaborated in *Process and Reality* posits an ontology which is based on the two kinds of existence of an entity, that of actual entity and that of abstract entity or abstraction, also called ‘object’.

[>https://en.wikipedia.org/wiki/Process_philosophy< — retrieved 30 May 2023]

It is also axiomatic in the Tao’s Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix that every complete entity or “object” consists of two poles, called “Ordinal” and “Cardinal”, equating with Whitehead’s “actual” and “abstract” respectively.

The Wikipedia article continues to describe process philosophy in more detail, but it did not elicit further thoughts from me, so I do not quote it and add my commentary.

[[At some point I might want to revisit Process Theory as presented in some exposition other than Wikipedia that I can make more sense of, if it appears to elucidate the TT-NS-PAS framework.]]

① Process Theology

As we have seen previously, the word “Tao” means “way” in the Chinese language, and that in itself implies space and time, being and doing, noun and verb. Tao is somewhat equivalent to the word “God” in the English language, but Tao does not have the anthropomorphic baggage that the Western conceptualization of God has. In the Western world, the study of God is called Theology, a word derived from the Latin language

for a deity, *theos*. The study of Tao/ God/Theos in terms of Its relationship to time is found in so-called “Process Theology”. Portions of the Wikipedia article on process theology relevant to the Tao’s Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix are quoted and commented below.

PROCESS THEOLOGY

Process theology is a type of theology developed from Alfred North Whitehead’s (1861–1947) process philosophy, but most notably by Charles Hartshorne (1897–2000), John B. Cobb (b. 1925), and Eugene H. Peters (1929-1983). Process theology and process philosophy are collectively referred to as “process thought”.

For both Whitehead and Hartshorne, it is an essential attribute of God to affect and be affected by temporal processes, contrary to the forms of theism that hold God to be in all respects non-temporal (eternal), unchanging (immutable), and unaffected by the world (impassible). Process theology does not deny that God is in some respects eternal (will never die), immutable (in the sense that God is unchangingly good), and impassible (in the sense that God’s eternal aspect is unaffected by actuality), but it contradicts the classical view by insisting that God is in some respects temporal, mutable, and passible.

Various notions about the nature of the deity that are merely hinted at in that quoted paragraph are elaborated in more detail in another [chapter, “Theological Considerations”, and in other sections of other chapters, such as “Immanence + Transcendence = Tao”](#). Basically and briefly, Tao/God/Theos is both transcendent — meaning beyond temporal constraints or distinctions (eternal, immutable, impassible) — and also immanent — meaning subject to temporal constraints or distinctions (temporal, mutable, passible). This *Cosmogony* book elaborates on instantiations of the seven fundamental time-like processes that function within the immanent deity, whereas the *Cosmology* book elaborates on instantiations of the fundamental space-like aspects that exist within the immanent deity.

The Wikipedia article continues:

According to Cobb, “process theology may refer to all forms of theology that emphasize event, occurrence, or becoming over substance. In this sense theology influenced by G. W. F. Hegel is process theology just as much as that influenced by Whitehead. This use of the term calls attention to affinities between these otherwise quite different traditions.” Also Pierre Teilhard de Chardin can be included among process theologians, even if they are generally understood as referring to the Whiteheadian/Hartshornean school, where there continue to be ongoing debates within the field on the nature of God, the relationship of God and the world, and immortality.

Various notions about the nature of the deity that are merely hinted at in that quoted paragraph are elaborated in more detail in [other sections of other chapters, such as “Being + Doing = Existence”](#). Basically and briefly, in philosophy, “substance” is the term applied to fundamental Being, which is space-like in that it exists eternally, whereas “events, occurrences, becoming” are terms applied to fundamental Doing, which is time-like in that it refers to changes in substances. It is axiomatic in the Tao’s Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix that Being and Doing are equal in every way; neither is more fundamental. What is more fundamental than both of them is the notion of Existence as distinct from the notion of Nonexistence.

The Wikipedia article continues:

History

Various theological and philosophical aspects have been expanded and developed by Charles Hartshorne (1897–2000), John B. Cobb, Eugene H. Peters, and David Ray Griffin. A characteristic of process theology each of these thinkers shared was a rejection of metaphysics that privilege “being” over “becoming”, particularly those of Aristotle and Thomas Aquinas. Hartshorne was deeply influenced by French philosopher Jules Lequier and by Swiss philosopher Charles Secrétan who were probably the first ones to claim that in God liberty of becoming [time-like Doing, verb] is above his substantiality [space-like Being, noun].

As I said in my previous comment, as with Process Theology, the Tao’s Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix do not privilege Being over Doing.

God and the World relationship

Whitehead’s classical statement is a set of antithetical statements that attempt to avoid self-contradiction by shifting them from a set of oppositions into a contrast:

It is as true to say that God is permanent and the World fluent, as that the World is permanent and God is fluent.

It is as true to say that God is one and the World many, as that the World is one and God many.

It is as true to say that, in comparison with the World, God is actual eminently, as that, in comparison with God, the World is actual eminently.

It is as true to say that the World is immanent in God, as that God is immanent in the World.

It is as true to say that God transcends the World, as that the World transcends God.

It is as true to say that God creates the World, as that the World creates God.

These contrasting statements found in process theology are entirely congruent with the Tao's Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix, particularly the "Taijitu Tango Principle"; refer to the **chapter or section** by that name. Basically and briefly, yin defines yang and yang defines yin as the figure and ground for each other; the primordial dichotomy ("One produced the Two") does not privilege one half over the other half. My chapter "Yin + Yang = Chi" is my catalog of "antithetical statements". However, unlike process theology, in that chapter you will see that the Tao's Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix do not "avoid self-contradiction". Rather, it embraces self-contradiction with the notion that "paradox" is fundamental; refer to the chapter by that name. Basically and briefly, Tao/God/Theos experiences itself *as if* it were not itself.

The Wikipedia article continues:

Themes

God is not omnipotent in the sense of being coercive. The divine has a power of persuasion rather than coercion. Process theologians interpret the classical doctrine of omnipotence as involving force, and suggest instead a forbearance in divine power. "Persuasion" in the causal sense means that God does not exert unilateral control.

Likewise in the Tao's Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix, "power", "control" "persuasion", and "force" are distributed throughout the system. Refer to the chapter "Passive + Active = Action" for more discussion about that. Basically and briefly, passivity and activity are on a reciprocal spectrum, meaning that, the more of one the less of the other and vice versa — as is the case with all complementary or conjugate pairs. The Cosmic System as a whole explores various ratios between the two extremes in its various subsystems. Passive and active processes work *against* each other during the Ordinal phase ("the One produced the Two") of the septenarian cycle of a subsystem, but they work *with* each other during the Cardinal Phase (the Two produces the One) of the septenarian cycle of a subsystem. Passive and active processes work together toward ultimate balance in the transformation of the Cosmic System as a whole during the entire time cycle of a Cosmos. In other words, over the course of time, the subsystems undo the primordial dichotomy.

The Wikipedia article continues:

Reality is not made up of material substances that endure through time, but serially-ordered events, which are experiential in nature. These events have both a [objective] physical and [subjective] mental aspect. All experience (male, female, atomic, and botanical) is important and contributes to the ongoing and interrelated process of reality.

Refer to **Chapter X-x, "Subjectivity + Objectivity = Transjectivity"** for further discussion of that. Basically and briefly, the notion with this physical/mental dichotomy is that all existence in space and function in time depends on point-of-view. From the transjective point of view of Tao, physical and mental are on an equal ontological footing, and space and time are on an equal ontological footing, and objectivity and subjectivity are on an equal ontological footing. However, a fragment of Tao, an individual self, has a point-of-view or perspective that makes space and time appear to be asymmetrical, that makes objective and subjective realms appear to be asymmetrical, and that makes physical and mental appear to be asymmetrical.

The universe is characterized by process and change carried out by the agents of free will. Self-determination characterizes everything in the universe, not just human beings. God cannot totally control any series of events or any individual, but God influences the creaturely exercise of this universal free will by offering possibilities. To say it another way, God has a will in everything, but not everything that occurs is God's will.

God [Tao] contains [produces] the universe [All] but is not identical with it (panentheism, not pantheism or pandeism). Some also call this "theocosmocentrism" to emphasize that God has always been related to some world or another.

Because God [immanent Tao, the One] interacts with the changing universe [All], God is changeable (that is to say, God is affected by the actions that take place in the universe) over the course of time. However, the abstract elements of God (goodness, wisdom, etc.) remain eternally solid.

Dipolar theism is the idea that God has both a changing aspect (God's existence as a Living God) and an unchanging aspect (God's eternal essence). [https://en.wikipedia.org/wiki/Process_theology< — retrieved 30 May 2023]

Refer to **Chapter X-x**, "**Transcendence + Immanence = Deity**", for further discussion of that notion.

Thomas Nail: Fundamental Motion

[[This section needs considerable editing and commenting in order to be worth inclusion in this chapter/book. Perhaps there is a more systematic presentation of Nail's notions to be found and used. Otherwise, it will take me a lot of work to make it sensible to the typical reader.]]

While researching Whiteheadian process theory, I found someone who extended that notion:

Thomas Nail is a Professor of Philosophy at The University of Denver. Nail received a B.A in philosophy from the University of North Texas, and a Ph.D. from the University of Oregon.... Nail has written on the philosophy of movement, which he defines as "the analysis of diverse phenomena across social, aesthetic, scientific, and ontological domains from the primary perspective of motion." He argues that the philosophy of motion is a unique kind of philosophical methodology. It is related to process philosophy but is distinct from Whitehead's discontinuous "occasions" and from Bergson's vitalism. "The difference between simply describing the motion of things, which almost every philosopher and even layperson has done, and the philosophy of movement is the degree to which movement plays an analytically primary role in the description."

The philosophy of movement studies patterns of motion as they flow and intersect with themselves to create folds or kinetic cycles and junction points.

From the perspective of movement, according to Nail, all seemingly discrete bodies are the result of moving flows of matter that continually fold themselves up in various patterns or what he calls "fields of motion." Nail's philosophy of movement provides a conceptual framework for the study of these patterns of motion through history. [https://en.wikipedia.org/wiki/Thomas_Nail< — retrieved 10 June 2023]

So what does that mean and how does it elucidate the Tao's Template ontology? An interview of Nail by Christine Rawls was published in a blog of the American Psychological Association:

In your work on Lucretius [ancient Roman philosopher in the Epicurean tradition], you write, "Just as the corpora create space and time through motion, so they also create weight by their motion" (190)? Can you elaborate a little on this? What is time for Lucretius in your reading and why are we, rightfully, returning to reading his theories? You also write, "Time, for Lucretius, is nothing apart from the relative motion, rest, and sensation of things..." (111) This page of your work reminds me of Spinoza's Ethics. I understand the connection to some of your work on Being and Motion, and I have yet to unpack it, reading slowly, but it has serious overlaps with Spinoza's dynamic epistemology and ontology of motion. They seem to be friends.

One of the things that is so interesting to me about Lucretius is that he is one of the few in the Western tradition that is willing to say, "matter moves" without needing any higher explanation for its motion. There is no trace of transcendence whatsoever in his work. For Lucretius, the indeterminate movement of matter does not occur in space and time (which would precede motion) but produces space and time itself. Movement is thus not movement from point A to point B (points in space traversed over time) — it is the process that produces the line and points AB in the first place. If this sounds Bergsonian it is because Lucretius' was Bergson's first intellectual love. Bergson's first book was a line-by-line Greek and Latin commentary on Lucretius' great poem *De Rerum Natura* (*The Nature of Things*). If Lucretius also sounds a bit like Spinoza it is because Spinoza got his materialism from *De Rerum Natura*. The first sections of book two of Spinoza's [book] *Ethics* are basically just a summary of Lucretius.

The difference, however, is that Bergson and Spinoza are vitalists: Bergson has an *élan vital* and Spinoza has his *conatus* — neither of which have any equivalent in Lucretius. For Lucretius, matter moves without any exterior cause or immanent life force, energy, or power. In Bergson and Spinoza you have a vitalist materialism that runs through to Deleuze and into contemporary vitalist new materialism. In Lucretius, however, you find a distinct kinetic materialism where nature is just matter in motion—that's it. So yes, they are all friends in a sense but with this important difference.

Neo-vitalists might say to this point: “yes, but force and vitality do not transcend matter as they do in early modern vitalism. They are immanent to matter. Movement is just another word for vital energy.” My reply would be: “if vital energy is strictly identical to movement than why did Spinoza, Bergson, Nietzsche, Deleuze, and others need to add vitalistic terms at all?” What work does “vitality” do for our materialism that was not already in Lucretius’ non-vitalistic materialism? At the very least vitalistic language adds nothing to immanent materialism in my opinion. At the most, however, it takes a metaphysically burdened and political problematic term like “life,” which is such a tiny fraction of the universe and has been used to justify so much violence against non-life and then uses it to give matter back its agency — as if matter needed “life” to have agency. The universe is not just vital and creative; it is also destructive and non-living (in fact it is mostly this). But then if you want a concept of vitality without tying it to life (and all its problems) and without any suggestion of being ontologically distinct from matter, then why even use this term in the first place? Most of the criticisms of new materialism have been aimed at this vitalist version of it. Its too bad. I hope we do not have to throw the baby out with the bathwater. Vitalism is unnecessary and even potentially dangerous for new materialism and so I am on the side of Karen Barad and Mel Chen, who have explicitly (although usually in footnotes) rejected any form of vitalism in their versions of new materialism.

There is a lot to unpack there, but I will not do it thoroughly here: concerns raised in that paragraph are discussed at length in various sections of **Chapter X-x**, “Yin + Yang = Chi”. Basically and briefly, in the Tao's Template ontology, “Vitalism” or “Life-Force” is an “ontological primitive”, meaning that it is one of the seven Processes, more specifically it is one of the three abstract or Cardinal Processes, and even more specifically it is the Cardinal Action or Origination Process. It does not “transcends matter” in that it is an energy or a force that moves collections of matter contrary to the Second Law of Thermodynamics, aka entropy, aka the universe is becoming more disordered, aka the universe is dying. Entropy/Syntropy is another name for the Ordinal Action or Termination Process, whereas Syntropy/Entropy is another name for the Cardinal Action or Origination Process.

Time, like force, for me, is another historical instance of philosophers and scientists trying to explain why matter moves. Force was popular in the early modern period and time was popular in the 19th and 20th centuries. Most ontologies and theories of time treat time as the ultimate *a priori* of nature (or of human existence). Historically, this was supported by Einstein’s theory of general relativity in the 20th century, even though there were still exceptional “singularities” (in black holes for example) left unexplained by that theory. Matter, in general relativity, moves across a pre-existing curved spacetime. If quantum theory is correct, however, there should be a quantum theory of gravity (space and time) in which spacetime emerges from the laws of quantum mechanics. In particular, how energetic vibrations below the level of space and time produce space and time like ripples on the surface of a pond.

Recall that in the Tao's Template ontology, Tao > One > Two > Three > All. Translated into physics terminology, the base ontological primitive is the notion of “rest” (Taoness), the first derivative of that notion is the notion of “motion” with respect to the notion of rest (Oneness), the second derivative of that notion is the notion of the reciprocal relationship of space and time to each other (Twoness), and the third derivative of that is the notion that space and time exist and function in a geometrical configuration of orthogonality or perpendicularity (Threeness). Those notions are all abstract, in the “mind of God”, so to speak. In the “body of God”, so to speak, the concrete manifestations (matter/energy, particles/waves, force fields, and so on) appear when there is a “break” in the “symmetry” of the abstract relationships. Matter is therefore a derivative

This is the present assumption of most contemporary theoretical physics — even if the formalisms of “quantum gravity” have yet to be experimentally verified. The race is on to prove them. Lucretius was already the precursor of this idea two thousand years ago: matter produces space and time through its indeterminate [random, stochastic] motion. In other words, I think we have finally come back to Lucretius. Philosophers need to keep up with what is happening in the sciences (and scientists should keep up with poetry, like Lucretius). My thought is of course that quantum gravity is possibility an indication that it is time to shift focus from ontologies of time to ontologies of motion. Its time to consider a new perspective. This is not because I think “being is motion” forever and all time, but that historically, this is our present limit of thought. I am not a dogmatist or metaphysician. If we discover something in the universe that is completely static [at rest], I am open to being wrong. This is what I mean by “historical ontology”. As things change we rework our ontologies of the present from within the present. Ontology is a performative practice — this is a key thesis in [my book] *Being and Motion*.

If I understand him correctly, Nail is saying that “matter in motion” is his proposed ontological primitive, and that space/time is a derivative of that. To me this seems like merely a variation on the physicalist

materialist reductionist narrative that is a common metaphysical presupposition of the nature of things, namely that matter and energy are derivative of space/time.

Op, I'll have to beg to differ slightly on there being no "equivalent in Lucretius" to Spinoza, especially if both systems are motion and then motion once more, as [Spinoza scholar] Wim Klever wrote.... I would agree with you that we need to shift to ontologies of motion and take on relevant new perspectives. As you'll read in the other interviews in this series, the discussion of time remains current as it accompanies a changing world of quantum physics meets energy mechanics and more. More specifically, to follow-up with what you say above, what is time for you? Several trusted scholars have said your work on the ontology of motion is on the level and scope of Heidegger's [book] Being and Time. Additional accolades are in order here, so I pause only to ask how you feel your ontology of motion differs or is unique and how you think personally about time?

Time, for me, is the kinetic dissipation of matter. I will not say entropy, because entropy typically assumes random motion (which I disagree for reasons described in *Being and Motion*). Matter tends to move from more dense to less dense regions and this provides the arrow of time that we experience as regional beings. However, time is not ontologically chronological because if time is fully material then it does not go "away" outside the universe into some non-existent "past." There is no evidence that there is any such outside to the universe. So, the past is still with us in the immanent material that we are and in the universe more broadly. The future too, is here in the matter that we (and nature) are. So time is, as Bergson said in his final lectures, *Le pensée et le mouvant*, nothing but movement: the transformation or redistribution of an open whole. At every moment the entire universe kinetically transforms its entire distribution of space and time. There simply is no static nature to which the present can refer to as "past nature." The whole thing is continually different to itself — but tending regionally toward energetic dissipation.

In my reading, Lucretius was right about the primacy of movement instead of time. Deleuze, however, gets very close, but ends up favoring the vitalist tradition I just described. This keeps him from having a kinetic theory of time. For example, in [his book] *Difference and Repetition* he explicitly subordinates movement to time: "The [third] synthesis is necessarily static, since time is no longer subordinated to movement; time is the most radical form of change, but the form of change does not change" (DR, 89). In *Logic of Sense*, the subordination of movement and matter to time is explicit in his theory of "an empty form of time, independent of all matter" (LS, 62). Deleuze explicitly places time above matter and motion and I do not.

What is unique about *Being and Motion* is that it is the first history of the philosophy of motion and it is the first systematic ontology of motion. I owe a great debt to Lucretius, Marx, Bergson, Virginia Woolf, Paul Valéry, Deleuze, and others, but in the end my philosophy has its own method, concepts, and conclusions. Its too hard to summarize here but in place of reading the first few chapters of *Being and Motion* I think I might say that it is the first ontology of motion to take the material practice of ontology itself as the subject of historical inquiry.

Yes, cronos. There's new work being done on time on Deleuze in philosophy and film studies currently. Another great discussion for some time in the future.

With your work as the first history of the philosophy of motion you have made a lasting contribution to the history of philosophy. Yes, Bergson writes that time is movement and must be conceived as both duration and simultaneity as well. Others in this series will agree with you that time is not ontologically chronological, but not necessarily that there's no 'outside' of the universe. I understand, logically, that we cannot posit an 'outside' the universe, but we are forced to consider anomalies regardless of their fit with our logics of the times when we are faced with mounting evidence.

So, you don't interpret the swerve in Lucretius as a random motion? No chance?

I am open to hearing evidence for an outside to the universe, but I have no idea what that would even look like. In part, because the universe is not a whole but an expanding and open process—just as Lucretius described in *De Rerum Natura*. I believe there is genuine novelty in the universe but we do not need to posit randomness to get that novelty. Lucretius says that matter is always in the habit [solent] of swerving. There are at least two

typical ideas of randomness neither of which Lucretius' view could support. The first one is a radical randomness, or what Quentin Meillassoux calls "hyperchaos," which is complete ex nihilo creation from nothing. Lucretius is explicit that "nil posse creari de nihilo" [nothing can be created from nothing]. The second kind of randomness is the constrained definition randomness where there is a closed domain of objects and matter moves randomly within that. Again, Lucretius is explicit that nature is not a finite closed system—and so there cannot be randomness in this sense either. Something always comes from something relationally but creatively and non-deterministically.

In the Lucretius work you describe the "sensation of temporality..." I realize the sensation of temporality as an experience, especially in this advancing techno-logical and yet irrational world, differs from the motion of sensations as process and/or as concept, and how all of these categories can be read divergently, with differing logics, including the logic of sensation some might say... On this note, do you feel we have new forms of logic and deduction being produced because of the material conditions we are embedded within, such as your kinetic understanding of bio-politics and the migrant-in-motion? Understanding acutely that we are finite, but believing that we are also infinite, would you say our time is limited?

In one sense our lives as we experience them are absolutely finite and follow the dissipation of the universe more generally. In another sense, the matter that flows and dissipates through us will eventually be broken down by black holes at the end of the universe. None of it though will be destroyed. Not infinite in any metaphysical sense, but at least indefinite. Lucretius understood the first two laws of thermodynamics well before their modern formalization by Boltzmann.

Matter can dissipate faster or slower; we can try and speed it up or slow it down in our little region. Lucretius II is all about the ethics of going with this flow instead of trying to slow it down to avoid death and accumulate.

*I worked a little on the second law of thermodynamics in my MA thesis. You're right about Lucretius preceding Boltzmann, and Bergson also preceded some of Einstein. Another exciting element in Bergson, at the start of his *The Creative Mind*, is where he writes that there are two forms of possibility, of what is possible. One is what is possible based on the elements and ideas, materials, and movements between already in existence, and the other cannot be predicted because, as he says, we do not know what questions and interest(s) future generations will have or desire.*

Yes, exactly! Great connection. Relational possibility without probability or ex nihilo emergence. Its all in Lucretius' swerve.

Being Continentally trained, but interested in all philosophical and interdisciplinary methodologies and most if not all philosophers, as much as it would be fantastic to ask you about more of your earlier work, which has been described as scholarship that will be studied for decades: "Carefully argued, well informed, hugely ambitious, and analytically precise, it will become a standard reference for years to come." How can new students approach your work on motion since it is related to some forms of time even if not all, or even if that relation is a flow by which various aggregates and encounters then unfold in time?

I would suggest to folks interested in my work to start with the area they are interested in and go from there. If you are interested in ontology read at least Book I of *Being and Motion*; if art and aesthetics, then start with *Theory of the Image*; if politics than *The Figure of the Migrant* and *Theory of the Border*; if science then *Theory of the Object*; if natural history, climate change, and the Anthropocene than *Theory of the Earth*; if Lucretius, Marx, or Woolf, then start with those books. Once all these books are out I would like to write a more general "Introduction to the Philosophy of Motion" at some point.

*Two free copies of *Theory of the Image* showed up at my home in 2018 on Preservation Way last year from an unknown source! At the moment, as I also really crack open BM by audio book while moving, I'm enjoying thinking through the Greek idea that the concrete derives from the abstract, such as your comments on kinetic inversion, model, and mold. The work is also pragmatically incredibly useful for undergraduate courses.*

In most of your professional career, you write on migration, borders, evolving definitions of community, and, more recently at the end of 2019, new materialism(s). You support ethics in these ways, putting forth new definitions or emphasizing those that already were there but did not create a more unifying theory about nature in motion. Would you mind elaborating on how the new materialisms essay that appeared recently in Angeliki, as you and your co-authors write that there is “no single definition of new materialism” and how this theory works in conjunction with your understanding of time and motion above?

At the University of Oregon I studied political philosophy, environmental philosophy, feminist philosophy, phenomenology, post-structuralism, and was a political activist. I wrote my dissertation on the theme of political revolution in Deleuze and Guattari and the Zapatista uprising in Chiapas, Mexico. This research was the foundation of my first book, *Returning to Revolution: Deleuze, Guattari, and Zapatismo*, published in 2012.

After graduate school I worked on what I felt was politically important at that moment: the struggle of migrants under neoliberal capitalism—partly inspired by Alain Badiou’s activism and the some very rousing articles by Giorgio Agamben, Hannah Arendt, Etienne Balibar and Jacques Rancière on the political importance of the *sans papiers*. Starting here but digging deeper into the history of migration confirmed for me that migrants have actually always been central figures. This led me to see broader connections between historical structures or patterns of movement and their relation to the structures of ontology, art, science, and nature during those times. But since not much was written about this history of motion or migration from my favorite French philosophers I had to create my own kind of method and take tools from where I could (Marx, Nietzsche, Foucault, etc). This was a time of creativity for me.

While I was writing these political books the first texts on new materialism were just coming out. Stacy Alaimo and Susan Heckman published the first collection of essays on feminist new materialism in 2010 and over the next five years, around the time I had completed writing the political books (c. 2015) more people were talking about “new materialism” and tracing its lineage to Spinoza and Deleuze (two central figures from my graduate education). Donna Haraway and Rosi Braidotti’s feminism always inspired me and they started writing about new materialism, along with Manuel Delanda. It seemed like all the Deleuzians were suddenly talking about materialism but it was still extremely unclear what it was all about and if it was just a new name for what Deleuze had already been doing.

Around this time I also started taking long walks in the park at night every two weeks with my friends and colleagues Josh Hanan and Chris Gamble. Josh had come to new materialism from Foucault, Chris from Derrida, and me from Deleuze. Chris introduced me to Karen Barad’s work. Over a couple years, we read all the literature that was coming out, and talked about it, and concluded it was quite a mess to figure out all the similarities and differences between vitalist new materialism, object oriented ontology, speculative realism, old materialisms, and performative new materialism. Most articles out there conflate these really different approaches. So over the course of two years we tried hard to figure it all out in hopes of moving the conversation forward—specifically in favor of what we identify as performative new materialism. We gave several lectures at the University of Denver and eventually published our essay with Angelaki as “What is New Materialism?”.

During these years I also started to see that my previous research on patterns of motion was actually compatible with the version of new materialism we were moving toward. It was non-anthropocentric (due to the influence of Deleuze) but it was also pretty historical and materialist (due to the influence of Marx and Foucault). So, although I do not use the term “new materialist” in *The Figure of the Migrant* (2015) and *Theory of the Border* (2016), I do think they are fully consistent with my kinetic new materialism which I describe explicitly in *Being and Motion* (2018) and *Lucretius I: An Ontology of Motion* (2018). Everything I have published after 2016 explicitly identifies with the term “new materialist” and is consistent with my critique of vitalism (mentioned above).

The term “new materialism” remains contested with multiple definitions—each with a number difficulties that we discuss in the paper, but I think it is still worth preceding with, at least provisionally. The philosophy of movement

and the kinetic theory of time developed in *Being and Motion* (and discussed a bit above) are a direct result of trying to develop a form of new materialism without vitalism or temporal reductions.

That's a delightful story. John Kaag and others have been philosophizing a lot the past few years on walking, sauntering, and nature, something I don't think is self-absorbed at all. I like the work of Balibar, his Spinoza influences, and Ranciere, especially, but also Haraway and Rosi Braidotti's work. DeLanda has been a personal fav since early years of graduate school. I can understand why and how you would draw these connections and incorporate them into your life. I was around in the first years of Object Oriented Ontology and Graham Harman's Guerilla Metaphysics. I traveled to the outskirts of England on a Sunday once to hang with Ray Brassier at a pub. We talked for over four hours. I think we can both agree that these movements the past two decades have created new areas of studying philosophy that are beneficial. It feels similarly the case in the philosophy of race, various feminisms and womanisms, and the explosion of areas like the philosophy of film. Together, these areas are contributing in many ways to how we all 'do' philosophy and on how we teach.

In the opening of H.G. Wells' story The Time Machine, the time traveler reveals, in a philosophical discussion, that time is simply "only real for those in 3-D space..." that human consciousness needs time to flow the way we perceive or might think it does, need it to. What role do you assign to human consciousness, the hard problem as they say, as it (we) evolve, join in, if you will, with the future? Perhaps a comment or two about your work Being and Motion could help readers, as a "historical and regional ontology."

I do not think that time is merely an effect of consciousness. I am a realist. I think time is real. I also think time (following Lucretius and Carlo Rovelli) is a product or effect of matter in motion—specifically the dissipation of motion that defines the universe. Time is just the name for the kinetic transformation of the entire universe as an open process.

I like that definition. Beyond the biological necessity, our experiences of daily space and time that we must pay attention to for survival, which is also based on gravity and walking upright, among other laws, aren't there new questions about time with the discovery and proof of the Simulation Theory (more than just 0s & 1s), predictions about advanced AI (here to stay & will be more intelligent than humans), and related new ways in which we can go about space and time?

For example, you write that in a world of advancing digitization and images, all images are a part of electric flows. What if electricity or those electric flows, in some energetic way, reach beyond the speed of light? Then what do we do with our more linear logics? Hegel, DeLanda, Blanchot, come to mind here, and others who write on different kinds of logics.

Interesting line of thought here but the hypothesis that the universe is a computer simulation is science fiction and not really a testable hypothesis. Predictions about AI are similarly speculative. Electricity is made of photons and electrons. The photons travel at the speed of light and electrons move a bit more slowly through transistor gates to produce digital images. There is currently no evidence to suggest that anything in the universe can travel faster than the speed of light or that anything ever will. This is a key principle of general relativity, Planck's constant, and the standard model of quantum mechanics. Any form of logic that assumes a priori the principle of non-contradiction needs to be revised in light of quantum indeterminacy. Category theory, for example, does not assume such a logic and is thus in some ways a better fit for quantum reality than other forms of logic and mathematics.

Well, I might not say "no evidence," but I understand the paradigm we are in currently and that you are correct. Photons also carry information and there's some interesting work being done currently on neutrinos. Quantum computing and advanced AI are creating teams of their own. Amir Husain is one AI researcher leading the way.

Thank you for supporting the conclusion, "Any form of logic that assumes a priori the principle of non-contradiction needs to be revised in light of quantum indeterminacy." There is a reading of Spinoza that I disagree with that I worked

on for the doctoral research that would, at least in part, support this conclusion. It causes some logical complications for theories of representation and Spinoza.

As philosophers of motion are always interested in philosophy of physics, some physicists now call dark matter “another type of matter,” and their newest discoveries are demonstrating we know less than we thought about the universe. In this context, what is an ‘idea’ about matter if matter can change in some of its natural properties? For example, 2011 Nobel Prize winning physicists deduced that our universe is ‘skattering,’ the energy of repulsion, going against the force of gravity, etc... and then our kind of material laws of nature pulling things back in through their own forces... apparently both are occurring, we are not only expanding. Logically, aren’t folds in nature, as well as its elasticity, more like involutions at times rather than expansions? We know that 5% are atoms, 23% dark matter, & 72% is dark energy and so forth...

Do we produce, while in motion in every way, an interaction with only 5% of the universe, for example, or are there better ways to think about this? Can we truly think about dark matter if, in a real sense, it is outside of time in its ever more far reaching metaphysics? Isn’t one of the only ways in here to conceive of certain encounters with human ideas as eternal in some sense, the infinite in the finite if you will? You write that our new discoveries in quantum gravity and cosmology are in need of more accurate paradigm, a “new historical ontology for the twenty-first century.” You seem to state clearly “humans are, after all, matter with the capacity for creating new ontological descriptions and inscriptions.” (65-66)

Yes, I think materialist philosophers should take physics and all the sciences seriously. This does not mean we should merely accept (or merely reject) interpretations and concepts that come from working scientists. We should follow the work as closely as we can and contribute our interpretations alongside theirs and participate in the development of knowledge. Knowing nothing about contemporary science and technology should not be a badge of humanist honor.

Dark energy, in my understanding of the literature, is not a new “type” of matter—but is simply the indeterminate fluctuation of quantum fields (which make up all matter) operating and exerting gravitational pull on very large scales in the universe [the so-called cosmological constant]. It is responsible for pulling the universe out in all directions (although obviously there are a lot of other gravitational movements at work as well, as you say). What remains puzzling is that there should be a lot more of it given the rate of cosmic expansion. In any case, dark matter and energy are not outside time but time is an immanent result of material quantum fluctuations (at least according to quantum gravity theory).

You are absolutely right that dark energy (i.e. quantum fluctuations) pose a challenge to ideas of matter as passive or mechanical. Karen Barad has written beautifully on this. Chris Gamble and I have an article coming out in *Rhizomes* called “Blackhole Materialism” that shows precisely where quantum gravity and “black hole indeterminacy” can support a new theory of indeterminate materialism.

I am not sure what you mean by eternal human ideas; I remain agnostic on metaphysical issues like eternity. I think we should keep our ontologies historical and positional — and not let them turn into grand theories of being forever and all time.

I’m not sure if I knew Barad’s work or not, but definitely appreciate all of these references and good to know. That’s some fun news too. I look forward to that essay with anticipation. When I think of the infinite I sometimes also think of eternity and various formulations of what dark matter or energy might actually be doing, but I don’t think of concepts of eternity as ‘forever,’ although I understand there is a universal conception like it in most religions, for better and worse. Not all theories of eternity are terrible, especially if someday we have more evidence for that which pushes the infinite into itself, makes it infinite infinitely if you will, etc. It’s ok, at least for me, to pay rational attention to the possibility (and probability) that there is both the historical and positional or the more metaphysical, if you will. They are connected, related, or involve each other at least, for me. If something can be proven to timeless then the concept of teleology is not relevant logically, as one example.

What if it is scientifically possible to time travel after-all, as Einstein believed he mathematically proved? You would need some seriously trusted math for this kind of machine, but we'll have the quantum computing resources and the interest. Are you in? Would you sign up for a round trip? Well, it wouldn't exactly be round, but you could go and come back if desired. You write that we miss the most important and fundamental element of our era if we do not pay closer attention to motion, and not to space and time. I believe your logic for a theory of motion is revolutionary, but I really want to know if you'll get in that time machine?

In a real way, we are already in a time machine. We are made of burned out stars from billions of years ago. The past is fully active and immanent within us. The end of the universe will be made of the particles and quantum fields that once made up our bodies. The future too is already here in another arrangement. We are the past and the future.

Yes, yes! As Nietzsche would say. We are all star dust, star dust and energy. I love that there are logical ways to conceive of ourselves as already in a time machine. Bergson also says as much often, in his own ways, but what you add is dynamic, pragmatically relevant, a real tool we can all use to think and do.

Can you speak about revolution today in addition to your work on ontology, art, philosophy and science? I understand it's a big topic, but I would also say that it's a pressing one... As great art or philosophy take real time, as another example, and as we need better theories about how singularities organize and create more powerful affects, as you've noted, what are your impressions about the directions we will benefit from taking up other than the options of only war or dialogue?

Before we can say anything about revolution "is" we really need to make sure everyone affected is invited to participate in the meaning of this term today. Before we can talk about "benefit" for who we have to listen and help create the whole "we." That in itself is a huge task—the ongoing immanent preconditions of inclusive revolution. This is particularly difficult today in the context of right wing xenophobia and anti-immigrant sentiment in many Western countries and in recent climate summits where indigenous voices are being ignored. The form revolutionary movements take depends on who is involved. This is one of the reasons why the struggle for migrant and indigenous political agency is so important. These are groups on the front lines of global primitive accumulation and climate change. Their voices need to be heard and supported. Theory cannot dictate or predict the emergence of new historical forms in art, politics, science, or ontology. Theorists, I think, should be there to help in their own way, alongside everyone else without any special access to what revolution is or will be. My political work is less as an unchanging theory of the being of revolution but a historical description of what it has looked like in certain places and what it is starting to look like today as a mixture of these previous historical formations. We can learn a lot from Zapatismo and the long history of migrant struggles in particular. But we still have to "make the road by walking," or, as the Zapatistas say, "caminar preguntando" [Walking, we question].

[><https://blog.apaonline.org/2020/10/02/time-will-tell-an-interview-with-thomas-nail/>< — retrieved 09 June 2023]

But what is movement, and why has something so seemingly simple posed such enormous difficulties for Western philosophers and scientists? Why have some of the greatest minds dedicated their lives to discovering something genuinely immobile that would explain why things move? The Greek philosopher Aristotle imagined an "unmoved mover," who first propelled and ordered the moving Cosmos. The ancient scientist Archimedes imagined that if he had a fixed fulcrum and a lever long enough, he could move the earth. Later, the seventeenth-century French philosopher René Descartes reinterpreted Archimedes' fulcrum as a point of "certain knowledge" from which he could objectively know the rest of moving reality. Descartes and Isaac Newton also believed that God was like an unmoving clockmaker who set our mechanical universe into motion while himself remaining still. Even Albert Einstein's theory that we live in a finite "block universe" is part of the centuries-long effort to explain movement by something immobile.

These thinkers were motivated by an anxiety about the unpredictable nature of movement. They found the phenomenon of movement so tricky to master because it is un-masterable. Their efforts failed because they made the mistaken philosophical assumption that something unchanging and universal precedes and orders matter in motion. In their narratives of stasis, matter and motion are passive aspects of reality – caused and formed by higher powers.

The assumed passivity of matter and motion justified their belief in a chain of being where immaterial and unmoving entities like mind, spirit, essence, form, and God, are superior to material and moving processes like nature, bodies, weather, and animals. Those in power have also used the idea of a static natural hierarchy to justify their subordination of people and things that are more material and mobile than others. For example, the destruction and domination of nature (plants, animals, rivers, soil) by humans are justified because nature is material and mobile (it is passive, fluctuating, changing, lacking mind, and lacking culture). Since humans are active, have consciousness, culture, and knowledge of higher principles like God, forms, forces, eternity, and essences, they are justified by the so-called natural order of the universe in doing whatever they want with nature.

The history of domination in the Euro-Western tradition and the deep-seated hatred of matter and motion go hand in hand.

This idea of a hierarchical chain of being places stasis above motion, form above matter, life above death, God above humans, men above women, reason above bodily feeling, one race above others, empires over the colonized, citizens above migrants, straight above queer, humans above animals, animals above plants, and plants above minerals. Everything higher up is less material and less fluctuating than what is below. The history of domination in the Euro-Western tradition and the deep-seated hatred of matter and motion go hand in hand.

In short, the Euro-Western tradition has defined progress by the domination of nature. We are now living in the wake of the consequences of this fateful decision.

After thousands of years of treating nature and matter as a passive substance, we are feeling the full ecological consequences of this mistake with the destruction of planetary systems we assumed were stable. In short, the whole chain of being with matter and motion on the bottom, and spirit and stasis on the top has been devastating for the earth and its people.

However, Western history has relatively recently arrived at a startling philosophical twist in this narrative. Everything we have scientifically observed so far in the world has been in motion, but we do not know what causes matter/energy to move and do not know precisely how it will move. From the ongoing expansion of the universe with its innumerable galaxies whirling around supermassive black holes to the path of a hurricane or the organization of a migrant caravan, we know of nothing in our vast Cosmos that is entirely static. Indeed, even at the tiniest sub-atomic levels, indeterminate energy fluctuations never stop moving and cannot be wholly predicted. Physicists call them “quantum fluctuations.”

Most people think of motion as the translation of an object from point A to B in space and time. We also tend to think of point A and point B as discrete locations in space, and we think of movement as the successive change in location from one point to the other. But what if space and time are also moving outward in all directions as the universe expands? What if the fabric of spacetime itself is woven from the same energetic fluctuations as the universe, as most physicists now believe? It means that there are no fixed points in space or time and that the entire Cosmos is continually changing. It also means that movement is only relative to other movements and not to any fixed points in space or time. Movement, then, is the constant transformation of the entire universe.

Yet, if everything is in motion, why do things seem relatively stable? Why do we think of movement as going from one point to another? Here is the problem. In the Western tradition, we are used to thinking of things as determinate. Something determinate has distinct and definite limits. We typically define a “being” as something that exists as a positive presence within those limits. But what if we try to think about something without definite

limits and without a fully positive presence? We could use the words "absence" or "non-being," but what if this something was not entirely absent either?

There is a third option. We can talk about "processes" to indicate an event that is neither a determinate being nor non-being. For example, a process such as a swallow swooping after a bug through the sky is neither entirely present nor wholly absent. In other words, it is an "indeterminate" process.

An indeterminate movement is a process understood as a process and not as a thing. Movement is not a sequence of static beings alternating with other static non-beings. As long as everything is moving, it is in process and indeterminate. This applies to swallows swooping for bugs and everything else as well. Because of their preference for stasis, the French philosopher Henri Bergson once described philosophers as "like children trying to catch smoke by closing their fists."

The world is constituted by processes whose relatively stable iterations and fluctuations generate the phenomena we see around us. Matter flows, cycles, and circulates in metastable patterns. A metastable pattern is an ongoing process that restores and repeats itself slightly differently each time, like a whirlpool or eddy in a river.

"Identity" is not a static position or unchanging form but a cycle or habit of indeterminately swerving matter.

Since heat is constantly spreading out in the universe, no metastable process can ever be the same twice or last forever. Due to entropy, all movements of matter in the universe are irreversible. The universe flows one way: from hot to cold. Because of this direction and relationality, the flow of matter can eddy, whirl, and entangle itself into stable patterns that give the world local and momentary solidity and durability.

In other words, "identity" is not a static position or unchanging form but a cycle or habit of indeterminately swerving matter. Visible things are what return to approximately the same place periodically. Difference, then, is not a distinction between two identities but rather a flow or process that cycles between singular metastable recursions. Flow and persistence precede existence. [<https://www.thephilosopher1923.org/post/the-new-basics-movement>] — retrieved 09 June 2023]

Vitalism

Vitalism is a belief that starts from the premise that "living organisms are fundamentally different from non-living entities because they contain some non-physical element or are governed by different principles than are inanimate things." [1][a] Where vitalism explicitly invokes a vital principle, that element is often referred to as the "vital spark," "energy," "élan vital," "vital force," or "vis vitalis," which some equate with the soul. In the 18th and 19th centuries, vitalism was discussed among biologists, between those who felt that the known mechanics of physics would eventually explain the difference between life and non-life and vitalists who argued that the processes of life could not be reduced to a mechanistic process. Vitalist biologists such as Johannes Reinke proposed testable hypotheses meant to show inadequacies with mechanistic explanations, but their experiments failed to provide support for vitalism. Biologists now consider vitalism in this sense to have been refuted by empirical evidence, and hence regard it either as a superseded scientific theory,[4] or, since the mid-20th century, as a pseudoscience.

Eternalism versus Presentism

The two poles of time = maximum One Quantum of time (history of the finite Cosmos) versus minimum one quantum of time (now)

= wave versus particle

ETERNALISM

In the philosophy of space and time, eternalism is an approach to the ontological nature of time, which takes the view that all existence in time is equally real, as opposed to presentism or the growing block universe theory of time, in which at least the future is not the same as any other time. Some forms of eternalism give time a similar ontology to that of space, as a dimension, with different times being as real as different places, and future events are “already there” in the same sense other places are already there, and that there is no objective flow of time.

It is sometimes referred to as the “block time” or “block universe” theory due to its description of space-time as an unchanging four-dimensional “block”, as opposed to the view of the world as a three-dimensional space modulated by the passage of time.

The present

In classical philosophy, time is divided into three distinct regions: the “past”, the “present”, and the “future”. Using that representational model, the past is generally seen as being immutably fixed, and the future as at least partly undefined. As time passes, the moment that was once the present becomes part of the past, and part of the future, in turn, becomes the new present. In this way time is said to pass, with a distinct present moment moving forward into the future and leaving the past behind. One view of this type, presentism, argues that only the present exists. The present does not travel forward through an environment of time, moving from a real point in the past and toward a real point in the future. Instead, it merely changes. The past and future do not exist and are only concepts used to describe the real, isolated, and changing present. This conventional model presents a number of difficult philosophical problems and may be difficult to reconcile with currently accepted scientific theories such as the theory of relativity.

The bar and ring paradox is an example of the relativity of simultaneity. Both ends of the bar pass through the ring simultaneously in the rest frame of the ring (left), but the ends of the bar pass one after the other in the rest frame of the bar (right).

It can be argued that special relativity eliminates the concept of absolute simultaneity and a universal present: according to the relativity of simultaneity, observers in different frames of reference can have different measurements of whether a given pair of events happened at the same time or at different times, with there being no physical basis for preferring one frame's judgments over another's. However, there are events that may be non-simultaneous in all frames of reference: when one event is within the light cone of another—its causal past or causal future—then observers in all frames of reference show that one event preceded the other. The causal past and causal future are consistent within all frames of reference, but any other time is “elsewhere”, and within it there is no present, past, or future. There is no physical basis for a set of events that represents the present.

Many philosophers have argued that relativity implies eternalism. Philosopher of science Dean Rickles says that, “the consensus among philosophers seems to be that special and general relativity are incompatible with presentism.” Christian Wüthrich argues that supporters of presentism can only salvage absolute simultaneity if they reject either empiricism or relativity. Dean Zimmerman and others argue for a single privileged frame whose judgments about length, time and simultaneity are the true ones, even if there is no empirical way to distinguish this frame.

The flow of time

Antiquity

Arguments for and against an independent flow of time have been raised since antiquity, represented by fatalism, reductionism, and Platonism: Classical fatalism argues that every proposition about the future exists, and it is either true or false, hence there is a set of every true proposition about the future, which means these propositions describe the future exactly as it is, and this future is true and unavoidable. Fatalism is challenged by positing that there are propositions that are neither true nor false, for example they may be indeterminate. Reductionism questions whether time can exist independently of the relation between events, and Platonism argues that time is absolute, and it exists independently of the events that occupy it.

Earlier, pre-Socratic Greek philosopher Parmenides of Elea had posited that existence is timeless and change is impossible (an idea popularized by his disciple Zeno of Elea and his paradoxes about motion).

Middle ages

The philosopher Katherin A. Rogers argued that Anselm of Canterbury took an eternalist view of time, although the philosopher Brian Leftow argued against this interpretation, suggesting that Anselm instead advocated a type of presentism. Rogers responded to this paper, defending her original interpretation. Rogers also discusses this issue in her book *Anselm on Freedom*, using the term "four-dimensionalism" rather than "eternalism" for the view that "the present moment is not ontologically privileged", and commenting that "Boethius and Augustine do sometimes sound rather four-dimensionalist, but Anselm is apparently the first consistently and explicitly to embrace the position." Taneli Kukkonen argues in the *Oxford Handbook of Medieval Philosophy* that "what Augustine's and Anselm's mix of eternalist and presentist, tenseless and tensed language tells is that medieval philosophers saw no need to choose sides" the way modern philosophers do.

Augustine of Hippo wrote that God is outside of time—that time exists only within the created universe. Thomas Aquinas took the same view, and many theologians agree. On this view, God would perceive something like a block universe, while time might appear differently to the finite beings contained within it.

Modern period

One of the most famous arguments about the nature of time in modern philosophy is presented in *The Unreality of Time* by J. M. E. McTaggart. It argues that time is an illusion. McTaggart argued that the description of events as existing in absolute time is self-contradictory, because the events have to have properties about being in the past and in the future, which are incompatible with each other. McTaggart viewed this as a contradiction in the concept of time itself, and concluded that reality is non-temporal. He called this concept the B-theory of time.

Dirk Vorenkamp, a professor of religious studies, argued in his paper "B-Series Temporal Order in Dogen's Theory of Time" that the Zen Buddhist teacher Dōgen presented views on time that contained all the main elements of McTaggart's B-series view of time (which denies any objective present), although he noted that some of Dōgen's reasoning also contained A-Series notions, which Vorenkamp argued may indicate some inconsistency in Dōgen's thinking.

A. Halliday has attempted to rationalize time by arguing that it is finite.[citation needed] This was founded on the thought that, if an entity has, or is assigned, parts then those parts must be finite. Assembling finite parts must result in a finite whole. Therefore, it follows that past, present and future are finite. It then follows that, as they also form a whole, then the whole of time is finite.

In the simplest case, if time is finite then it is limited. Time is thought of as existing inside of space. If there cannot be a gap between the edge of time and the limits of space, then time fills all of space, ensuring change everywhere. Therefore, time cannot flow if flow demands movement from one point to another?

Quantum physics

Some philosophers appeal to a specific theory that is "timeless" in a more radical sense than the rest of physics, the theory of quantum gravity. This theory is used, for instance, in Julian Barbour's theory of timelessness. On the other hand, George Ellis argues that time is absent in cosmological theories because of the details they leave out.

Recently, Hrvoje Nikolić has argued that a block time model solves the black hole information paradox.

Objections

Philosophers such as John Lucas argue that "The Block universe gives a deeply inadequate view of time. It fails to account for the passage of time, the pre-eminence of the present, the directedness of time and the difference

between the future and the past." Similarly, Karl Popper argued in his discussion with Albert Einstein against determinism and eternalism from a common-sense standpoint.

A flow-of-time theory with a strictly deterministic future, which nonetheless does not exist in the same sense as the present, would not satisfy common-sense intuitions about time. Some have argued that common-sense flow-of-time theories can be compatible with eternalism, for example John G. Cramer's transactional interpretation. Kastner (2010) "proposed that in order to preserve the elegance and economy of the interpretation, it may be necessary to consider offer and confirmation waves as propagating in a "higher space" of possibilities.

In *Time Reborn*, Lee Smolin argues that time is physically fundamental, in contrast to Einstein's view that time is an illusion. Smolin hypothesizes that the laws of physics are not fixed, but rather evolve over time via a form of cosmological natural selection. In *The Singular Universe and the Reality of Time*, co-authored with philosopher Roberto Mangabeira Unger, Smolin goes into more detail on his views on the physical passage of time. In contrast to the orthodox block universe view, Smolin argues that what instead exists is a "thick present" in which two events in the present can be causally related to each other. Marina Cortês and Lee Smolin also argue that certain classes of discrete dynamical systems demonstrate time asymmetry and irreversibility, which is inconsistent with the block universe interpretation of time.

Avshalom Elitzur vehemently rejects the block universe interpretation of time. At the Time in Cosmology conference, held at the Perimeter Institute for Theoretical Physics in 2016, Elitzur said: "I'm sick and tired of this block universe, ... I don't think that next Thursday has the same footing as this Thursday. The future does not exist. It does not! Ontologically, it's not there." Elitzur and Shahar Dolev argue that quantum mechanical experiments such as the Quantum Liar and the evaporation of black holes challenge the mainstream block universe model, and support the existence of an objective passage of time. Elitzur and Dolev believe that an objective passage of time and relativity can be reconciled, and that it would resolve many of the issues with the block universe and the conflict between relativity and quantum mechanics. Additionally, Elitzur and Dolev believe that certain quantum mechanical experiments provide evidence of apparently inconsistent histories, and that spacetime itself may therefore be subject to change affecting entire histories.

[>[https://en.wikipedia.org/wiki/Eternalism_\(philosophy_of_time\)](https://en.wikipedia.org/wiki/Eternalism_(philosophy_of_time))< — retrieved 29 July 2023]

PRESENTISM

Philosophical presentism is the view that only present entities exist (or, equivalently, that everything is present). According to presentism, there are no past or future entities. In a sense, the past and the future do not exist for presentists — past events have happened (have existed) and future events will happen (will exist), but neither exist at all since they do not exist now. Presentism is a view about temporal ontology that contrasts with eternalism — the view that past, present and future entities exist (that is, the ontological thesis of the 'block universe') — and with no-futurism — the view that only past and present entities exist (that is, the ontological thesis of the 'growing block universe').

Historical antecedents

Augustine of Hippo proposed that the present is analogous to a knife edge placed exactly between the perceived past and the imaginary future and does not include the concept of time. Proponents claim this should be self-evident because, if the present is extended, it must have separate parts—but these must be simultaneous if they are truly a part of the present. According to early philosophers, time cannot be simultaneously past and present and hence not extended. Contrary to Saint Augustine, some philosophers propose that conscious experience is extended in time. For instance, William James said that time is "the short duration of which we are immediately and incessantly sensible". Other early presentist philosophers include the Indian Buddhist tradition. Fyodor Shcherbatskoy, a leading scholar of the modern era on Buddhist philosophy, has written extensively on Buddhist presentism: "Everything past is unreal, everything future is unreal, everything imagined, absent, mental... is unreal. Ultimately, real is only the present moment of physical efficiency [i.e., causation]."

According to J. M. E. McTaggart's [book] *The Unreality of Time*, there are two ways of referring to events: the 'A Series' (or 'tensed time': yesterday, today, tomorrow) and the 'B Series' (or 'untensed time': Monday, Tuesday, Wednesday). Presentism posits that the A Series is fundamental and that the B Series alone is not sufficient. Presentists maintain that temporal discourse requires the use of tenses, whereas the "Old B-Theorists" argued that tensed language could be reduced to tenseless facts (Dyke, 2004).

McTaggart's notion and description of two types of time reminds me of certain Attributes of the Tao's Template ontology, namely "tensed time" is Ordinal and "untensed time" is Cardinal. In terms of the philosophy of Pan-experientialism (refer to [Chapter X-X](#)) these two ways to experience time depend on one's consciousness as embodied either as the minimum one or the maximum One, aka as the fragment or as the Whole.

Arthur N. Prior has argued against un-tensed theories with the following ideas: the meaning of statements such as "Thank goodness that's over" is much easier to see in a tensed theory with a distinguished, present now. Similar arguments can be made to support the theory of egocentric presentism (or perspectival realism), which holds that there is a distinguished, present self.

In the modern theory of relativity, the conceptual observer is at a geometric point in both space and time at the apex of the 'light cone' which observes the events laid out in time as well as space. Different observers may disagree on whether two events at different locations occurred simultaneously depending on whether the observers are in relative motion (see relativity of simultaneity). This theory depends upon the idea of time as an extended thing and has been confirmed by experiment, thus giving rise to a philosophical viewpoint known as four dimensionalism. Although the contents of an observation are time-extended, the conceptual observer, being a geometric point at the origin of the light cone, is not extended in time or space. This analysis contains a paradox in which the conceptual observer contains nothing, even though any real observer would need to be the extended contents of an observation to exist. This paradox is partially resolved in relativity theory by defining a 'frame of reference' to encompass the measuring instruments used by an observer. This reduces the time separation between instruments to a set of constant intervals.

Some of the difficulties and paradoxes of presentism can be resolved by changing the normal view of time as a container or thing unto itself and seeing time as a measure of changing spatial relationships among objects. Thus, observers need not be extended in time to exist and to be aware, but they rather exist and the changes in internal relationships within the observer can be measured by stable countable events.[citation needed]

Philosophical objections

One main objection to presentism comes from the idea that what is true substantively depends upon what exists (or, that truth depends or 'supervenes' upon being). In particular, presentism is said to be in conflict with truth-maker theory, one theory which looks to capture the dependence of truth upon being with the idea that truths (e.g., true propositions) are true in virtue of the existence of some entity or entities ('truth-makers'). The conflict arises because most presentists accept that there are evidence-transcendent and objective truths about the past (and some accept that there are truths about the future, pace concerns about fatalism), but presentists deny the existence of the obvious truth-makers for such truths. For instance, most presentists accept that it is true that Marie Curie discovered polonium, but they deny that the event of her discovery exists (because it is a wholly past event). Presentists have been charged with violating the plausible truth-maker principle (that truths require truth-makers) and ontologically 'cheating'. Presentists can respond to this objection either by denying that truths about the past require truth-makers (that is, they can accept the truth-maker principle for some truths, but deny that it applies in full generality, or else reject the truth-maker principle wholesale), or by locating presently existing entities to play the role of truth-makers for truths about the past.

[>https://en.wikipedia.org/wiki/Philosophical_presentism< — retrieved 29 July 2023]

Involution and Evolution

><http://www.integralworld.net/visser99.html><

Statistical Mechanics

Might be more fundamental than Relativity and Quantity

><https://link.springer.com/article/10.1007/s10701-024-00755-9><

“A Stochastic Model of Mathematics and Science”





Chapter I-x

YIN + YANG = CHI

[[Perhaps this chapter belongs in the *Cosmology* book, but until that book is released, it will remain here in this *Cosmogony* book, and a summary here might take its place.]]

[[Arrange these contraries in a didactic sequence that somewhat follows Tao's Template.]]

This is a lengthy chapter because it is fundamental to understanding how the universe functions in time, transformation is time being subject of this *Cosmogony* book. Basically and briefly, the universe evolves in three pairs of ways = six fundamental ways — the Processes of the PAS.

This chapter is all about “The One produced the Two” phrase in Tao's Template.

In other words, this chapter is about the Dialectic Principle in reverse, where instead of One becoming Two leading to Three, Two become One leading to Tao.

The Cosmos is paradoxical from beginning to end, from top to bottom, and from inside to outside.

In other words, this chapter is about the philosophy of Dual Aspect Monism.

Introduction

Recall yet again Chapter 42 of the Tao Te Ching:

Tao produced the One; the One produced the Two; the Two produced the Three; the Three produced All things.

All things carry the Yin and embrace the Yang, and through the blending of the Chi they achieve harmony.

In a previous chapter, we focused on the meaning of the sequence, Tao > One > Two > Three > All. In this chapter, we are going to focus on the stanza that provides the formula Yin + Yang = Chi. It so happens that this formula is pervasive in the foundations of “all things” that are investigated by science and philosophy, namely the universe of being and doing, aka experience. Yin + Yang = Chi is how the Tao learns by experiencing Itself ‘as if’ it were not Itself.

Let's review what we learned in the previous chapter about the fragmentation of Tao, where Tao, in the act of “producing” was said to be experiencing Itself “as if” it were not Itself in a cascade of steps:

1. The Absolute Absolute cannot be compared or contrasted with anything or nothing
2. The Absolute is compared and contrasted with the Relative
3. The Absolute = the Transcendent Tao and the Immanent Tao
4. , meaning that each fragment takes a point of view of not-self and other-self. If we conceptualize Tao in anthropomorphic terms as primordial Consciousness that fragments itself into pieces, other lesser consciousnesses, that
- 5.

Dual Aspect Monism

>https://en.wikipedia.org/wiki/Double-aspect_theory<

The Trinity

[[This section belongs in the *Cosmology* book.]]

Can either be Action, Inspiration, Expression Dimensions, or it can be Ordinal + Cardinal = Neutral, or it can be the Absolute + Transcendent + Immanent versions of Tao --- depending on the source.

<https://en.wikipedia.org/wiki/Trimurti>

Creation = Cardinal, Destruction = Ordinal, Preservation = Neutral

https://en.wikipedia.org/wiki/Triple_deity

https://en.wikipedia.org/wiki/Trifunctional_hypothesis

<https://en.wikipedia.org/wiki/Trinity>

Finitude + Infinitude = Infinite Regress

The appearance of an “infinite regress” in one’s concepts or mathematics is normally thought of as a fatal problem in a physics theory, but I think of it as the solution to the problem of infinitude versus finitude? How does the Infinite conceive of the finite? How does the finite conceive of the Infinite? How does one reconcile the paradox of the Tao experiencing Itself as if it were not Itself? My answer to this conundrum is that the immanent Tao had a “breakthrough” with a “breakdown” into an infinitude of finitudes. The first finitude was from the Zero/Infinity to Oneness, which is the mathematical way of stating what happened. The second finitude was the multiplication of the One to the Two, or the division of the One into the One Half, depending on whether you take the Cardinal or the Ordinal perspective. Thus, there is an “infinite regress” in the generation of space and an infinite regress in the generation of time in the same way and for the same reason that integers themselves are finite, but the intergers or natural numbers can be expanded into an infinite sequence.

Infinite regress is usually considered to be a problem, but in the NS schema it is the solution to the problem ... of existence in potentially infinite space and potentially eternal time. Basically and briefly, the Tao, via experiencing itself as if it were not itself, first produces the One in a Big Bang. This is actually called the Singularity because it has no distinguishing characteristics; it is pure raw spacetime, or motion as distinct from rest or Tao. The One produces the Two, which is objective space/time physics and subjective time/space psychology. An infinite regress is only potentially infinite like the real numbers count from zero to the potential infinite. I equate this with the immanent Tao. There is the actual infinite which is undifferentiated, and I equate that with the transcendent Tao. The Cosmos that we see is an infinite regress.

>https://en.wikipedia.org/wiki/Infinite_regress<

><https://en.wikipedia.org/wiki/Infinitism><

Infinite Regress = the gestalt of Ordinal finitude and Cardinal infinitude. Space and time are the products of an infinite regress of the Infinite experiencing itself as if it were not itself.

From *Infinity and the Mind*: and from *Godel Escher Bach*

- Quote stuff on Cantor’s tower of infinities
- Quote stuff on the problem of the One and the Many
- Quote stuff on infinite regress as the solution to paradoxes
- Zeno’s Paradoxes

Game Theory

[[Where does this section really belong? Somewhere better than here? Such as in the Live&Learn Chapter?]]

Laszlo Mero, *Moral Calculations*

Carse: *Finite and Infinite Games*

“Games” of the type where there one must guess at what another player has/does = learning to make the unknown known, as in the Free Energy Principle.

“Finite and Infinite Games: A Vision of Life and Play and Possibility” (1986) by philosopher James P. Carse

Biography per Wikipedia:

James P. Carse (December 24, 1932 – September 25, 2020) was an American academic who was Professor Emeritus of history and literature of religion at New York University. His book *Finite and Infinite Games* was widely influential. He was religious “in the sense that I am endlessly fascinated with the unknowability of what it means

to be human, to exist at all.” Carse’s recent work on religion and belief provides a foil to New Atheism.

[>https://en.wikipedia.org/wiki/James_P._Carse< — retrieved 24 September 2023]

His book is downloadable from ><https://wtf.tw/ref/carse.pdf>< and various other websites that you may find using your favorite internet search engine.

The reason I include a review of this book in this *Cosmogony* book is because it adds even more clarity to one of the distinctions between what I call Ordinality and what I call Cardinality in the Process/Aspect System matrix, namely that Ordinality is finite (bounded) and Cardinality is infinite (unbounded). Carse has provided a summary of his book’s ideas, which I quote hereinafter, and I provide some commentary interspersed within the text of his review, I provide some explanatory and correlating words in [brackets], with I provide some underlines for emphasis.

A “game” is defined as any interaction between two things that has significant consequences. Thus this section is just another way to state the Dialectic Principle. (Perhaps it should be a subsection in that section.) What we as humans should strive for is so-called “win-win” solutions to conflicts of interest between gameplayers.

Finite and Infinite Games: Summary and Review by James P. Carse

What comes to mind when you hear the word *game*? Monopoly? Super Mario? Chess?

Games are so much more than this. In fact, all of life can be seen as one big game. Unlike the board games you played as a kid, these life games can be played in two very different ways.

In a **previous** chapter, “Live and Learn”, I presented the notion that the Cosmos can be viewed as somewhat like a ‘school’, meaning that the function and purpose of existing things is to ‘learn’ to get along better with internal selves and external selves — to make progress along seven tracks that I call Processes. Another favorite metaphor among philosophers is that life, the universe, and everything is playing something like a ‘game’. As it so happens, the seven learning Processes consist of two basic types of game.

This book summary explain the differences between games that have clear goals and rules, and games that don’t. Some people see life as a zero sum game with clear winners and losers and a fixed amount of time to play. Others see it as a series of moments that all carry endless possibilities and no winners or losers. From your career to your sex life, the way you choose to play will have a huge impact on your life.

It is a tenet of the NS schema that people of the Ordinal persuasion, whether in terms of the Life-Stage they are in (see Part V) or the Worldview that they have (see Part II) or their degree of Enlightenment (see Part VI), tend to prefer to play finite games, and people of the Cardinal persuasion tend to prefer to play infinite games.

In this summary of *Finite and Infinite Games* by James P. Carse, In this book summary you’ll learn

- why some people are so obsessed with titles;
- why your colleague has to win every argument; and
- why your idea of time is completely wrong.

***Finite and Infinite Games* Key Idea #1:** You can see almost every part of life as a finite or an infinite game.

When we think of games, we usually think of hide-and-seek, truth-or-dare, or similar children’s games. But if you reflect a little further, we adults have our own games too.

The games of adults, however, can be *finite* or *infinite*.

Finite games have specific temporal, spatial and numerical boundaries. A finite game always has a clear beginning, a particular playing field and a certain number of players. Besides these external restrictions, there are also internal limitations that mean that the rules of the game must be agreed upon in advance by the players.

Then the players compete in line with these rules with the aim of winning. Then the game is over.

Refer to the section on discussion of the book *Moral Calculations* by Laszlo Mero for more about the notion that the mathematical exploration of ‘game theory’ indicates that if one is to survive and thrive in life one should emphasize cooperation rather than competition. The basic idea here is that Cardinality has a slight edge over Ordinality in the games of surviving and thriving.

If this doesn’t really sound like the real world to you, consider a general election. The rules of an election are clearly outlined; a winner is decided by the amount of votes on a given day, there are certain practices that are or are not permitted (for example, vote rigging is banned) and only one candidate is allowed per party.

Infinite games, on the other hand, are the polar opposite of finite games.

While people play finite games to win, infinite games are played with the goal of continuing the game. Therefore, infinite games don't have external or internal restrictions. Anyone can participate in the game anytime and anywhere.

Consider music composition: there will never be a best symphony, because there will always be new composers writing inspiring music. No composer makes music to win or be the best, but because the compositions she writes are invitations for even more people to join in the game.

All this might sound a bit abstract at first, but read on to get a better grasp of what life looks like according to the finite and the infinite player.

Finite and Infinite Games **Key Idea #2:** Finite players are limited by the world observing them, while infinite players know no boundaries.

We've seen that finite games necessarily have temporal, spatial and numerical boundaries. But other boundaries are needed, too.

Imagine if the rules for an election stated merely that there should be two candidates and that the one with the most votes would win. On their own, these rules would mean the two candidates could be common criminals, and you could have new elections every day if you liked!

This is why finite games are also regulated by the *audience* observing them. The audience determines when the game occurs and who the players are. In the example of the election, the electorate is the audience who decides who the two candidates are and when the election will be held.

This means the finite player is not free to play the game at his or her leisure, but must depend on the time allotted by the audience.

The finite player is under pressure from the audience to play and finish the game. For instance, the finite game of an exam entails the player working to create something — answers in this case. She then spends the two allotted hours working because that's the amount of time her teacher has given them to complete it.

In contrast, infinite games have no boundaries, so infinite players govern their own time.

As infinite games have no beginning or end, time doesn't pass for an infinite player. Instead, each moment presents a new beginning with new possibilities for the game to unfold and develop.

Instead of consuming time, the infinite player fills it with play. He won't finish a work project in two hours simply because that's the allotted time; he will work for as long as he desires, inviting others to join in.

Finite and Infinite Games **Key Idea #3:** Where finite players see society, infinite players see culture.

Whenever we play games, we need others to play with us, whether they're our teammates or our opponents. However, there is a difference in how finite and infinite players perceive their game in relation to other players.

Finite players see society essentially as one big finite game consisting of smaller games such as school or a profession, with every player trying to win against others and be awarded a *title*.

This title can simply be recognition for having won a past finite game. For example, for the finite player, a priest would be "Father," as this is the title earned for having completed specific training and, as a result, winning the game of becoming a priest.

This title is then displayed through property, and society is obliged to honor it. For example, imagine you attend a respected college and become a successful lawyer. To show your success, you might then purchase an expensive car.

Infinite players are different. They see society as a continually developing culture.

Focusing on titles means concentrating on previous victories. For infinite players, these are irrelevant because their attention lies on the future and the possibilities it holds. Therefore, infinite players are more concerned with offering a vision that could encourage others to join in and work to develop that vision, rather than offering an ultimate solution to a problem.

For instance, an infinite player wouldn't fight poverty by struggling to provide citizens with a specific amount of goods. He would see more value in sparking a discussion on where poverty stems from in the first place.

Finite and Infinite Games **Key Idea #4:** Finite players strive to dominate through winning, while infinite players strive to coexist through playing.

The desire to dominate accompanies finite players everywhere — from their behavior in the bedroom to conversations with friends.

Players of finite games aim to win in order to gain control over others. By flaunting their titles they exhibit their superiority and overshadow others. They endeavor to do this in every way possible, and this typifies their gameplay.

Finite players see even basic conversations as a game to be won — they don't want to discuss, they just want to give explanations and convince the opponent of their truth. In these cases, knowledge becomes the title to be won.

For the finite player, sexual relationships are also a way to take command over their partner and conquer them. This might involve concealing their own sexual desires through elaborate courting rituals until a desired end is achieved.

The infinite player, on the other hand, is not concerned with winning over others, because to them, only the game matters. As infinite games don't have winners, infinite players don't care about demonstrating their superiority. They play for the sake of the game.

For the infinite player, conversations are interactions based on give and take, where listening is valued as much as talking. She sees them as a discourse, rather than a chance to give an explanation. Infinite players don't assert that what they say is truth. Instead, they offer their conversation partner a perspective, and are open to any new knowledge that the conversation might bring.

Infinite players also aren't fixated on a particular outcome in the game of sexuality, whether it's obtaining physical pleasure or conceiving a child. They play in order to explore and understand themselves and each other.

Finite and Infinite Games **Key Idea #5:** Finite players are a product of their past, while infinite players transform theirs.

How much does your past weigh on you? Finite players are compelled to play by their fixation on the past.

Finite play is actually a game of the past where finite players eagerly assume the roles given to them and thus play a part that was designed *in* the past and *for* the past. For example, if you were born as the eldest son of a wealthy family, as a finite player you will adopt the role of being the heir of the family, safeguarding its property and reputation.

Consider the psychology behind entering a finite game. As it's really all about winning, the players must feel the urge to prove themselves. How often a finite player wins or loses is irrelevant because she dwells on their past, where she's still a loser. If she wasn't so wrapped up in the past, she wouldn't enter a finite game in the first place.

See it this way: if you feel like a deadbeat in front of your classmates, you might be driven to become successful so that you can prove them wrong. However, no matter how successful you become, you still feel like the same loser, because it's your motivation to keep grinding away at your job.

Infinite players view things differently. They liberate themselves from their past using their uniqueness. They can make peace with the past by acknowledging their own genius and originality. For an infinite player, the past is history. It doesn't determine the future, because the future of an infinite game is open-ended and rife with possibility.

For an infinite player, being born as the eldest son of a wealthy family is not a blueprint for life; it's the starting point of an infinite number of possible games.

Finite and Infinite Games **Key Idea #6:** You can choose what kind of game you want to play and what kind of player you want to be.

There are numerous differences between finite and infinite games, but this doesn't mean that there aren't finite games *within* infinite ones, or that you can't opt out of them altogether. After all, you have the power to choose what kind of game you want to play.

Remember that participation in each and every game is voluntary.

Finite players often feel they are obliged to play, and feel pressured to play in a certain way. But in the end, no one can force you into the game if you don't want to join it.

It's true that finite players are chosen externally. You can't be a lawyer until you have passed the bar, for example. It's also true that you have to do predefined things to stay in the game as a lawyer, such as go to court and attend meetings. However, no one can force you into being a lawyer if you don't want to be one.

We all opt to play and adhere to the rules of the game by our own free will, so you can choose which game you want to take part in.

Finite players feel trapped because they have to put on a particular guise in order to play certain roles properly. For example, you should be seen as wise and just to be a lawyer.

The problem is, sometimes these masks become too convincing even to ourselves, and we get lost in the game, forgetting that we're only assuming a role and can always quit the game. So the lawyer who feels bound by her duties must remember she can always leave her job and move to Jamaica if she wants to!

At the end of the day, the game you play is your personal choice. As long as you don't hide behind masks and or let yourself be duped by the masks of others, you can play as you wish.

In Review: *Finite and Infinite Games* Book Summary

The key message in this book:

Life can be seen as a finite or an infinite game. Finite players focus on the outcome of the game, such as winning and losing, whereas infinite players center on allowing the game to continue and give rise to multiple possibilities. However you choose to play this game is up to you. [<https://lifeclub.org/books/finite-and-infinite-games-james-p-carse-review-summary> — retrieved 24 September 2023]

Void versus Chaos versus Cosmos

Void = apophatic theology = zero = transcendence

Chaos = cataphatic theology = infinity = immanence

In many mythologies Cosmos defeats Chaos: <https://brendangrahamdempsey.substack.com/p/gods-fight-with-the-dragon-part-i>

Inanimate versus Animate

Relativity + Quantum = Physics

Continuum versus Discontinuum

Gestalt

Yin + Yang = Chi

Yin and yang ... yinyang, or yin-yang is a Chinese philosophical concept that describes opposite but interconnected forces. In Chinese cosmology, the universe creates itself out of a primary chaos of material energy, organized [Cosmos] into the cycles of yin and yang and formed into objects and lives. Yin is the receptive [passive] and yang the active principle, seen in all forms of change and difference such as the annual cycle (winter and summer), the landscape (north-facing shade and south-facing brightness), sexual coupling (female and male), the formation of both men and women as characters, and sociopolitical history (disorder and order).

Taiji or tai chi ... is a Chinese cosmological term for the "Supreme Ultimate" state of undifferentiated absolute and infinite potential, the oneness before duality, from which yin and yang originate.... In the cosmology pertaining to yin and yang, the material energy which this universe was created from is known as qi [chi]. It is believed that the organization of qi in this cosmology of yin and yang has formed many things. Included among these forms are humans. Many natural dualities (such as light and dark, fire and water, expanding and contracting) are thought of as physical manifestations of the duality symbolized by yin and yang. This duality lies at the origins of many branches of classical Chinese science and philosophy, as well as being a primary guideline of traditional Chinese medicine, and a central principle of different forms of Chinese martial arts and exercise ... as well as appearing in the pages of the I Ching.

The notion of duality can be found in many areas, such as Communities of Practice. The term “dualistic-monism” or dialectical monism has been coined in an attempt to express this fruitful paradox of simultaneous unity and duality. Yin and yang can be thought of as complementary (rather than opposing) forces that interact to form a dynamic system in which the whole is greater than the assembled parts. [gestalt] According to this philosophy, everything has both yin and yang aspects (for instance, shadow cannot exist without light). Either of the two major aspects may manifest more strongly in a particular object, depending on the criterion of the observation. The yin and yang symbol (or taijitu) shows a balance between two opposites with a portion of the opposite element in each section.

In Taoist metaphysics, distinctions between good and bad, along with other dichotomous moral judgments, are perceptual, not real; so, the duality of yin and yang is an indivisible whole. In the ethics of Confucianism on the other hand, most notably in the philosophy of Dong Zhongshu (c. 2nd century BC), a moral dimension is attached to the idea of yin and yang.

[>https://en.wikipedia.org/wiki/Yin_and_yang< — retrieved 30 May 2023]

Involution + Evolution = Cycle

Let’s summarize some extensive previous documentation: Recall that there are seven Processes, and that by Processes I refer to the seven fundamental types of changes that occur over time. In the Process/Aspect System, Involution and Evolution are opposite Processes on the Two-dimensional Inspiration Axis. (The other Processes are Analysis and Synthesis on opposite sides of the Three-dimensional Expression Axis, Termination and Origination on opposite sides of the Action Axis, and Combination on the Assimilation Axis.) Involution has the Attribute of Ordinality and Evolution has the Attribute of Cardinality. Involution has the metaphorical Direction of Downward and Evolution has the metaphorical Direction of Upward. I chose those two words for the Inspiration Processes because the two terms have a long history of usage in esoteric and exoteric sciences and philosophies. My understanding has both similarities and dissimilarities to historical precedents. Therefore, as usual, let’s take a look at what Wikipedia has to say about that history.

INVOLUTION

The term involution has various meanings. In some instances it refers to a process prior to evolution which gives rise to the Cosmos, in others it is an aspect of evolution, and in still others it is a process that follows the completion of evolution in the human form.

The word is ambiguous in the cosmology of other teachings. As we will see, sometimes the metaphors used are ‘inward’ and ‘outward’ (which I regard as Three-dimensional), and sometimes the metaphors used are ‘upward’ and ‘downward’ (which I regard as Two-dimensional), and sometimes the metaphors used are ‘backward’ and ‘forward’ process, (which I regard as One-dimensional). However, it is not ambiguous in the NS schema. Basically and briefly, my use of those terms is limited to the two Inspiration Processes (which I regard as Two-dimensional). In other words, various sources appear to have conflated three Dimensions of Ordinality and Cardinality; see further on.

According to esoteric cosmology

In theosophy, anthroposophy, and Rosicrucianism, involution and evolution are part of a complex sequence of cosmic cycles, called Round.

Theosophists, Anthroposophists, and Rosicrucians have their recursive nested cosmic cycles called Rounds (><https://theosophy.wiki/en/Round><), and I have my recursive nested NS schema — two names for the same thing. These others think that time has just one dimension, so they regard the septenarian cycle as a linear process with an involution phase and an evolution phase. In the NS schema, time has three dimensions, so not only does the universe connect from an end to a new beginning, but it also connects a top to a new bottom, and also it connect an inside to a new outside; see further on.

The metaphorical directions up ‘downward’ involution and ‘upward’ evolution are used in the following description, just as I do:

When the universe attains a stage of sufficient density, the individual spirit is able to descend and participate in the evolution. Involution thus refers to the incarnation of spirit in an already established matter, the necessary prerequisite of evolution:

As an example, the so-called descent of the Monad into matter means an involution or involving or infolding of spiritual potencies into material vehicles which coincidentally and contemporaneously, through the compelling urge of the infolding energies, unfold their own latent capacities, unwrap them, roll them forth; and this is the evolution of matter. — Gottfried de Purucker

Some of that wording is hard for me to follow because I am not intimately familiar with the Theosophical way of verbalizing their conceptualizations. My view of involution and evolution is informed by the Taijitu Tango Principle: in the NS schema, Involution is on the 'top' and evolution on the 'bottom' during the Ordinal stages of the septenarian cycle, and the reverse during the Cardinal stages of the septenarian cycle. In terms of universal involution/evolution,

That period of time devoted to the attainment of self-consciousness and the building of the vehicles through which the spirit in man manifests, is called involution. Its purpose is to slowly carry life lower and deeper into denser and denser matter for the building of forms, till the nadir of materiality is reached. From that point, life begins to ascend into higher Worlds. This succeeding period of existence, during which the individual human being develops self-consciousness into divine omniscience, is called "spiritual evolution".

In the cosmology of Surat Shabda Yoga, involution and evolution apply to both the macrocosm, the whole of creation, and the microcosm, the constitution of an individual soul.

This particular conceptualization uses the words involution and evolution to refer to what I conceptualize as the three-dimensional process of the turning of the universe inside out via the universal assimilation process. Recall that I regard the meaning of Three-dimensionality as having an inside and an outside. In this quotation, I take the word "macrocosm" to refer to the objective outer creation (the whole universe) and the word "microcosm" to refer to the subjective inner creation ("individual soul"). The extroverted part of the self looks outward and the introverted part of the self looks inward, and the assimilation interface between the two is what one perceives as one's self or ego. (Recall my definition that "consciousness" exists and functions as the assimilation boundary or membrane of a "self".) As the self assimilates both inner and outer worlds over time, it metaphorically 'grows' in this 3-D process.

~~The Rosicrucian Cosmo-Conception, a Rosicrucian text written by Max Heindel, advances the concept of epigenesis as the key related to the evolution (after an involutionary period) of human beings.~~

According to Sri Aurobindo

Introduction

For Sri Aurobindo, involution is the process by which the Omnipresent Reality, i.e. the Absolute, Brahman [aka Tao] extends Itself to create a universe of separate forms from out of Its own Force/Energy.

Sat, Chit-Tapas, and Delight/Ananda are the three aspects of Satchitananda, and they are part of involution. Spirit or consciousness manifests as these three, and then as the intermediate link of Supermind, which is transitional between the higher [three] and lower [three] (matter, life, and mind) nature.

If one is not familiar with the terms, then one must follow the hyperlinks provided by Wikipedia and/or read **Chapter X-x in Part X "Aurobindo"**. Basically and briefly, Satchitananda (Truth, Consciousness, Bliss) correlates with the Cardinal Expression, Cardinal Action, and Cardinal Inspiration Processes in the NS schema. The lower nature of "matter, life, and mind" correlate with Ordinal Action, Ordinal Inspiration, and Ordinal Expression Processes respectively. The transitional Supermind equates with the Assimilation Axis between the Cardinal (higher) and the Ordinal (lower) sides. In Aurobindonian terms, involution is the movement from what I refer to as Tao beyond the 'highest' down through the transitional zone to the 'lowest'.

The reason for involution is Delight — the Delight of Being (the Spirit or Absolute) moving to Delight of Becoming (temporal existence, the Cosmos). Being throws itself forward into a multiplicity of forms, becoming lost in the inconscience of matter, and then through evolution it partakes in the Delight of rediscovering the Spirit which had been hidden in the interim.

Whereas the space-like metaphors of 'higher' and 'lower' were used in the previous paragraph, in this paragraph the time-like metaphor of 'forward' is used. This mixing of space and time metaphors is mitigated in the NS schema.

Evolution is thus the movement forward by which the created universe evolves from its initial state of inconscience (i.e. as [1-D] matter), evolves [2-D] animated life forms and [3-D] mental beings (i.e. humans), and continues to evolve spiritual properties, and in that process rediscovers its Source. Such an Evolution of animated forms is only possible because at each stage of development, the developing entity contains within itself the

conception of what it may become. Thus, the evolution of animated life out of matter supposes a previous involution of that animated capacity. This is akin to a seed that already has the essence of the tree that will emerge from it.

Each plane emerges from an earlier plane through the evolutionary process, which takes place in chronological time. But in a parallel construction, each of these new planes can be understood as being a descendant of its corresponding higher order plane from the Infinite. Thus, when mentality emerged in the universe, the universal plane of Mind was implanted to a degree in those beings harboring that mentality.

The evolution is the development of all entities in the Cosmos, including humans, in order to attain their fulfillment, including the discovery of spiritual Delight, which was, and always is, the experience of the Source Creator. The evolution is the progressive development from the original inconscience of matter into life (movement, sensation, desire, etc. and living physical beings), and from thence to mind (in conscious animals and most especially humans — the self-conscious thinking animal), and from thence to spiritualized mind, culminating in The Supermind or Truth Consciousness (as supramental individuals, and finally the supramental, i.e. a divine life on earth).

Meher Baba

Meher Baba uses the term “involution” to mean the inner path of a spiritual aspirant toward Self-realization. He divides involution into seven stages he calls “planes”, and describes different experiences and powers had on each, until the goal of full enlightenment is achieved at the seventh plane.

Refer to **Chapter X-x in Part X** “Soul Age” for further discussion. Basically and briefly, Meher Baba uses the two terms the reverse of the way that others reviewed here do. The way that I reconcile this reversal of meaning is to apply the Taijitu Tango Principle: **the two define and contain each other, and it is the point of view that one takes with respect to the Processes that determines what seems to be going on.**

Other Indian interpretations

Baba Hari Dass

For Baba Hari Dass (a Maunisadhu monk who practices continual silence), evolution and involution are key concepts on [macrocosmic] universal level that have also individualized expressions [microcosmic] in mental processes. In Samkhya and Yoga Sutras of Patanjali, in yoga practice, those two states are conditions of mind ... with the mind’s outward-evolution expressions ... and the inward-involution expressions the involution stage where “Yoga is the control of thought waves in the mind” Outward expressions of mental activity ... draw the mind to the afflicting experiences, and in effect produce afflicting impressions... (outgoing mind). Involution, or deep introspection in yoga, leads to the opposite results and attenuates afflicting impressions to the finest degree possible with the end result of ... (non-painful thought waves). Thus, when the mind is liberated from painful impressions, one-pointed mind ... is achieved, which can be said to be the goal of yoga. One-pointed mind is the foundation of ... “super-consciousness”.

This are yet other way to say the same thing that is said in the NS schema: The “one-pointed mind” can be conceptualized as the assimilation zone between the Ordinal macrocosmic objective outer evolutionary and the Cardinal microcosmic subjective inner involutionary.

Integral thought

In integral thought, involution is the process by which the Divine manifests the Cosmos. The process by which the creation rises to higher states and states of consciousness is the evolution. Involution prepares the universe for the Big Bang; evolution continues from that point forward. The term involution comes from the idea that the divine involves itself in creation. After the creation, the Divine (i.e. the Absolute, Brahman, God) is both the One (the Creator) and the Many (that which was created).

The integral philosopher Ken Wilber refers to involution in his online chapter of Kosmic Karma, employing concepts from Plotinus, Advaita Vedanta, Tibetan Buddhism, and Sri Aurobindo. According to Wilber, the cosmic evolution described in his previous works is preceded by an involution of Spirit into Matter. This involution follows the reverse stages to the sequence of evolution — e.g. Spirit to soul to mind to life to matter. Once the stage of insentient, lifeless matter is attained, then “something like the Big Bang occurs”, whereupon matter and manifest world come into concrete existence, from which stage evolution follows.

The NS schema is in agreement with the Wilberian conception, if one takes the involution phase of creation before the Big Bang to be Potential and the evolution phase of creation to be Actual, **and if one takes the**

involution phase to be Chaos and the evolution phase to be Cosmos; refer to the section Potential versus Actual above. This is another usage of the terms that can be reconciled with other usages within the NS schema.

Gurdjieff

Involution and evolution are important themes in the cosmology of G. I. Gurdjieff (1866? – 1949), addressed in detail in his book *Beelzebub's Tales to His Grandson*.

In a popular presentation of Gurdjieff's teaching by P. D. Ouspensky and others, different terminologies are often preferred: "ascending and descending octaves" (evolutionary and involutionary processes), "the Ray of Creation" (the full scale of involutionary processes), "emanation" (the initiation of involutionary processes at the prime source), etc.

Like Aurobindo and others, Gurdjieff uses the word involution in reference to a top-down flow in the universe contributing to the creation and maintenance of Cosmoses. Gurdjieff's main emphasis, however, was the mystery of how the descending flow of involution could change into the ascending flow of evolution. Exactly in this mystery, Gurdjieff looked for the significance of all living creatures, particularly man.

[>[https://en.wikipedia.org/wiki/Involution_\(esotericism\)](https://en.wikipedia.org/wiki/Involution_(esotericism))< — retrieved 24 May 2023]

To my way of thinking, the differences and ambiguities in the definitions and descriptions of involution and evolution are cleared up by understanding them in NS terms, that is logic and mathematics and physics, specifically space/time and time/space geometry.

Pro + Con = Argumentation

Prosecution + Defense = Justice

[[The legal systems of groups and societies and cultures and nations and worlds have been working for millennia to fine tune the method of the quest for justice via the application of what was referred to as "Opponent Processing" in Chapter X-x in the section by that name, and by what is called Prosecution + Defense in this section.... This is reminiscent of the scientific and philosophical endeavors to approach the truth via the dialectic process...]]

Ordinal + Cardinal = Neutral

Yin and Yang in Chinese philosophy and Tao's Template (TT) have their equivalent in the Natural Sequence (NS), and the Process/Aspect System, namely Ordinal and Cardinal. It so happens that these are mathematical terms, so let's take a look at their definitions in that realm

Continuum + Quantum =

Make the distinction between the Quantum (the maximum One) versus the quantum (the minimum One). The wave/particle duality might figure in here, as both are required for a 'complete' description of a phenomenon:

In physics, complementarity is a conceptual aspect of quantum mechanics that Niels Bohr regarded as an essential feature of the theory. The complementarity principle holds that objects have certain pairs of complementary properties which cannot all be observed or measured simultaneously, for examples, position and momentum or wave and particle properties. In modern terms, complementarity encompasses both the uncertainty principle and wave-particle duality.

Bohr considered one of the foundational truths of quantum mechanics to be the fact that setting up an experiment to measure one quantity of a pair, for instance the position of an electron, excludes the possibility of

measuring the other, yet understanding both experiments is necessary to characterize the object under study. In Bohr's view, the behavior of atomic and subatomic objects cannot be separated from the measuring instruments that create the context in which the measured objects behave. Consequently, there is no "single picture" that unifies the results obtained in these different experimental contexts, and only the "totality of the phenomena" together can provide a completely informative description. [>

[https://en.wikipedia.org/wiki/Complementarity_\(physics\)<](https://en.wikipedia.org/wiki/Complementarity_(physics)<) — retrieved xxx]

Wave–particle duality is the concept in quantum mechanics that quantum entities exhibit particle or wave properties according to the experimental circumstances. It expresses the inability of the classical concepts such as particle or wave to fully describe the behavior of quantum objects. During the 19th and early 20th centuries, light was found to behave as a wave, and then later discovered to have a particulate character, whereas electrons were found to act as particles, and then later discovered to have wavelike aspects. The concept of duality arose to name these contradictions. [>https://en.wikipedia.org/wiki/Wave–particle_duality< — retrieved xxx]

Find where it says, if anywhere, that all particles have a field, not just photons and electrons. The Mind Field would be the Oneness to those Twonesses.

Quantity + Quality = Attributes

Space + Time = Motion

See if I can find a source other than Dewey Larson for this section.

Quantum Mechanics + General Relativity = Quantum Gravity

Digital + Analogue = Computation

[[Review the papers submitted to FQXI for the essay contest of the year ____]]

Formula + Algorithm = Mathematical Structures

Formulas are space-like? algorithms are time-like?

Thesis + Antithesis = Synthesis

[[This section should perhaps go in another chapter, the one about Universal Darwinism = Tao learning.]]

The above formula is commonly known as the Hegelian Dialectic

Dialectic (Greek: διαλεκτική, dialektikḗ; related to dialogue; German: Dialektik), also known as the dialectical method, is a discourse between two or more people holding different points of view about a subject but wishing to establish the truth through reasoned argumentation. Dialectic resembles debate, but the concept excludes subjective elements such as emotional appeal and rhetoric (in the modern pejorative sense). Dialectic may thus be contrasted with both the eristic, which refers to argument that aims to successfully dispute another's argument (rather than searching for truth), and the didactic method, wherein one side of the conversation teaches the other. Dialectic is alternatively known as minor logic, as opposed to major logic or critique.

Within Hegelianism, the word dialectic has the specialised meaning of a contradiction between ideas that serves as the determining factor in their relationship. Dialectical materialism, a theory or set of theories produced mainly by Karl Marx and Friedrich Engels, adapted the Hegelian dialectic into arguments regarding traditional materialism. The dialectics of Hegel and Marx were criticized in the twentieth century by the philosophers Karl Popper and Mario Bunge.

Dialectic tends to imply a process of evolution and so does not naturally fit within classical logics, but was given some formalism in the twentieth century. The emphasis on process is particularly marked in Hegelian dialectic, and even more so in Marxist dialectical logic, which tried to account for the evolution of ideas over longer time periods in the real world.

WESTERN DIALECTICAL FORMS

There is a variety of meanings of dialectic or dialectics within Western philosophy.

Classical philosophy

In classical philosophy, dialectic (διαλεκτική) is a form of reasoning based upon dialogue of arguments and counter-arguments, advocating propositions (theses) and counter-propositions (antitheses). The outcome of such a dialectic might be the refutation of a relevant proposition, or of a synthesis, or a combination of the opposing assertions, or a qualitative improvement of the dialogue.

Moreover, the term “dialectic” owes much of its prestige to its role in the philosophies of Socrates and Plato, in the Greek Classical period (5th to 4th centuries BC). Aristotle said that it was the pre-Socratic philosopher Zeno of Elea who invented dialectic, of which the dialogues of Plato are the examples of the Socratic dialectical method.

According to Kant, however, the ancient Greeks used the word "dialectic" to signify the logic of false appearance or semblance. To the Ancients, “it was nothing but the logic of illusion. It was a sophistic art of giving to one's ignorance, indeed even to one's intentional tricks, the outward appearance of truth, by imitating the thorough, accurate method which logic always requires, and by using its topic as a cloak for every empty assertion.”

Socratic method

The Socratic dialogues are a particular form of dialectic known as the method of elenchus (literally, “refutation, scrutiny”) whereby a series of questions clarifies a more precise statement of a vague belief, logical consequences of that statement are explored, and a contradiction is discovered. The method is largely destructive, in that false belief is exposed and only constructive in that this exposure may lead to further search for truth. The detection of error does not amount to a proof of the antithesis; for example, a contradiction in the consequences of a definition of piety does not provide a correct definition. The principal aim of Socratic activity may be to improve the soul of the interlocutors, by freeing them from unrecognized errors; or indeed, by teaching them the spirit of inquiry.

In common cases, Socrates used enthymemes as the foundation of his argument.

For example, in the *Euthyphro*, Socrates asks Euthyphro to provide a definition of piety. Euthyphro replies that the pious is that which is loved by the gods. But, Socrates also has Euthyphro agreeing that the gods are quarrelsome and their quarrels, like human quarrels, concern objects of love or hatred. Therefore, Socrates reasons, at least one thing exists that certain gods love but other gods hate. Again, Euthyphro agrees. Socrates concludes that if Euthyphro's definition of piety is acceptable, then there must exist at least one thing that is both pious and impious (as it is both loved and hated by the gods) — which Euthyphro admits is absurd. Thus, Euthyphro is brought to a realization by this dialectical method that his definition of piety is not sufficiently meaningful.

In another example, in Plato's *Gorgias*, dialectic occurs between Socrates, the Sophist Gorgias, and two men, Polus and Callicles. Because Socrates' ultimate goal was to reach true knowledge, he was even willing to change his own views in order to arrive at the truth. The fundamental goal of dialectic, in this instance, was to establish a precise definition of the subject (in this case, rhetoric) and with the use of argumentation and questioning, make

the subject even more precise. In the *Gorgias*, Socrates reaches the truth by asking a series of questions and in return, receiving short, clear answers.

Plato

There is another interpretation of dialectic, suggested in *The Republic*, as a procedure that is both discursive and intuitive. In Platonism and Neoplatonism, dialectic assumes an ontological and metaphysical role in that it becomes the process whereby the intellect passes from sensibles to intelligibles, rising from Idea to Idea until it finally grasps the supreme Idea, the First Principle which is the origin of all. The philosopher is consequently a "dialectician". In this sense, dialectic is a process of enquiry that does away with hypotheses up to the First Principle (*Republic*, VII, 533 c-d). It slowly embraces the multiplicity in unity. Simon Blackburn writes that the dialectic in this sense is used to understand "the total process of enlightenment, whereby the philosopher is educated so as to achieve knowledge of the supreme good, the Form of the Good".

Aristotle

Aristotle stresses that rhetoric is closely related to dialectic. He offers several formulas to describe this affinity between the two disciplines: first of all, rhetoric is said to be a "counterpart" (*antistrophos*) to dialectic (*Rhet.* I.1, 1354a1); (ii) it is also called an "outgrowth" (*paraphues ti*) of dialectic and the study of character (*Rhet.* I.2, 1356a25f.); finally, Aristotle says that rhetoric is part of dialectic and resembles it (*Rhet.* I.2, 1356a30f.). In saying that rhetoric is a counterpart to dialectic, Aristotle obviously alludes to Plato's *Gorgias* (464bff.), where rhetoric is ironically defined as a counterpart to cookery in the soul. Since, in this passage, Plato uses the word 'antistrophos' to designate an analogy, it is likely that Aristotle wants to express a kind of analogy too: what dialectic is for the (private or academic) practice of attacking and maintaining an argument, rhetoric is for the (public) practice of defending oneself or accusing an opponent. The analogy to dialectic has important implications for the status of rhetoric. Plato argued in his *Gorgias* that rhetoric cannot be an art (*technê*), since it is not related to a definite subject, while real arts are defined by their specific subjects, as e.g. medicine or shoemaking are defined by their products, i.e., health and shoes.

Medieval philosophy

Logic, which could be considered to include dialectic, was one of the three liberal arts taught in medieval universities as part of the trivium; the other elements were rhetoric and grammar.

Based mainly on Aristotle, the first medieval philosopher to work on dialectics was Boethius (480–524). After him, many scholastic philosophers also made use of dialectics in their works, such as Abelard, William of Sherwood, Garlandus Compotista, Walter Burley, Roger Swyneshed, William of Ockham, and Thomas Aquinas.

This dialectic (a *quaestio disputata*) was formed as follows:

- The question to be determined ("It is asked whether...");
- A provisory answer to the question ("And it seems that...");
- The principal arguments in favor of the provisory answer;
- An argument against the provisory answer, traditionally a single argument from authority ("On the contrary...");
- The determination of the question after weighing the evidence ("I answer that...");
- The replies to each of the initial objections. ("To the first, to the second etc., I answer that...")

Modern philosophy

The concept of dialectics was given new life at the start of the 19th century by Georg Wilhelm Friedrich Hegel (following Johann Gottlieb Fichte), whose dialectical model of nature and of history made dialectic a fundamental aspect of the nature of reality (instead of regarding the contradictions into which dialectics leads as a sign of the sterility of the dialectical method, as the 18th-century philosopher Immanuel Kant tended to do in his *Critique of Pure Reason*).

In the mid-19th century, the concept of dialectics was appropriated by Karl Marx (see, for example, *Das Kapital*, published in 1867) and Friedrich Engels and retooled in what they considered to be a nonidealistic manner. It

would also become a crucial part of later representations of Marxism as a philosophy of dialectical materialism. These representations often contrasted dramatically[25] and led to vigorous debate among different Marxist groupings.

Hegelian dialectic

The Hegelian dialectic describes the change of forms of thought through their own internal contradictions into higher forms that unite said oppositions, however this dialectic is usually presented in a threefold manner, as stated by Heinrich Moritz Chalybäus as comprising three dialectical stages of development: a thesis, giving rise to its reaction; an antithesis, which contradicts or negates the thesis; and the tension between the two being resolved by means of a synthesis. Although this model is often named after Hegel, he never used that specific formulation. Hegel ascribed that terminology to Kant. Carrying on Kant's work, Fichte greatly elaborated on the synthesis model and popularized it.

On the other hand, Hegel did use a three-valued logical model that is very similar to the antithesis model, but Hegel's most usual terms were: Abstract-Negative-Concrete. Hegel used this writing model as a backbone to accompany his points in many of his works.

The formula, thesis-antithesis-synthesis, does not explain why the thesis requires an antithesis. However, the formula, abstract-negative-concrete, suggests a flaw, or perhaps an incompleteness, in any initial thesis—it is too abstract and lacks the negative of trial, error, and experience. For Hegel, the concrete, the synthesis, the absolute, must always pass through the phase of the negative, in the journey to completion, that is, mediation. This is the essence of what is popularly called Hegelian dialectics.

According to the German philosopher Walter Kaufmann:

Fichte introduced into German philosophy the three-step of thesis, antithesis, and synthesis, using these three terms. Schelling took up this terminology. Hegel did not. He never once used these three terms together to designate three stages in an argument or account in any of his books. And they do not help us understand his *Phenomenology*, his *Logic*, or his philosophy of history; they impede any open-minded comprehension of what he does by forcing it into a scheme which was available to him and which he deliberately spurned [...] The mechanical formalism [...] Hegel derides expressly and at some length in the preface to the *Phenomenology*.

Kaufmann also cites Hegel's criticism of the triad model commonly misattributed to him, adding that "the only place where Hegel uses the three terms together occurs in his lectures on the history of philosophy, on the last page but one of the sections on Kant—where Hegel roundly reproaches Kant for having 'everywhere posited thesis, antithesis, synthesis'".

To describe the activity of overcoming the negative, Hegel also often used the term *Aufhebung*, variously translated into English as "sublation" or "overcoming", to conceive of the working of the dialectic. Roughly, the term indicates preserving the useful portion of an idea, thing, society, etc., while moving beyond its limitations.

In the *Logic*, for instance, Hegel describes a dialectic of existence: first, existence must be posited as pure Being (*Sein*); but pure Being, upon examination, is found to be indistinguishable from Nothing (*Nichts*). When it is realized that what is coming into being is, at the same time, also returning to nothing (in life, for example, one's living is also a dying), both Being [Something] and Nothing are united as Becoming.

As in the Socratic dialectic, Hegel claimed to proceed by making implicit contradictions explicit: each stage of the process is the product of contradictions inherent or implicit in the preceding stage. For Hegel, the whole of history is one tremendous dialectic, major stages of which chart a progression from self-alienation as slavery to self-unification and realization as the rational constitutional state of free and equal citizens. The Hegelian dialectic cannot be mechanically applied for any chosen thesis. Critics argue that the selection of any antithesis, other than the logical negation of the thesis, is subjective. Then, if the logical negation is used as the antithesis, there is no rigorous way to derive a synthesis. In practice, when an antithesis is selected to suit the user's subjective purpose,

the resulting “contradictions” are rhetorical, not logical, and the resulting synthesis is not rigorously defensible against a multitude of other possible syntheses. The problem with the Fichtean “thesis–antithesis–synthesis” model is that it implies that contradictions or negations come from outside of things. Hegel’s point is that they are inherent in and internal to things. This conception of dialectics derives ultimately from Heraclitus.

Hegel stated that the purpose of dialectics is “to study things in their own being and movement and thus to demonstrate the finitude of the partial categories of understanding.”

One important dialectical principle for Hegel is the transition from quantity to quality, which he terms the Measure. The measure is the qualitative quantum, the quantum is the existence of quantity.

The identity between quantity and quality, which is found in Measure, is at first only implicit, and not yet explicitly realised. In other words, these two categories, which unite in Measure, each claim an independent authority. On the one hand, the quantitative features of existence may be altered, without affecting its quality. On the other hand, this increase and diminution, immaterial though it be, has its limit, by exceeding which the quality suffers change. [...] But if the quantity present in measure exceeds a certain limit, the quality corresponding to it is also put in abeyance. This however is not a negation of quality altogether, but only of this definite quality, the place of which is at once occupied by another. This process of measure, which appears alternately as a mere change in quantity, and then as a sudden revulsion of quantity into quality, may be envisaged under the figure of a nodal (knotted) line.

As an example, Hegel mentions the states of aggregation of water: “Thus the temperature of water is, in the first place, a point of no consequence in respect of its liquidity: still with the increase or diminution of the temperature of the liquid water, there comes a point where this state of cohesion suffers a qualitative change, and the water is converted into steam or ice”. As other examples Hegel mentions the reaching of a point where a single additional grain makes a heap of wheat; or where the bald tail is produced, if we continue plucking out single hairs.

Another important principle for Hegel is the negation of the negation, which he also terms *Aufhebung* (sublation): Something is only what it is in its relation to another, but by the negation of the negation this something incorporates the other into itself. The dialectical movement involves two moments that negate each other, something and its other. As a result of the negation of the negation, “something becomes its other; this other is itself something; therefore it likewise becomes an other, and so on ad infinitum”. Something in its passage into other only joins with itself, it is self-related. In becoming there are two moments: coming-to-be and ceasing-to-be: by sublation, i.e., negation of the negation, being passes over into nothing, it ceases to be, but something new shows up, is coming to be. What is sublated (*aufgehoben*) on the one hand ceases to be and is put to an end, but on the other hand it is preserved and maintained. In dialectics, a totality transforms itself; it is self-related, then self-forgetful, relieving the original tension.

Marxist dialectic is a form of Hegelian dialectic which applies to the study of historical materialism. It purports to be a reflection of the real world created by man. Dialectic would thus be a robust method under which one could examine personal, social, and economic behaviors. Marxist dialectic is the core foundation of the philosophy of dialectical materialism, which forms the basis of the ideas behind historical materialism.

Karl Marx and Friedrich Engels, writing several decades after Hegel's death, proposed that Hegel's dialectic is too abstract:

The mystification which dialectic suffers in Hegel’s hands, by no means prevents him from being the first to present its general form of working in a comprehensive and conscious manner. With him it is standing on its head. It must be turned right side up again, if you would discover the rational kernel within the mystical shell.

In contradiction to Hegelian idealism, Marx presented his own dialectic method, which he claims to be “direct opposite” of Hegel’s method:

My dialectic method is not only different from the Hegelian, but is its direct opposite. To Hegel, the life-process of the human brain, i.e. the process of thinking, which, under the name of 'the Idea', he even transforms into an independent subject, is the demiurgos of the real world, and the real world is only the external, phenomenal form of 'the Idea'. With me, on the contrary, the ideal is nothing else than the material world reflected by the human mind, and translated into forms of thought.

In Marxism, the dialectical method of historical study became intertwined with historical materialism, the school of thought exemplified by the works of Marx, Engels, and Vladimir Lenin. In the USSR, under Joseph Stalin, Marxist dialectics became "diamat" (short for dialectical materialism), a theory emphasizing the primacy of the material way of life; social praxis over all forms of social consciousness; and the secondary, dependent character of the "ideal".

The term "dialectical materialism" was coined by the 19th-century social theorist Joseph Dietzgen who used the theory to explain the nature of socialism and social development. The original populariser of Marxism in Russia, Georgi Plekhanov used the terms "dialectical materialism" and "historical materialism" interchangeably. For Lenin, the primary feature of Marx's "dialectical materialism" (Lenin's term) was its application of materialist philosophy to history and social sciences. Lenin's main input in the philosophy of dialectical materialism was his theory of reflection, which presented human consciousness as a dynamic reflection of the objective material world that fully shapes its contents and structure.

Later, Stalin's works on the subject established a rigid and formalistic division of Marxist–Leninist theory in the dialectical materialism and historical materialism parts. While the first was supposed to be the key method and theory of the philosophy of nature, the second was the Soviet version of the philosophy of history.

~~A dialectical method was fundamental to Western Marxists such as Karl Korsch and Georg Lukács. Certain members of the Frankfurt School also used dialectical thinking, such as Theodor W. Adorno who developed negative dialectics. Soviet academics, notably Evald Ilyenkov and Zaid Orudzhev, continued pursuing unorthodox philosophic study of Marxist dialectics; likewise in the West, notably the philosopher Bertell Ollman at New York University.~~

Friedrich Engels proposed that Nature is dialectical, thus, in *Anti-Dühring* he said that the negation of negation is:

A very simple process, which is taking place everywhere and every day, which any child can understand as soon as it is stripped of the veil of mystery in which it was enveloped by the old idealist philosophy.

In *Dialectics of Nature*, Engels said:

Probably the same gentlemen who up to now have decried the transformation of quantity into quality as mysticism and incomprehensible transcendentalism will now declare that it is indeed something quite self-evident, trivial, and commonplace, which they have long employed, and so they have been taught nothing new. But to have formulated for the first time in its universally valid form a general law of development of Nature, society, and thought, will always remain an act of historic importance.

Marxist dialectics is exemplified in *Das Kapital* (Capital), which outlines two central theories: (i) surplus value and (ii) the materialist conception of history; Marx explains dialectical materialism:

In its rational form, it is a scandal and abomination to bourgeoisdom and its doctrinaire professors, because it includes in its comprehension an affirmative recognition of the existing state of things, at the same time, also, the recognition of the negation of that state, of its inevitable breaking up; because it regards every historically developed social form as in fluid movement, and therefore takes into account its transient nature not less than its momentary existence; because it lets nothing impose upon it, and is in its essence critical and revolutionary.

Class struggle is the primary contradiction to be resolved by Marxist dialectics, because of its central role in the social and political lives of a society. Nonetheless, Marx and Marxists developed the concept of class struggle to comprehend the dialectical contradictions between mental and manual labor, and between town and country. Hence, philosophic contradiction is central to the development of dialectics – the progress from quantity to quality, the acceleration of gradual social change; the negation of the initial development of the status quo; the negation of that negation; and the high-level recurrence of features of the original status quo.

In the USSR, Progress Publishers issued anthologies of dialectical materialism by Lenin, wherein he also quotes Marx and Engels:

As the most comprehensive and profound doctrine of development, and the richest in content, Hegelian dialectics was considered by Marx and Engels the greatest achievement of classical German philosophy.... "The great basic thought", Engels writes, "that the world is not to be comprehended as a complex of ready-made things, but as a complex of processes, in which the things, apparently stable no less than their mind images in our heads, the concepts, go through an uninterrupted change of coming into being and passing away... this great fundamental thought has, especially since the time of Hegel, so thoroughly permeated ordinary consciousness that, in its generality, it is now scarcely ever contradicted. But, to acknowledge this fundamental thought in words, and to apply it in reality in detail to each domain of investigation, are two different things.... For dialectical philosophy nothing is final, absolute, sacred. It reveals the transitory character of everything and in everything; nothing can endure before it, except the uninterrupted process of becoming and of passing away, of endless ascendancy from the lower to the higher. And dialectical philosophy, itself, is nothing more than the mere reflection of this process in the thinking brain." Thus, according to Marx, dialectics is "the science of the general laws of motion both of the external world and of human thought".

The basic notion here is that dialectical materialism lives in the Ordinal Worldviews and dialectical idealism lives in the Cardinal Worldviews.

Lenin describes his dialectical understanding of the concept of development:

A development that repeats, as it were, stages that have already been passed, but repeats them in a different way, on a higher basis ("the negation of the negation"), a development, so to speak, that proceeds in spirals, not in a straight line; a development by leaps, catastrophes, and revolutions; "breaks in continuity"; the transformation of quantity into quality; inner impulses towards development, imparted by the contradiction and conflict of the various forces and tendencies acting on a given body, or within a given phenomenon, or within a given society; the interdependence and the closest and indissoluble connection between all aspects of any phenomenon (history constantly revealing ever new aspects), a connection that provides a uniform, and universal process of motion, one that follows definite laws – these are some of the features of dialectics as a doctrine of development that is richer than the conventional one.

An example of the influence of Marxist dialectic in the European tradition is Jean-Paul Sartre's 1960 book *Critique of Dialectical Reason*. Sartre stated:

Existentialism, like Marxism, addresses itself to experience in order to discover there concrete syntheses. It can conceive of these syntheses only within a moving, dialectical totalisation, which is nothing else but history or—from the strictly cultural point of view adopted here—"philosophy-becoming-the world".[47]

Dialectical naturalism

Dialectical naturalism is a term coined by American philosopher Murray Bookchin to describe the philosophical underpinnings of the political program of social ecology. Dialectical naturalism explores the complex interrelationship between social problems, and the direct consequences they have on the ecological impact of human society. Bookchin offered dialectical naturalism as a contrast to what he saw as the "empyrean, basically antinaturalistic dialectical idealism" of Hegel, and "the wooden, often scientistic dialectical materialism of orthodox Marxists".

The basic notion here is that, in Nature, there are selves interacting with not self in such a way as the self models both the self and the not self and learns to thereby survive and thrive. **Refer to Chapter Xx "..."**

THEOLOGICAL DIALECTICAL FORMS

Dialectical theology

Neo-orthodoxy, in Europe also known as theology of crisis and dialectical theology, is an approach to theology in Protestantism that was developed in the aftermath of the First World War (1914–1918). It is characterized as a reaction against doctrines of 19th-century liberal theology and a more positive reevaluation of the teachings of the Reformation, much of which had been in decline (especially in western Europe) since the late 18th century. [50] It is primarily associated with two Swiss professors and pastors, Karl Barth (1886–1968) and Emil Brunner (1899–1966), even though Barth himself expressed his unease in the use of the term.

In dialectical theology the difference and opposition between God and human beings is stressed in such a way that all human attempts at overcoming this opposition through moral, religious or philosophical idealism must be characterized as 'sin'. In the death of Christ humanity is negated and overcome, but this judgment also points forwards to the resurrection in which humanity is reestablished in Christ. For Barth this meant that only through God's 'no' to everything human can his 'yes' be perceived. Applied to traditional themes of Protestant theology, such as double predestination, this means that election and reprobation cannot be viewed as a quantitative limitation of God's action. Rather it must be seen as its "qualitative definition". As Christ bore the rejection as well as the election of God for all humanity, every person is subject to both aspects of God's double predestination.

Dialectic prominently figured in Bernard Lonergan's philosophy, in his books *Insight and Method in Theology*. Michael Shute wrote about Lonergan's use of dialectic in *The Origins of Lonergan's Notion of the Dialectic of History*. For Lonergan, dialectic is both individual and operative in community. Simply described, it is a dynamic process that results in something new:

For the sake of greater precision, let us say that a dialectic is a concrete unfolding of linked but opposed principles of change. Thus there will be a dialectic if (1) there is an aggregate of events of a determinate character, (2) the events may be traced to either or both of two principles, (3) the principles are opposed yet bound together, and (4) they are modified by the changes that successively result from them.

Dialectic is one of the eight functional specialties Lonergan envisaged for theology to bring this discipline into the modern world. Lonergan believed that the lack of an agreed method among scholars had inhibited substantive agreement from being reached and progress from being made compared to the natural sciences. Karl Rahner, S.J., however, criticized Lonergan's theological method in a short article entitled "Some Critical Thoughts on 'Functional Specialties in Theology'" where he stated: "Lonergan's theological methodology seems to me to be so generic that it really fits every science, and hence is not the methodology of theology as such, but only a very general methodology of science."

Criticisms

Karl Popper has attacked the dialectic repeatedly. In 1937, he wrote and delivered a paper entitled "What Is Dialectic?" in which he attacked the dialectical method for its willingness "to put up with contradictions".[56] Popper concluded the essay with these words: "The whole development of dialectic should be a warning against the dangers inherent in philosophical system-building. It should remind us that philosophy should not be made a basis for any sort of scientific system and that philosophers should be much more modest in their claims. One task which they can fulfill quite usefully is the study of the critical methods of science" (Ibid., p. 335).

In chapter 12 of volume 2 of *The Open Society and Its Enemies* (1944; 5th rev. ed., 1966), Popper unleashed a famous attack on Hegelian dialectics in which he held that Hegel's thought was to some degree responsible for facilitating the rise of fascism in Europe by encouraging and justifying irrationalism. (This was unjust in the view of some philosophers, such as Walter Kaufmann.) In section 17 of his 1961 "addenda" to *The Open Society*, entitled "Facts, Standards and Truth: A Further Criticism of Relativism", Popper refused to moderate his criticism of the Hegelian dialectic, arguing that it "played a major role in the downfall of the liberal movement in Germany [...] by contributing to historicism and to an identification of might and right, encouraged totalitarian modes of thought. [...] [And] undermined and eventually lowered the traditional standards of intellectual responsibility and honesty".

The philosopher of science and physicist Mario Bunge repeatedly criticized Hegelian and Marxian dialectics, calling them "fuzzy and remote from science"[59] and a "disastrous legacy". He concluded: "The so-called laws of dialectics, such as formulated by Engels (1940, 1954) and Lenin (1947, 1981), are false insofar as they are intelligible."

Formalism

Since the late 20th century, European and American logicians have attempted to provide mathematical foundations for dialectic through formalisation, although logic has been related to dialectic since ancient times. Such as Stephen Toulmin (*The Uses of Argument*, 1958), Nicholas Rescher (*Dialectics: A Controversy-Oriented Approach to the Theory of Knowledge*, 1977), and Frans H. van Eemeren and Rob Grootendorst (pragma-dialectics, 1980s). One can include works of the communities of informal logic and paraconsistent logic.

Defeasibility

Building on theories of defeasible reasoning (see John L. Pollock), systems have been built that define well-formedness of arguments, rules governing the process of introducing arguments based on fixed assumptions, and rules for shifting burden. Many of these logics appear in the special area of artificial intelligence and law, though the computer scientists' interest in formalizing dialectic originates in a desire to build decision support and computer-supported collaborative work systems.

Dialog games

Dialectic itself can be formalised as moves in a game, where an advocate for the truth of a proposition and an opponent argue. Such games can provide a semantics of logic, one that is very general in applicability.

Mathematics

Mathematician William Lawvere interpreted dialectics in the setting of categorical logic in terms of adjunctions between idempotent monads. This perspective may be useful in the context of theoretical computer science where the duality between syntax and semantics can be interpreted as a dialectic in this sense. For example, the Curry-Howard equivalence is such an adjunction or more generally the duality between closed monoidal categories and their internal logic. [<https://en.wikipedia.org/wiki/Dialectic> — retrieved 31 May 2023]

Physis + Psyche = Psychoïd

Question + Answer = Learning

Being + Doing = Transformation

Chaos (Probabilism) + Cosmos (Determinism) = Complexity

If it can be said that the basic philosophy of reductionism is that all space-like levels and time-like stages of the Cosmos are implied in the lowest levels and earliest stages — as latent potential in the Big Bang, as it were — and the inexorable laws of the Cosmos grind on relentlessly such that there is “nothing new under the sun”, then it can also be said that the philosophy of emanationism says otherwise, namely that there is unpredictable novelty and originality in terms of the structure of space/time subsequent to the primordial or initial creation event, if there was such a thing. This would mean that disorderly chaos is as fundamental as orderly Cosmos, and that contingency is as real as necessity. As you read the following quotations from Wikipedia, take note of this difference between the two philosophies.

If I read the following Wikipedia article on chaos correctly, the distinction between nothing and chaos was not evident to all people is their cosmogonical (creation) traditions. Let's review that article.

Throughout this *Cosmogony* book, I refer to the orderly component of existence and function, of space and of time, as the Cosmos, and it is claimed that the Tao's Template ontology / the Natural Sequence schema / the Process/Aspect System matrix exhibit the patterned structure of the Cosmos. In ancient Greek philosophy, the Cosmos was contrasted with Chaos, and it was said that Chaos was the unstructured undefined disorderly realm from which the orderly Cosmos *emerged* — notice that word “emerged”. As it so happens, modern quantum physics says the same thing. As an introduction to this notion, we turn to Wikipedia, as usual.

Chaos

CHAOS

Chaos (Ancient Greek: χάος, romanized: Kháos) is the mythological void state preceding the creation of the universe (the Cosmos) in Greek creation myths. In Christian theology, the same term is used to refer to the gap or the abyss created by the separation of heaven and earth.

Etymology

Greek kháos (χάος) means 'emptiness, vast void, chasm, abyss', related to the verbs kháskō (χάσκω) and khainō (χαίνω) 'gape, be wide open', from Proto-Indo-European *ǵʰeh₂n-, cognate to Old English geanian, 'to gape', whence English yawn.

It may also mean space, the expanse of air, the nether abyss or infinite darkness. Pherecydes of Syros (fl. 6th century BC) interprets chaos as water, like something formless that can be differentiated.

Greco-Roman tradition

Hesiod and the Pre-Socratics use the Greek term in the context of cosmogony. Hesiod's Chaos has been interpreted as either "the gaping void above the Earth created when Earth and Sky are separated from their primordial unity" or "the gaping space below the Earth on which Earth rests." Passages in Hesiod's Theogony suggest that Chaos was located below Earth but above Tartarus. Primal Chaos was sometimes said to be the true foundation of reality, particularly by philosophers such as Heraclitus.

Archaic Period

In Hesiod's Theogony, Chaos was the first thing to exist: "at first Chaos came to be" (or was), but next (possibly out of Chaos) came Gaia, Tartarus, and Eros (elsewhere the name Eros is used for a son of Aphrodite).[a] Unambiguously "born" from Chaos were Erebus and Nyx. For Hesiod, Chaos, like Tartarus, though personified enough to have borne children, was also a place, far away, underground and "gloomy," beyond which lived the Titans. And, like the earth, the ocean, and the upper air, it was also capable of being affected by Zeus's thunderbolts.

The notion of the temporal infinity was familiar to the Greek mind from remote antiquity in the religious conception of immortality. The main object of the first efforts to explain the world remained the description of its growth, from a beginning. They believed that the world arose out from a primal unity, and that this substance was the permanent base of all its being. Anaximander claims that the origin is apeiron (the unlimited), a divine and perpetual substance less definite than the common elements (water, air, fire, and earth) as they were understood to the early Greek philosophers. Everything is generated from apeiron, and must return there according to necessity. A conception of the nature of the world was that the earth below its surface stretches down indefinitely and has its roots on or above Tartarus, the lower part of the underworld. In a phrase of Xenophanes, "The upper limit of the earth borders on air, near our feet. The lower limit reaches down to the "apeiron" (i.e. the unlimited)." The sources and limits of the earth, the sea, the sky, Tartarus, and all things are located in a great windy-gap, which seems to be infinite, and is a later specification of "chaos".

Classical Greece

In Aristophanes's comedy *Birds*, first there was Chaos, Night, Erebus, and Tartarus, from Night came Eros, and from Eros and Chaos came the race of birds.

At the beginning there was only Chaos, Night, dark Erebus, and deep Tartarus. Earth, the air and heaven had no existence. Firstly, blackwinged Night laid a germless egg in the bosom of the infinite deeps of Erebus, and from this, after the revolution of long ages, sprang the graceful Eros with his glittering golden

wings, swift as the whirlwinds of the tempest. He mated in deep Tartarus with dark Chaos, winged like himself, and thus hatched forth our race, which was the first to see the light. That of the Immortals did not exist until Eros had brought together all the ingredients of the world, and from their marriage Heaven, Ocean, Earth, and the imperishable race of blessed gods sprang into being. Thus our origin is very much older than that of the dwellers in Olympus. We [birds] are the offspring of Eros; there are a thousand proofs to show it. We have wings and we lend assistance to lovers. How many handsome youths, who had sworn to remain insensible, have opened their thighs because of our power and have yielded themselves to their lovers when almost at the end of their youth, being led away by the gift of a quail, a waterfowl, a goose, or a cock.

In Plato's *Timaeus*, the main work of Platonic cosmology, the concept of chaos finds its equivalent in the Greek expression *chôra*, which is interpreted, for instance, as shapeless space (*chôra*) in which material traces (*ichnê*) of the elements are in disordered motion (*Timaeus* 53a–b). However, the Platonic *chôra* is not a variation of the atomistic interpretation of the origin of the world, as is made clear by Plato's statement that the most appropriate definition of the *chôra* is "a receptacle of all becoming – its wetnurse, as it were" (*Timaeus* 49a), notabene a receptacle for the creative act of the demiurge, the world-maker.

Aristotle, in the context of his investigation of the concept of space in physics, "problematises the interpretation of Hesiod's chaos as 'void' or 'place without anything in it'. Aristotle understands chaos as something that exists independently of bodies and without which no perceptible bodies can exist. 'Chaos' is thus brought within the framework of an explicitly physical investigation. It has now outgrown the mythological understanding to a great extent and, in Aristotle's work, serves above all to challenge the atomists who assert the existence of empty space."

Roman tradition

For Ovid, (43 BC – 17/18 AD), in his *Metamorphoses*, Chaos was an unformed mass, where all the elements were jumbled up together in a "shapeless heap".

Before the ocean and the earth appeared— before the skies had overspread them all—
the face of Nature in a vast expanse was naught but Chaos uniformly waste.

It was a rude and undeveloped mass, that nothing made except a ponderous weight;
and all discordant elements confused, were there congested in a shapeless heap. [24]

According to Hyginus: "From Mist (*Caligo*) came Chaos. From Chaos and Mist, came Night (*Nox*), Day (*Dies*), Darkness (*Erebus*), and Ether (*Aether*)." An Orphic tradition apparently had Chaos as the son of Chronus and Ananke.

Biblical tradition

Chaos has been linked with the term *abyss* / *tohu wa-bohu* of Genesis 1:2. The term may refer to a state of non-being prior to creation[28][29] or to a formless state. In the Book of Genesis, the spirit of God is moving upon the face of the waters, displacing the earlier state of the universe that is likened to a "watery chaos" upon which there is *choshek* (which translated from the Hebrew is darkness/confusion).

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This model of a primordial state of matter has been opposed by the Church Fathers from the 2nd century, who posited a creation *ex nihilo* by an omnipotent God.

In modern biblical studies, the term chaos is commonly used in the context of the Torah and their cognate narratives in Ancient Near Eastern mythology more generally. Parallels between the Hebrew Genesis and the Babylonian *Enuma Elish* were established by Hermann Gunkel in 1910. Besides Genesis, other books of the Old Testament, especially a number of Psalms, some passages in Isaiah and Jeremiah and the Book of Job are relevant.

Hawaiian tradition

In Hawaiian folklore, a triad of deities known as the "Ku-Kaua-Kahi" (a.k.a. "Fundamental Supreme Unity") were said to have existed prior to and during Chaos ever since eternity, or put in Hawaiian terms, "*mai ka po mai*," meaning "from the time of night, darkness, Chaos."

They eventually broke the surrounding Po ("night"), and light entered the universe. Next the group created three heavens for dwelling areas together with the Earth, Sun, Moon, stars, and assistant spirits.

Gnosticism

According to the Gnostic *On the Origin of the World*, Chaos was not the first thing to exist. When the nature of the immortal aeons was completed, Sophia desired something like the light which first existed to come into being. Her desire appears as a likeness with incomprehensible greatness that covers the heavenly universe, diminishing its inner darkness while a shadow appears on the outside which causes Chaos to be formed. From Chaos every deity including the Demiurge is born.

Alchemy and Hermeticism

Magnum Chaos, wood-inlay by Giovan Francesco Capoferri at the Basilica di Santa Maria Maggiore in Bergamo, based on a design by Lorenzo Lotto.

The Greco-Roman tradition of *prima materia*, notably including the 5th- and 6th-century Orphic cosmogony, was merged with biblical notions (Tehom) in Christianity and inherited by alchemy and Renaissance magic.[citation needed]

The cosmic egg of Orphism was taken as the raw material for the alchemical magnum opus in early Greek alchemy. The first stage of the process of producing the philosopher's stone, i.e., *nigredo*, was identified with chaos. Because of association with the Genesis creation narrative, where "the Spirit of God moved upon the face of the waters" (Gen. 1:2), Chaos was further identified with the classical element of Water.

Ramon Llull (1232–1315) wrote a *Liber Chaos*, in which he identifies Chaos as the primal form or matter created by God. Swiss alchemist Paracelsus (1493–1541) uses chaos synonymously with "classical element" (because the primeval chaos is imagined as a formless congestion of all elements). Paracelsus thus identifies Earth as "the chaos of the gnomi", i.e., the element of the gnomes, through which these spirits move unobstructed as fish do through water, or birds through air. An alchemical treatise by Heinrich Khunrath, printed in Frankfurt in 1708, was entitled *Chaos*. The 1708 introduction states that the treatise was written in 1597 in Magdeburg, in the author's 23rd year of practicing alchemy. The treatise purports to quote Paracelsus on the point that "The light of the soul, by the will of the Triune God, made all earthly things appear from the primal Chaos." Martin Ruland the Younger, in his 1612 *Lexicon Alchemiae*, states, "A crude mixture of matter or another name for *Materia Prima* is Chaos, as it is in the Beginning."

The term gas in chemistry was coined by Dutch chemist Jan Baptist van Helmont in the 17th century directly based on the Paracelsian notion of chaos. The g in gas is due to the Dutch pronunciation of this letter as a spirant, also employed to pronounce Greek χ.

Modern usage

The term chaos has been adopted in modern comparative mythology and religious studies as referring to the primordial state before creation, strictly combining two separate notions of primordial waters or a primordial darkness from which a new order emerges and a primordial state as a merging of opposites, such as heaven and earth, which must be separated by a creator deity in an act of cosmogony. In both cases, chaos referring to a notion of a primordial state contains the Cosmos in *potentia* but needs to be formed by a demiurge before the world can begin its existence.

Use of chaos in the derived sense of "complete disorder or confusion" first appears in Elizabethan Early Modern English, originally implying satirical exaggeration. "Chaos" in the well-defined sense of chaotic complex system is in turn derived from this usage.

Popular culture has depicted the Chaos Greek deity in multiple instances. A modern instance is the popular 2020 video game *Hades* in which Chaos is represented as a genderless non-binary deity which dwells above the foundation of the underworld or "creation" itself. [>[https://en.wikipedia.org/wiki/Chaos_\(cosmogony\)](https://en.wikipedia.org/wiki/Chaos_(cosmogony))< — retrieved 31 March 2024]

Basically and briefly, Chaos is not the pre-space/time condition of nothing; it is the condition where everything is happening everywhere at once. One could refer to this as the Positive Pole of +Chaos. The opposite of this is the Negative Pole of –Void. So let's take a look at –Void:

Void

Potential

[[The remainder of this Chaos extraction should go in the Part on Philosophy in the *Perennialism* book. It could be heavily commented with correlations to components of Tao's Template, the Process/Aspect System, and the NS schema.]]

Not just modern philosophers and scientists, but ancient mythologists, were aware of the constant struggle between chaos and Cosmos:

Chaoskampf

The motif of *Chaoskampf* (German 'struggle against chaos') is ubiquitous in myth and legend, depicting a battle of a culture hero deity with a chaos monster, often in the shape of a serpent or dragon. Parallel concepts appear in the Middle East and North Africa, such as the abstract conflict of ideas in the Egyptian duality of Maat and Isfet or the battle of Horus and Set.

In modern science, this ancient myth of the struggle of order against disorder appears in various forms, such as the opposing movements of entropy in the inanimate realm and syntropy in the animate realm; [refer to section....](#)

GRECO-ROMAN TRADITION

Hesiod and the Pre-Socratics use the Greek term in the context of cosmogony. Hesiod's Chaos has been interpreted as either "the gaping void above the Earth created when Earth and Sky are separated from their primordial unity" or "the gaping space below the Earth on which Earth rests." Passages in Hesiod's *Theogony* suggest that Chaos was located below Earth but above Tartarus. Primal Chaos was sometimes said to be the true foundation of reality, particularly by philosophers such as Heraclitus.

As documented further on, some interpretations of quantum mechanics (the ones that I prefer and that are consistent with the NS schema) also say that the orderly Cosmos emerges from disorderly chaos; [refer to section.....](#)

Archaic Period

In Hesiod's *Theogony*, Chaos was the first thing to exist: "at first Chaos came to be" (or was), but next (possibly out of Chaos) came Gaia, Tartarus, and Eros (elsewhere the name Eros is used for a son of Aphrodite). Unambiguously "born" from Chaos were Erebus and Nyx. For Hesiod, Chaos, like Tartarus, though personified enough to have borne children, was also a place, far away, underground and "gloomy", beyond which lived the Titans.

The notion of the temporal infinity was familiar to the Greek mind from remote antiquity in the religious conception of immortality. The main object of the first efforts to explain the world remained the description of its growth, from a beginning. They believed that the world arose out from a primal unity, and that this substance was the permanent base of all its being. Anaximander claims that the origin is *apeiron* (the unlimited), a divine and perpetual substance less definite than the common elements (water, air, fire, and earth) as they were understood to the early Greek philosophers. Everything is generated from apeiron, and must return there according to necessity. A conception of the nature of the world was that the earth below its surface stretches down indefinitely and has its roots on or above Tartarus, the lower part of the underworld. In a phrase of Xenophanes, "The upper limit of the earth borders on air, near our feet. The lower limit reaches down to the "apeiron" (i.e. the unlimited)." The sources and limits of the earth, the sea, the sky, Tartarus, and all things are located in a great windy-gap, which seems to be infinite, and is a later specification of "chaos".

Classical Greece

In Aristophanes's comedy *Birds*, first there was Chaos, Night, Erebus, and Tartarus, from Night came Eros, and from Eros and Chaos came the race of birds.

At the beginning there was only Chaos, Night, dark Erebus, and deep Tartarus. Earth, the air and heaven had no existence. Firstly, blackwinged Night laid a germless egg in the bosom of the infinite deeps of Erebus, and from this, after the revolution of long ages, sprang the graceful Eros with his glittering golden wings, swift as the whirlwinds of the tempest. He mated in deep Tartarus with dark Chaos, winged like himself, and thus hatched forth our race, which was the first to see the light. That of the Immortals did not exist until Eros had brought together all the ingredients of the world, and from their marriage Heaven, Ocean, Earth, and the imperishable race of blessed gods sprang into being. Thus our origin is very much older than that of the dwellers in Olympus. We [birds] are the offspring of Eros; there are a thousand proofs to show it. We have wings and we lend assistance to lovers. How many handsome youths, who had sworn to remain insensible, have opened their thighs because of our power and have yielded themselves to their

lovers when almost at the end of their youth, being led away by the gift of a quail, a waterfowl, a goose, or a cock.

In Plato's *Timaeus*, the main work of Platonic cosmology, the concept of chaos finds its equivalent in the Greek expression *chôra*, which is interpreted, for instance, as shapeless space (*chôra*) in which material traces (*ichnê*) of the elements are in disordered motion (*Timaeus* 53a–b). However, the Platonic *chôra* is not a variation of the atomistic interpretation of the origin of the world, as is made clear by Plato's statement that the most appropriate definition of the *chôra* is "a receptacle of all becoming — its wetnurse, as it were" (*Timaeus* 49a), notabene a receptacle for the creative act of the demiurge, the world-maker.

More is said about the notion of "potential" as distinct from actual is covered [elsewhere](#)...

Aristotle, in the context of his investigation of the concept of space in physics, "problematizes the interpretation of Hesiod's chaos as 'void' or 'place without anything in it'. Aristotle understands chaos as something that exists independently of bodies and without which no perceptible bodies can exist. 'Chaos' is thus brought within the framework of an explicitly physical investigation. It has now outgrown the mythological understanding to a great extent and, in Aristotle's work, serves above all to challenge the atomists who assert the existence of empty space."

Roman Tradition

For Ovid, (43 BC – 17/18 AD), in his [book] *Metamorphoses*, Chaos was an unformed mass, where all the elements were jumbled up together in a "shapeless heap".

Before the ocean and the earth appeared— before the skies had overspread them all—
the face of Nature in a vast expanse was naught but Chaos uniformly waste.

It was a rude and undeveloped mass, that nothing made except a ponderous weight;
and all discordant elements confused, were there congested in a shapeless heap.

According to Hyginus: "From Mist (Caligo) came Chaos. From Chaos and Mist, came Night (Nox), Day (Dies), Darkness (Erebus), and Ether (Aether)."[26][b] An Orphic tradition apparently had Chaos as the son of Chronus and Ananke.

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"Chaos magic" as a branch of contemporary occultism is a product of the 1970s.

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Cosmos

COSMOS

The Cosmos ... is another name for the Universe. Using the word Cosmos implies viewing the universe as a complex and orderly system or entity.

The Cosmos, and our understanding of the reasons for its existence and significance, are studied in cosmology — a broad discipline covering scientific, religious or philosophical aspects of the Cosmos and its nature. Religious and philosophical approaches may include the Cosmos among spiritual entities or other matters deemed to exist outside our physical universe.

The philosopher Pythagoras first used the term *kosmos* (Ancient Greek: κόσμος, Latinized *kósmos*) for the order of the universe. Greek κόσμος "order, good order, orderly arrangement" is a word with several main senses rooted in those notions. The verb κοσμεῖν (κοσμεῖν) meant generally "to dispose, prepare", but especially "to order and arrange (troops for battle), to set (an army) in array"; also "to establish (a government or regime)", "to adorn, dress" (especially of women). Thus kosmos had an important secondary sense of "ornaments, decoration" (compare kosmokomes "dressing the hair", and cosmetic). In Modern Greek, κόσμος has developed, along with primary "the universe, the world", the meaning of "people" (collectively).

The term became part of modern language in the 19th century when geographer and polymath Alexander von Humboldt resurrected the use of the word, assigning it to his five-volume treatise, *Kosmos* (1845–1862), which influenced modern and somewhat holistic perception of the universe as one interacting entity. [source?]

The opposite of Chaos is Cosmos. Both words and concepts came from the Greek philosophers. The former is the extreme pole of disorderliness; the latter is the extreme pole of orderliness. Both are ...

Chaos is not the same thing as "nothing", except in information theory, where chaos (pure noise) contains no information, just as silence (lack of sound) contains no information. Translating this into mathematical terms, we can say that noise = infinity and silence = zero because both lack information or distinction other than their opposition to information, which is what numbers are.

ORDER, CHAOS, RELEVANCE REALIZATION, AND MYTHOLOGY

On the relation between John Vervaeke's relevance realization and Jordan Peterson's *Maps of Meaning*

Brett Andersen

Aug 3, 2022

*Note: This post is a little longer and the discussion is a little more technical, but I think it will be worth it for how it all comes together at the end.

Self-organized criticality

In the late 1980s and 90s, the physicist Per Bak was trying to solve the problem of complexity. The problem can be stated simply. The laws of physics are relatively simple and deterministic. You can write them all down on a single sheet of paper. Given these relatively simple, deterministic laws, why is the universe so interesting? If the laws of physics are so simple, why is everything so complex?

In his 1996 book *How Nature Works: The Science of Self-Organized Criticality*, Bak put forward his theory. He reasoned that complexity must emerge at the border between order and chaos. A crystal is an example of an ordered system. A crystal is not complex because if you know what one part of the system looks like, then you know what the whole thing looks like. That means an infinitely large crystal can be precisely described with very little information. That's not complexity. A gas is a chaotic system (keeping in mind that I am not using 'chaos' in the technical mathematical sense here). A gas is also not complex. Even though a gas does not have the regularity of a crystal, it is still uniform throughout its entire structure. It looks the same everywhere, and therefore is not complex.

Bak reasoned that complexity must emerge at the narrow window between too much order and too much chaos. This narrow window is referred to as the critical state or just criticality. The question, for Bak, was how systems in nature could get to this narrow window without any tuning from an outside agent. We can fine-tune a system to criticality by, for example, precisely adjusting the temperature or other variables. But there is no external agent fine-tuning systems in nature. They must achieve criticality from the bottom-up, through the interactions of the parts of the system and their environment. This is the origin of the term self-organized criticality. Systems in nature self-organize to the narrow window between order and chaos, which is where they become more complex.

Bak created some toy models to show how self-organized criticality could occur, the most famous of which is called the sand-pile model. In this model, sand is added to a pile very slowly, one grain at a time. Eventually, a single grain will be enough to cause an avalanche. The avalanches occur in various sizes. What was interesting about this is that the avalanches reliably occur in a power-law distribution (Jordan Peterson usually refers to this as a Pareto distribution), which means that there are many small avalanches and only a few very large ones. This "power-law distribution of avalanches" would come to serve as the primary marker of self-organized criticality in nature. For example, earthquakes and solar flares both occur in power-law distributions, with frequent small ones and only very rare large ones.

Bak's theory eventually failed as a general explanation of complexity — not because it was wrong per se, but because it was incomplete. There is more to the story than Bak understood. A 2018 PNAS paper entitled "The Physical Foundations of Biological Complexity" puts forward a more complete theory, but I will have to save discussion of that paper for another time.

Despite its failure as a general theory of complexity, self-organized criticality has become an important concept within biology, neuroscience, and cognitive science. Theoretical work indicates that biological systems function optimally at the border between order and chaos because being at this narrow window facilitates optimal learning and information flow. Empirical research has found signatures of criticality in systems such as flocks of birds, genetic regulatory systems, and most importantly the brain.

Because of empirical and theoretical work showing the importance of criticality for brain functioning, self-organized criticality is becoming an increasingly important concept within neuroscience and cognitive science. For example, there is empirical and theoretical work making the case that consciousness emerges at the narrow window between order and chaos in the brain. The literature relating consciousness to criticality is extremely interesting, and I will make an entire post about it later. What I want to focus on in this post are the relations between self-organized criticality, John Vervaeke's theory of relevance realization, and the cognitive science of insight. After looking at those relations, we will see how all of that relates to Jordan Peterson's first book *Maps of Meaning*.

Relevance Realization

John Vervaeke is a collaborator of mine (we just had our first paper together with Mark Miller accepted for publication) and the director of the cognitive science program at the University of Toronto. He has a great series of YouTube videos called *Awakening from the Meaning Crisis*, which I highly recommend. John's academic work focuses on his theory of relevance realization, which is a theory of how organisms solve the very difficult problem

of intelligently ignoring irrelevant aspects of the world and zeroing in on the relevant aspects. Although I can't go into too much detail about relevance realization in this post, John believes (as do I) that relevance realization is a key idea for responding to the meaning crisis. In two 2013 chapters by John Vervaeke and Leo Ferraro, they argue that self-organized criticality is the mechanism by which relevance realization is instantiated in the brain:

With its self-organizing criticality the brain engages in a kind of on-going opponent processing between integration [Synthesis Process] and differentiation [Analysis Process] of information processing. This means that the brain is constantly complexifying (simultaneously integrating as a system while [differentiating] its component parts) its processing as a way of continually adapting to a dynamically complex environment[...] The brain is thus constantly transcending itself in its ability to realize relevant information. (Vervaeke & Ferraro, 2013 p. 11)

We can therefore say that relevance realization (and the complexification associated with it) occurs at the narrow window between order and chaos. This accords with Vervaeke and Ferraro's discussion of network theory, in which they argue that relevance realization is best achieved in the brain by small-world networks, which are intermediate to regular networks (too much order) and random networks (too much chaos). See below for a visual demonstration of these kinds of networks.

An important aspect of relevance realization is the capacity for insight. An insight is what happens when we have an 'aha' moment in relation to a problem we've been thinking about. In contrast to methodical, deliberative thinking, insights occur suddenly and often occur when we aren't even actively thinking about the problem. As John Vervaeke and others have argued, insights involve a frame-shift. In order to deal with combinatorially explosive problems, we must put a frame around them that constrains the kinds of solutions that seem viable to us. An insight involves letting go of a previous way that we were framing the problem (which has been rendered dysfunctional or non-optimal for whatever reason) and adopting a new, more functional frame that allows us to solve whatever problem we are engaged with more effectively. This works because the previous frame has treated something important as irrelevant and the new frame brings the important information into the scope of relevance.

[[The following fits into the Principles chapter, in the Transition Principle section. Have a section on Nihilism, because nihilism = the chaos/void Transformation between Plateaus.]]

The self-organization of insight

Given that insight is related to relevance realization, we might expect there to be some arguments in the literature suggesting that insight is also related to self-organized criticality. This is, in fact, what was argued by Stephen & Dixon in their 2009 paper entitled "The Self-Organization of Insight: Entropy and Power Laws in Problem Solving". They argue that insights display the key signature of self-organized criticality, i.e., power-law distributions, and show how insights help a cognitive system to offload entropy by becoming more cognitively complex. The implication of their work is that insight is a self-organized critical phenomenon, meaning that it occurs at the border between order and chaos.

Stephen and Dixon (2009) present evidence that when somebody breaks frame (i.e., realizes that the way they are framing the problem is non-optimal), there is an increase in behavioral entropy. For our purposes, entropy can be considered a mathematical measure of disorder or chaos (in reality it's a little more complicated than that). This means that when somebody breaks frame, there is an increase in behavioral disorder or chaos. When that person establishes a new frame, however, there is a decrease in entropy such that there is even less entropy than there was before the insight. This means that when the insight occurs there is a re-emergence into a higher form of order. The figure below is adapted from Stephen and Dixon (2009) and is meant to convey what this process looks like. I inverted the figure and added some text to make it more understandable.

So we see that the person starts out with a moderate level of entropy. When they break frame, there is a "descent into chaos" (i.e., a temporary increase in entropy). When they establish a new frame, they re-emerge from this state of high entropy into a new stable state in which there is even less entropy than before. We can summarize this process like this:

There is a relatively stable way that the person is framing the world.

For whatever reason (whether because of novel sensory input or their own internal dynamics), the person realizes that their current frame is dysfunctional or non-optimal.

The person breaks their current frame, causing an increase in behavioral entropy.

The person adopts a new, more functional frame (this is the 'aha' moment), causing a decrease in behavioral entropy such that there is even less entropy than before the insight.

That is the basic structure of an insight, which emerges at the border between order and chaos and is a key aspect of relevance realization.

Maps of Meaning

This brings me to the point of this post. What I want to argue now is that this entire discussion was foreshadowed by Jordan Peterson in his first book *Maps of Meaning*. In that book he argued that mythological narratives have converged on a general pattern, which he refers to as the meta-mythology. The meta-mythology represents the process that updates individuals and cultures in the face of existential anomalies. The meta-mythology has characteristics indicating it is essentially the same as the process I have described above in this post. These include the facts that: a) the meta-mythology occurs at the border between order and chaos, b) it has the same basic structure as an insight, and c) the meta-mythology is the process by which relevance realization occurs. This overlap is quite interesting since it occurred independently from all of the literatures discussed above. Nowhere in *Maps of Meaning* or in his class lectures does Jordan Peterson refer to the science of self-organized criticality (which was not well-known at the time he was writing his book), the self-organization of insight (a literature that did not exist when he was writing), or John Vervaeke's theory of relevance realization (which also didn't exist at the time Jordan was writing). I will now argue that Jordan Peterson's theory from *Maps of Meaning* overlaps with all of these literatures.

a. The meta-mythology occurs at the border between order and chaos

There are a variety of quotes in *Maps of Meaning* indicating that the meta-mythology occurs at the border between order and chaos. For example, on p. 281 Peterson says that the mythological hero is a narrative representation of the meta-mythology. He says on p. 244 that the hero "stands on the border between order and chaos...".

Peterson also discusses Chinese Taoist philosophy at length. Peterson argues that the Tao (which can be translated as "the way") exists at the "razor's edge" between order and chaos. The meta-mythology is also referred to as "the way", indicating that it also exists at the border between order and chaos.

In sum, Peterson suggests throughout the book that the right place to be is at the border between order and chaos and that the meta-mythology characterizes what happens when one is at that border.

b. The meta-mythology has the same structure as an insight

The above figure is from *Maps of Meaning* and depicts the meta-mythology. Compare this figure to the previous figure showing the structure of an insight. The meta-mythology starts off with a particular way that we are framing the world (which Peterson refers to as a story rather than a frame). There is an anomaly of some kind that disrupts that story. As a result of the anomaly, there is a disintegration of the story (equivalent to breaking frame) and a consequent descent into chaos. If the process is successful, this is followed by a reintegration and ascent into a higher form of order (i.e., a new story that takes into account the anomaly that disrupted the previous story).

The outlines of this process are clearly the same as the structure of an insight, although the meta-mythology is more generalized because it applies not only to individuals but to groups of individuals (who have shared stories that must occasionally be re-structured) as well. To summarize the meta-mythology using the outlines of a typical hero story:

There is an initial period of relative stability (e.g., the pre-adventure paradisaal state)

There is some anomaly that disrupts that stability (e.g., the call to adventure)

There is a descent into chaos (e.g., the adventure)

There is a re-emergence into a higher form of order (e.g., the post-adventure re-establishment of paradise).

For example, in *Star Wars* (the original trilogy), we see this pattern play out with Luke:

He is initially living in relative harmony with his aunt and uncle.

His aunt and uncle are killed and he is recruited into helping the rebellion against the empire.

He is involved in battles, rescue missions, Jedi training, etc.

He defeats the empire and helps to re-establish the Jedi order and bring peace to the galaxy.

Of course, George Lucas was explicitly influenced by Joseph Campbell's *The Hero With a Thousand Faces*, so it's no coincidence that Luke's journey lines up so nicely with the meta-mythology. I could do the same thing, however, with other cultural phenomena, including *Harry Potter* and *The Lion King*. Stories that pull off this pattern correctly often resonate deeply with many people.

c. *The meta-mythology is relevance realization*

When we engage in the process characterized by the meta-mythology, what we are primarily doing according to Peterson is determining the motivational relevance of the anomaly that disrupted our previous story/frame. There are a variety of quotes in *Maps of Meaning* that demonstrate this, which you can find by simply searching for the word “relevance” in the PDF of the book. Here is one of them:

Exploratory behavior allows for classification of the general and (a priori) motivationally-significant unexpected into specified and determinate domains of motivational relevance. In the case of something with actual (post-investigation) significance, relevance means context-specific punishment or satisfaction, or their putatively “second-order” equivalents: threat or promise (as something threatening implies punishment, as something promising implies satisfaction). This is categorization, it should be noted, in accordance with implication for motor output, or behavior, rather than with regards to sensory (or, formalized, objective) property. (p. 53)

In other words, the process of [Bayesian] exploration and update (i.e., the meta-mythology) is the process by which we determine the motivational relevance of novel stimuli. To put it simply, the meta-mythology is relevance realization, described in terms of a narrative and phenomenological structure rather than in terms of modern cognitive science. To relate this back to the initial discussion on self-organized criticality, the meta-mythology represents the pattern by which we self-organize to the narrow window between order and chaos, where we engage in the process by which we become more complex.

Conclusion

John Vervaeke has argued that relevance realization is an important concept for responding to the meaning crisis. Jordan Peterson is clearly dealing with issues of meaning as well. Connecting their work is important, to my mind, because while John Vervaeke has made great progress in working out the technical details of this process, Jordan Peterson has done something equally important by connecting it to our ancient traditions. As Peterson argued in *Maps of Meaning*, we are deeply historical creatures. Our evolutionary, cultural, and personal histories live in us and through us. To be unmoored from our past is to be unmoored from the traditions that have successfully guided our ancestors for millennia (that success is demonstrated by the fact that we are alive, meaning that we are the descendants of people who successfully survived and reproduced).

The modern mechanistic worldview is nihilistic in part because it represents a radical departure from (and denial of) everything that has been believed up to this point. The modernist viewpoint generally regards mythological narratives and the worldview they support as nothing but superstitious bullshit, which at least implicitly means that most of our ancestors were suckers who built their civilizations atop meaningless lies (this idea is quickly becoming untenable in light of the emerging science of [cultural evolution](#); see also my recent post on supernatural beliefs).

The new worldview that is emerging no longer represents such a radical departure from our ancestors. By showing that this process (i.e., the meta-mythology, relevance realization) was at least implicit in the mythological narratives that served to organize our ancestors’ civilizations, we thereby show that we are part of a long lineage of people who have been engaged in the project of discovering and articulating how to live properly. This does not mean that we must be beholden to traditional beliefs or ways of life, which is clearly not tenable given a rapidly changing world. It does mean, however, that we can see ourselves as part of a living tradition rather than looking at our ancestors with nothing but contempt (an attitude that seems to be fashionable these days, as demonstrated by Douglas Murray in his recent book *The War on the West*). The bottom right-hand corner in the figure below from *Maps of Meaning* is meant to represent a process of abstraction by which we continually become more clear about the pattern underlying admirable or optimal behavior.

First we imitate the pattern underlying admirable behaviors, then we encode that pattern into rituals, then into narratives, then into philosophical argumentation, then, finally, we gain an empirical/scientific understanding of it. In this way: “The image of the hero, step by step, becomes ever clearer, and ever more broadly applicable.” (Peterson, 1999 p. 149)

In *Maps of Meaning*, Jordan Peterson made a great deal of progress on making this worldview fully scientific by connecting mythological, literary, and philosophical illustrations of the meta-mythology to the best scientific theories that he had available to him at the time (mainly from cybernetics and neuroscience). That project is not complete, but *Maps of Meaning* laid a solid foundation for it. John Vervaeke’s work (especially his YouTube series) has exposed me to a number of ideas that have helped to further that project. I suspect that I’ll be spending the

rest of my life trying to finish it. That is my response to the meaning crisis.

[><https://brettandersen.substack.com/p/order-chaos-complexity-and-mythology>< — retrieved 29 May 2023]

Chaos exists in the Transformations (“produced”) between the geometric Dimensions of the One, the Two, the Three, and the All. The geometric orthogonalities or perpendicularities are random (or pseudo-random?) from one Dimension to the next. The known happens during the plateau phase, the unknown happens during the Transformation phase.

Pseudo-random

Discuss difference between random and pseudo-random. As I see it, pseudo-randomness might only be our ignorance of the deterministic algorithm or formula that maybe generated what looks like chaos but is not. The question still being argued by deep thinkers is whether the Cosmos is at its foundation random or pseudo-random or deterministic. For instance, Einstein asked the question whether ‘God’ could have created the universe any other way than He did. Can any self within the Self know whether or not the Cosmos is based on random or pseudorandom or determinism as its ontological basis? My guess is that even the Immanent Tao does not know the answer this question, meaning that the old debate between determinism and free will is unsolved and unsolvable. It may be that one of the questions that drives the Tao’s existence and function is the search reconcile FreeWill with Determinism. The fundamental eternal/infinite tension/dichotomy is formalized in the Process/Aspect System matrix as the Inspiration Axis, where the Cardinal Pole is attracted to Free Will and the Negative Pole is attracted to Determinism.

[[Where, other than “God does not play dice” is it said that Einsteinian Relativity Cosmology is deterministic, and Quantum physics is indeterministic? That being the case, one of my primary contentions in this *Cosmogony* book is bolstered: existence in space and function in time lives at the interface between Chaos and Cosmos, and generates the complexity that we see, and aspire to resolve into simple principles. This philosophical aspiration is also the scientific aspiration, to unify relativity and quantumality in a single mathematical model and conceptual framework ...]]

Passive + Active = Action

Re-activity versus pro-activity (goal-oriented, teleological)

Potential + Actual = Creation

Points to be made in this section:

- Immanent Tao ‘relearning’ what it primordially ‘forgot’ about Itself as a strategy for becoming more than Itself in the long run of cosmic evolution. In mathematical terms, the Ordinal process of ‘dividing’ Itself is the same as the Cardinal process of ‘multiplying’ Itself, seen from the Ordinal and Cardinal processes where a boundary separates the Two versus joins the Two. (Recall that, from the Point of View of the One, Cardinal and Ordinal sides of the One are identical.)
- Heisenberg’s understanding of quantum physics where the realm of *potentia* is made real by the measurement process (“observation”), the interaction of the known and the unknown
-
- Allude to Friston’s “Free Energy Principle”, where three-dimensional living systems have the primary goal of survival, which ...

In the following extraction from Wikipedia, we see that scientists and philosophers have struggled to understand and explain the notions of potential and actual. I have an explanation derived from Larsonian physics (Rest > Motion > Space/Time and Time/Space) applied to the Process/Aspect System. *[[Consequently, this section might fit better in the Cosmology book, but there is an overlap, so a summary in this Cosmogony book is suitable.]]*

This Wikipedia article is worth quoting at length because it might help the reader to understand the key abstract notions found in Larsonian physics, in his first fundamental postulate:

POTENTIALITY AND ACTUALITY

In philosophy, potentiality and actuality are a pair of closely connected principles which Aristotle used to analyze motion, causality, ethics, and physiology in his [books] *Physics*, *Metaphysics*, *Nicomachean Ethics*, and *De Anima*. The concept of potentiality, in this context, generally refers to any “possibility” that a thing can be said to have. Aristotle did not consider all possibilities the same, and emphasized the importance of those that become real of their own accord when conditions are right and nothing stops them. Actuality, in contrast to potentiality, is the motion, change or activity that represents an exercise or fulfillment of a possibility, when a possibility becomes real in the fullest sense.

These concepts, in modified forms, remained very important into the Middle Ages, influencing the development of medieval theology in several ways. In modern times the dichotomy has gradually lost importance, as understandings of nature and deity have changed. However the terminology has also been adapted to new uses, as is most obvious in words like energy and dynamic. These were words first used in modern physics by the German scientist and philosopher, Gottfried Wilhelm Leibniz. Aristotle’s concept of *entelechy* retains influence on recent concepts of biological “entelechy”.

Potentiality

“Potentiality” and “potency” are translations of the Ancient Greek word *dunamis* (δύναμις). They refer especially to the way the word is used by Aristotle, as a concept contrasting with “actuality”. The Latin translation of *dunamis* is *potentia*, which is the root of the English word “potential”; it is also sometimes used in English-language philosophical texts. In early modern philosophy, English authors like Hobbes and Locke used the English word “power” as their translation of Latin *potentia*.

Dunamis is an ordinary Greek word for possibility or capability. Depending on context, it could be translated ‘potency’, ‘potential’, ‘capacity’, ‘ability’, ‘power’, ‘capability’, ‘strength’, ‘possibility’, ‘force’ and is the root of modern English words dynamic, dynamite, and dynamo.

In his philosophy, Aristotle distinguished two meanings of the word *dunamis*. According to his understanding of nature there was both a weak sense of potential, meaning simply that something “might chance to happen or not to happen”, and a stronger sense, to indicate how something could be done well. For example, “sometimes we say that those who can merely take a walk, or speak, without doing it as well as they intended, cannot speak or walk”. This stronger sense is mainly said of the potentials of living things, although it is also sometimes used for things like musical instruments.

Throughout his works, Aristotle clearly distinguishes things that are stable or persistent, with their own strong natural tendency to a specific type of change, from things that appear to occur by chance. He treats these as having a different and more real existence. “Natures which persist” are said by him to be one of the causes of all things, while natures that do not persist, “might often be slandered as not being at all by one who fixes his thinking sternly upon it as upon a criminal”. The potencies which persist in a particular material are one way of describing “the nature itself” of that material, an innate source of motion and rest within that material. In terms of Aristotle’s theory of four causes, a material’s non-accidental potential is the material cause of the things that can come to be from that material, and one part of how we can understand the substance (*ousia*, sometimes translated as “thinghood”) of any separate thing. (As emphasized by Aristotle, this requires his distinction between accidental causes and natural causes.) According to Aristotle, when we refer to the nature of a thing, we are referring to the form, shape or look of a thing, which was already present as a potential, an innate tendency to change, in that material before it achieved that form. When things are most “fully at work” we can see more fully what kind of thing they really are.

Actuality

Actuality is often used to translate both *energeia* (ἐνέργεια) and *entelecheia* (ἐντελέχεια) (sometimes rendered in English as *entelechy*). Actuality comes from Latin *actualitas* and is a traditional translation, but its normal meaning in Latin is ‘anything which is currently happening’.

The two words *energeia* and *entelecheia* were coined by Aristotle, and he stated that their meanings were intended to converge. In practice, most commentators and translators consider the two words to be interchangeable. They both refer to something being in its own type of action or at work, as all things are when they are real in the fullest sense, and not just potentially real. For example, “to be a rock is to strain to be at the center of the universe, and thus to be in motion unless constrained otherwise”.

Energeia

Energeia is a word based upon ἔργον (*ergon*), meaning ‘work’. It is the source of the modern word ‘energy’ but the term has evolved so much over the course of the history of science that reference to the modern term is not

very helpful in understanding the original as used by Aristotle. It is difficult to translate his use of *energeia* into English with consistency. Joe Sachs renders it with the phrase "being-at-work" and says that "we might construct the word is-at-work-ness from Anglo-Saxon roots to translate *energeia* into English".

Aristotle says the word can be made clear by looking at examples rather than trying to find a definition. Two examples of *energeiai* in Aristotle's works are pleasure and happiness (*eudaimonia*). Pleasure is an *energeia* of the human body and mind whereas happiness is more simply the *energeia* of a human being a human.

Interesting that Aristotle put forward psychological phenomena as his explanation of words that, I suggest, also refer to physical phenomena. There is a correlation.

Kinesis, translated as movement, motion, or in some contexts change, is also explained by Aristotle as a particular type of *energeia*. See below.

Entelechy (*entelechia*)

Entelechy, in Greek *entelécheia*, was coined by Aristotle and transliterated in Latin as *entelechia*. According to Sachs (1995, p. 245):

Aristotle invents the word by combining *entelēs* (ἐντελής, 'complete, full-grown') with *echein* (= *hexis*, to be a certain way by the continuing effort of holding on in that condition), while at the same time punning on *endelecheia* (ἐνδελέχεια, 'persistence') by inserting *telos* (τέλος, 'completion'). This is a three-ring circus of a word, at the heart of everything in Aristotle's thinking, including the definition of motion.

Sachs therefore proposed a complex neologism of his own, "being-at-work-staying-the-same". Another translation in recent years is "being-at-an-end" (which Sachs has also used).

Entelecheia, as can be seen by its derivation, is a kind of completeness, whereas "the end and completion of any genuine being is its being-at-work" (*energeia*). The *entelecheia* is a continuous being-at-work (*energeia*) when something is doing its complete "work". For this reason, the meanings of the two words converge, and they both depend upon the idea that every thing's "thinghood" is a kind of work, or in other words a specific way of being in motion. All things that exist now, and not just potentially, are beings-at-work, and all of them have a tendency towards being-at-work in a particular way that would be their proper and "complete" way.

Sachs explains the convergence of *energeia* and *entelecheia* as follows, and uses the word actuality to describe the overlap between them:[2]

Just as *energeia* extends to *entelecheia* because it is the activity which makes a thing what it is, *entelecheia* extends to *energeia* because it is the end or perfection which has being only in, through, and during activity.

Motion

Aristotle discusses motion (*kinēsis*) in his *Physics* quite differently from modern science. Aristotle's definition of motion is closely connected to his actuality-potentiality distinction. Taken literally, Aristotle defines motion as the actuality (*entelecheia*) of a "potentiality as such".[18] What Aristotle meant however is the subject of several different interpretations. A major difficulty comes from the fact that the terms actuality and potentiality, linked in this definition, are normally understood within Aristotle as opposed to each other. On the other hand, the "as such" is important and is explained at length by Aristotle, giving examples of "potentiality as such". For example, the motion of building is the *energeia* of the *dunamis* of the building materials as building materials as opposed to anything else they might become, and this potential in the unbuilt materials is referred to by Aristotle as "the buildable". So the motion of building is the actualization of "the buildable" and not the actualization of a house as such, nor the actualization of any other possibility which the building materials might have had.[19]

Building materials have different potentials.

One is that they can be built with. Building is one motion that had been a potential in the building material.

So it is the *energeia* or putting into action, of the building materials as building materials. A house is built, and no longer moving.

In an influential 1969 paper, Aryeh Kosman divided up previous attempts to explain Aristotle's definition into two types, criticised them, and then gave his own third interpretation. While this has not become a consensus, it has been described as having become "orthodox".[20] This and similar more recent publications are the basis of the following summary.

1. The "process" interpretation

Kosman (1969) and Coope (2009) associate this approach with W.D. Ross. Sachs (2005) points out that it was also the interpretation of Averroes and Maimonides.

This interpretation is, to use the words of Ross that "it is the passage to actuality that is kinesis" as opposed to any potentiality being an actuality.[21]

The argument of Ross for this interpretation requires him to assert that Aristotle actually used his own word *entelecheia* wrongly, or inconsistently, only within his definition, making it mean "actualization", which is in conflict with Aristotle's normal use of words. According to Sachs (2005) this explanation also can not account for the "as such" in Aristotle's definition.

2. The "product" interpretation

Sachs (2005) associates this interpretation with St Thomas of Aquinas and explains that by this explanation "the apparent contradiction between potentiality and actuality in Aristotle's definition of motion" is resolved "by arguing that in every motion actuality and potentiality are mixed or blended". Motion is therefore "the actuality of any potentiality insofar as it is still a potentiality". Or in other words:

The Thomistic blend of actuality and potentiality has the characteristic that, to the extent that it is actual it is not potential and to the extent that it is potential it is not actual; the hotter the water is, the less is it potentially hot, and the cooler it is, the less is it actually, the more potentially, hot.

As with the first interpretation however, Sachs (2005) objects that:

One implication of this interpretation is that whatever happens to be the case right now is an *entelechia*, as though something that is intrinsically unstable as the instantaneous position of an arrow in flight deserved to be described by the word that everywhere else Aristotle reserves for complex organized states that persist, that hold out against internal and external causes that try to destroy them.

In a more recent paper on this subject, Kosman associates the view of Aquinas with those of his own critics, David Charles, Jonathan Beere, and Robert Heineman.

3. The interpretation of Kosman, Coope, Sachs and others

Sachs (2005), amongst other authors (such as Aryeh Kosman and Ursula Coope), proposes that the solution to problems interpreting Aristotle's definition must be found in the distinction Aristotle makes between two different types of potentiality, with only one of those corresponding to the "potentiality as such" appearing in the definition of motion. He writes:

The man with sight, but with his eyes closed, differs from the blind man, although neither is seeing. The first man has the capacity to see, which the second man lacks. There are then potentialities as well as actualities in the world. But when the first man opens his eyes, has he lost the capacity to see? Obviously not; while he is seeing, his capacity to see is no longer merely a potentiality, but is a potentiality which has been put to work. The potentiality to see exists sometimes as active or at-work, and sometimes as inactive or latent.

Coming to motion, Sachs gives the example of a man walking across the room and says that...

"Once he has reached the other side of the room, his potentiality to be there has been actualized in Ross' sense of the term". This is a type of *energeia*. However, it is not a motion, and not relevant to the definition of motion.

While a man is walking his potentiality to be on the other side of the room is actual just as a potentiality, or in other words the potential as such is an actuality. "The actuality of the potentiality to be on the other side of the room, as just that potentiality, is neither more nor less than the walking across the room."

Sachs (1995, pp. 78–79), in his commentary of Aristotle's *Physics* book III gives the following results from his understanding of Aristotle's definition of motion:

The genus of which motion is a species is being-at-work-staying-itself (*entelecheia*), of which the only other species is thinghood. The being-at-work-staying-itself of a potency (*dunamis*), as material, is thinghood. The being-at-work-staying-the-same of a potency as a potency is motion.

The importance of actuality in Aristotle's philosophy

The actuality-potentiality distinction in Aristotle is a key element linked to everything in his physics and metaphysics.[23]

A marble block in Carrara. Could there be a particular sculpture already existing in it as a potentiality? Aristotle wrote approvingly of such ways of talking, and felt it reflected a type of causation in nature which is often ignored in scientific discussion.

Aristotle describes potentiality and actuality, or potency and action, as one of several distinctions between things that exist or do not exist. In a sense, a thing that exists potentially does not exist; but, the potential does exist. And this type of distinction is expressed for several different types of being within Aristotle's categories of being. For example, from Aristotle's *Metaphysics*, 1017a:[24]

We speak of an entity being a "seeing" thing whether it is currently seeing or just able to see.

We speak of someone having understanding, whether they are using that understanding or not.

We speak of corn existing in a field even when it is not yet ripe.

People sometimes speak of a figure being already present in a rock which could be sculpted to represent that figure.

Within the works of Aristotle the terms *energeia* and *entelecheia*, often translated as actuality, differ from what is merely actual because they specifically presuppose that all things have a proper kind of activity or work which, if achieved, would be their proper end. Greek for end in this sense is *telos*, a component word in *entelecheia* (a work that is the proper end of a thing) and also teleology. This is an aspect of Aristotle's theory of four causes and specifically of formal cause (*eidos*, which Aristotle says is *energeia*[25]) and final cause (*telos*).

In essence this means that Aristotle did not see things as matter in motion only, but also proposed that all things have their own aims or ends. In other words, for Aristotle (unlike modern science), there is a distinction between things with a natural cause in the strongest sense, and things that truly happen by accident. He also distinguishes non-rational from rational potentialities (e.g. the capacity to heat and the capacity to play the flute, respectively), pointing out that the latter require desire or deliberate choice for their actualization.[26] Because of this style of reasoning, Aristotle is often referred to as having a teleology, and sometimes as having a theory of forms.

While actuality is linked by Aristotle to his concept of a formal cause, potentiality (or potency) on the other hand, is linked by Aristotle to his concepts of hylomorphic matter and material cause. Aristotle wrote for example that "matter exists potentially, because it may attain to the form; but when it exists actually, it is then in the form".[27]

Teleology is a crucial concept throughout Aristotle's philosophy.[28] This means that as well as its central role in his physics and metaphysics, the potentiality-actuality distinction has a significant influence on other areas of Aristotle's thought such as his ethics, biology and psychology.[29]

The active intellect

Main article: Active Intellect

The active intellect was a concept Aristotle described that requires an understanding of the actuality-potentiality dichotomy. Aristotle described this in his *De Anima* (book 3, ch. 5, 430a10-25) and covered similar ground in his *Metaphysics* (book 12, ch.7-10). The following is from the *De Anima*, translated by Joe Sachs,[30] with some parenthetic notes about the Greek. The passage tries to explain "how the human intellect passes from its original state, in which it does not think, to a subsequent state, in which it does." He inferred that the *energeia/dunamis* distinction must also exist in the soul itself:[31]

...since in nature one thing is the material [hulē] for each kind [genos] (this is what is in potency all the particular things of that kind) but it is something else that is the causal and productive thing by which all of them are formed, as is the case with an art in relation to its material, it is necessary in the soul [psuchē] too that these distinct aspects be present;

the one sort is intellect [nous] by becoming all things, the other sort by forming all things, in the way an active condition [hexis] like light too makes the colors that are in potency be at work as colors [to phōs poiei ta dunamei onta chrōmata energeiai chrōmata].

This sort of intellect is separate, as well as being without attributes and unmixed, since it is by its thinghood a being-at-work, for what acts is always distinguished in stature above what is acted upon, as a governing source is above the material it works on.

Knowledge [epistēmē], in its being-at-work, is the same as the thing it knows, and while knowledge in potency comes first in time in any one knower, in the whole of things it does not take precedence even in time.

This does not mean that at one time it thinks but at another time it does not think, but when separated it is just exactly what it is, and this alone is deathless and everlasting (though we have no memory, because this sort of intellect is not acted upon, while the sort that is acted upon is destructible), and without this nothing thinks.

This has been referred to as one of "the most intensely studied sentences in the history of philosophy".[31] In the *Metaphysics*, Aristotle wrote at more length on a similar subject and is often understood to have equated the active intellect with being the "unmoved mover" and God. Nevertheless, as Davidson remarks:

Just what Aristotle meant by potential intellect and active intellect – terms not even explicit in the *De anima* and at best implied – and just how he understood the interaction between them remains moot to this day. Students of the history of philosophy continue to debate Aristotle's intent, particularly the question whether he considered the active intellect to be an aspect of the human soul or an entity existing independently of man.[31]

Post-Aristotelian usage

New meanings of *energeia* or energy

Already in Aristotle's own works, the concept of a distinction between *energeia* and *dunamis* was used in many ways, for example to describe the way striking metaphors work,[32] or human happiness. Polybius about 150 BC, in his work the *Histories* uses Aristotle's word *energeia* in both an Aristotelian way and also to describe the "clarity and vividness" of things.[33] Diodorus Siculus in 60-30 BC used the term in a very similar way to Polybius.

However, Diodorus uses the term to denote qualities unique to individuals. Using the term in ways that could be translated as 'vigor' or 'energy' (in a more modern sense); for society, 'practice' or 'custom'; for a thing, 'operation' or 'working'; like vigor in action.[34]

Platonism and neoplatonism

Already in Plato it is found implicitly the notion of potency and act in his cosmological presentation of becoming (kinēsis) and forces (dunamis),[35] linked to the ordering intellect, mainly in the description of the Demiurge and the "Receptacle" in his *Timaeus*. [36][37] It has also been associated to the dyad of Plato's unwritten doctrines,[38] and is involved in the question of being and non-being since from the pre-socratics,[39] as in Heraclitus's mobilism and Parmenides' immobilism. The mythological concept of primordial Chaos is also classically associated with a disordered prime matter (see also *prima materia*), which, being passive and full of potentialities, would be ordered in actual forms, as can be seen in Neoplatonism, especially in Plutarch, Plotinus, and among the Church Fathers,[39] and the subsequent medieval and Renaissance philosophy, as in Ramon Llull's *Book of Chaos*[40] and John Milton's *Paradise Lost*. [41]

Plotinus was a late classical pagan philosopher and theologian whose monotheistic re-workings of Plato and Aristotle were influential amongst early Christian theologians. In his *Enneads* he sought to reconcile ideas of Aristotle and Plato together with a form of monotheism, that used three fundamental metaphysical principles, which were conceived of in terms consistent with Aristotle's *energeia*/*dunamis* dichotomy, and one interpretation of his concept of the Active Intellect (discussed above):-

The Monad or "the One" sometimes also described as "the Good". This is the *dunamis* or possibility of existence.

The Intellect, or Intelligence, or, to use the Greek term, *Nous*, which is described as God, or a Demiurge. It thinks its own contents, which are thoughts, equated to the Platonic ideas or forms (*eide*). The thinking of this Intellect is the highest activity of life. The actualization of this thinking is the being of the forms. This Intellect is the first principle or foundation of existence. The One is prior to it, but not in the sense that a normal cause is prior to an effect, but instead Intellect is called an emanation of the One. The One is the possibility of this foundation of existence.

Soul or, to use the Greek term, *psyche*. The soul is also an *energeia*: it acts upon or actualizes its own thoughts and creates "a separate, material Cosmos that is the living image of the spiritual or noetic Cosmos contained as a unified thought within the Intelligence".

This was based largely upon Plotinus' reading of Plato, but also incorporated many Aristotelian concepts, including the unmoved mover as *energeia*. [42]

New Testament usage

This section possibly contains original research. New Testament concordances are not evidence that this concept is used in the New Testament. Please improve it by verifying the claims made and adding inline citations. Statements consisting only of original research should be removed. (August 2021) (Learn how and when to remove this template message)

Other than incorporation of Neoplatonic into Christendom by early Christian theologians such as St. Augustine, the concepts of *dunamis* and *ergon* (the morphological root of *energeia*[43]) are frequently used in the original Greek New Testament.[44] *Dunamis* is used 119 times[45] and *ergon* is used 161 times,[46] usually with the meaning 'power/ability' and 'act/work', respectively.

Essence-energies debate in medieval Christian theology

Further information: Essence-Energies distinction

In Eastern Orthodox Christianity, St Gregory Palamas wrote about the "energies" (actualities; singular *energeia* in Greek, or *actus* in Latin) of God in contrast to God's "essence" (*ousia*). These are two distinct types of existence,

with God's energy being the type of existence which people can perceive, while the essence of God is outside of normal existence or non-existence or human understanding, i.e. transcendental, in that it is not caused or created by anything else.

Palamas gave this explanation as part of his defense of the Eastern Orthodox ascetic practice of hesychasm. Palamism became a standard part of Orthodox dogma after 1351.[47]

In contrast, the position of Western Medieval (or Catholic) Christianity, can be found for example in the philosophy of Thomas Aquinas, who relied on Aristotle's concept of entelechy, when he defined God as *actus purus*, pure act, actuality unmixed with potentiality. The existence of a truly distinct essence of God which is not actuality, is not generally accepted in Catholic theology.

Influence on modal logic

The notion of possibility was greatly analyzed by medieval and modern philosophers. Aristotle's logical work in this area is considered by some to be an anticipation of modal logic and its treatment of potentiality and time. Indeed, many philosophical interpretations of possibility are related to a famous passage on Aristotle's *On Interpretation*, concerning the truth of the statement: "There will be a sea battle tomorrow".[48]

Contemporary philosophy regards possibility, as studied by modal metaphysics, to be an aspect of modal logic. Modal logic as a named subject owes much to the writings of the Scholastics, in particular William of Ockham and John Duns Scotus, who reasoned informally in a modal manner, mainly to analyze statements about essence and accident.

Influence on early modern physics

Aristotle's metaphysics, his account of nature and causality, was for the most part rejected by the early modern philosophers. Francis Bacon in his *Novum Organon* in one explanation of the case for rejecting the concept of a formal cause or "nature" for each type of thing, argued for example that philosophers must still look for formal causes but only in the sense of "simple natures" such as colour, and weight, which exist in many gradations and modes in very different types of individual bodies.[49] In the works of Thomas Hobbes then, the traditional Aristotelian terms, "*potentia et actus*", are discussed, but he equates them simply to "cause and effect".[50] Gottfried Wilhelm von Leibniz, the source of the modern adaptations of Aristotle's concepts of potentiality and actuality.

There was an adaptation of at least one aspect of Aristotle's potentiality and actuality distinction, which has become part of modern physics, although as per Bacon's approach it is a generalized form of energy, not one connected to specific forms for specific things. The definition of energy in modern physics as the product of mass and the square of velocity, was derived by Leibniz, as a correction of Descartes, based upon Galileo's investigation of falling bodies. He preferred to refer to it as an *entelecheia* or 'living force' (Latin *vis viva*), but what he defined is today called kinetic energy, and was seen by Leibniz as a modification of Aristotle's *energeia*, and his concept of the potential for movement which is in things. Instead of each type of physical thing having its own specific tendency to a way of moving or changing, as in Aristotle, Leibniz said that instead, force, power, or motion itself could be transferred between things of different types, in such a way that there is a general conservation of this energy. In other words, Leibniz's modern version of entelechy or energy obeys its own laws of nature, whereas different types of things do not have their own separate laws of nature.[51] Leibniz wrote:[52]

...the entelechy of Aristotle, which has made so much noise, is nothing else but force or activity ; that is, a state from which action naturally flows if nothing hinders it. But matter, primary and pure, taken without the souls or lives which are united to it, is purely passive ; properly speaking also it is not a substance, but something incomplete.

Leibniz's study of the "entelechy" now known as energy was a part of what he called his new science of "dynamics", based on the Greek word *dunamis* and his understanding that he was making a modern version of Aristotle's old dichotomy. He also referred to it as the "new science of power and action", (Latin *potentia et effectum* and *potentia et actionem*). And it is from him that the modern distinction between statics and dynamics in physics stems. The emphasis on *dunamis* in the name of this new science comes from the importance of his discovery of potential energy which is not active, but which conserves energy nevertheless. "As 'a science of power and action', dynamics arises when Leibniz proposes an adequate architectonic of laws for constrained, as well as unconstrained, motions." [53]

For Leibniz, like Aristotle, this law of nature concerning entelechies was also understood as a metaphysical law, important not only for physics, but also for understanding life and the soul. A soul, or spirit, according to Leibniz, can be understood as a type of entelechy (or living monad) which has distinct perceptions and memory.

Influence on modern physics

Ideas about potentiality have been related to quantum mechanics, where a wave function in a superposition of potential values (before measurement) has the potential to collapse into one of those values, under the Copenhagen interpretation of quantum mechanics. In particular, the German physicist Werner Heisenberg called this "a quantitative version of the old concept of 'potentia' in Aristotelian philosophy". [54][55]

Entelecheia in modern philosophy and biology

As discussed above, terms derived from *dunamis* and *energeia* have become parts of modern scientific vocabulary with a very different meaning from Aristotle's. The original meanings are not used by modern philosophers unless they are commenting on classical or medieval philosophy. In contrast, entelecheia, in the form of entelechy is a word used much less in technical senses in recent times.

As mentioned above, the concept had occupied a central position in the metaphysics of Leibniz, and is closely related to his monad in the sense that each sentient entity contains its own entire universe within it. But Leibniz' use of this concept influenced more than just the development of the vocabulary of modern physics. Leibniz was also one of the main inspirations for the important movement in philosophy known as German Idealism, and within this movement and schools influenced by it entelechy may denote a force propelling one to self-fulfillment.

In the biological vitalism of Hans Driesch, living things develop by entelechy, a common purposive and organising field. Leading vitalists like Driesch argued that many of the basic problems of biology cannot be solved by a philosophy in which the organism is simply considered a machine. [56] Vitalism and its concepts like entelechy have since been discarded as without value for scientific practice by the overwhelming majority of professional biologists.

However, in philosophy aspects and applications of the concept of entelechy have been explored by scientifically interested philosophers and philosophically inclined scientists alike. One example was the American critic and philosopher Kenneth Burke (1897–1993) whose concept of the "terministic screens" illustrates his thought on the subject.

Prof Denis Noble argues that, just as teleological causation is necessary to the social sciences, a specific teleological causation in biology, expressing functional purpose, should be restored and that it is already implicit in neo-Darwinism (e.g. "selfish gene"). Teleological analysis proves parsimonious when the level of analysis is appropriate to the complexity of the required 'level' of explanation (e.g. whole body or organ rather than cell mechanism). [https://en.wikipedia.org/wiki/Potentiality_and_actuality< — retrieved 13 June 2023]

But before we examine the notion of relationships between space-like levels (cosmology) and time-like stages (cosmogony) of emergentism in terms of reductionism and emanationism, we will lay a conceptual foundation

by examining the very notion of levels and stages itself, which is covered in the words “system” and “synergy” and “structure” and “holarchy”.

Subjectivity + Objectivity = Transjectivity (S+O=T)

[[(Oneness = Substantivalism.) In this brief intro to this section, first point out the Twoness (Relationalism) inherent in the definitions of the terms Subjectivity and Objectivity, as complementary and reciprocal contraries that mutually define each other. (Define Tao's Template as the set of Ontological Primitives. Point out that the words in the title of this section are capitalized because they are a couplet of Ontological Primitives.) Second, point out that Transjectivity is the Gestalt of the S+O, aka Substantivalism (Oneness) of the gestalt of the two terms at the next higher-later level-stage. Third, point out that the Self exists and functions on the boundary between the two S+O.]]

Subjectivity versus Objectivity

Wikipedia to the rescue, as usual:

The distinction between subjectivity and objectivity is a basic idea of philosophy, particularly epistemology and metaphysics. It is often related to discussions of consciousness, agency, personhood, philosophy of mind, philosophy of language, reality, truth, and communication (for example in narrative communication and journalism).

“Communication” is one instantiation of the Dialectic Principle that can be expanded to include all interaction of a self with another self or the not-self.

- Something is subjective if it is dependent on a mind (biases, perception, emotions, opinions, imagination, or conscious experience). If a claim is true exclusively when considering the claim from the viewpoint of a sentient being, it is subjectively true. For example, one person may consider the weather to be pleasantly warm, and another person may consider the same weather to be too hot; both views are subjective. The word subjectivity comes from subject in a philosophical sense, meaning an individual who possesses unique conscious experiences, such as perspectives, feelings, beliefs, and desires, or who (consciously) acts upon or wields power over some other entity (an object).
- Something is objective if it can be confirmed independent of a mind. If a claim is true even when considering it outside the viewpoint of a sentient being (how ?), then it is labelled objectively true. Scientific objectivity is practicing science while intentionally reducing partiality, biases, or external influences. Moral objectivity is the concept of moral or ethical codes being compared to one another through a set of universal facts or a universal perspective and not through differing conflicting perspectives.[4] Journalistic objectivity is the reporting of facts and news with minimal personal bias or in an impartial or politically neutral manner.

As used in the Tao's Template ontology, “subjective” refers to what exists in space and functions in time ‘within’ a boundary that separates/joins a self and a not-self, whereas “objective” refers to what exists in space and functions in time ‘outside’ a boundary that separates/joins a self and a not-self.

Both ideas have been given various and ambiguous definitions by differing sources as the distinction is often a given but not the specific focal point of philosophical discourse. The two words are usually regarded as opposites, though complications regarding the two have been explored in philosophy: for example, the view of particular thinkers that objectivity is an illusion and does not exist at all, or that a spectrum joins subjectivity and objectivity with a gray area in-between, or that the problem of other minds is best viewed through the concept of intersubjectivity, developing since the 20th century. The root of the words subjectivity and objectivity are subject and object, philosophical terms that mean, respectively, an observer and a thing being observed.

[>[https://en.wikipedia.org/wiki/Subjectivity_and_objectivity_\(philosophy\)](https://en.wikipedia.org/wiki/Subjectivity_and_objectivity_(philosophy))< — retrieved 02 November 2023]

Omnijectivity

The reader would do well to do an internet search on that word “omnijective” and read some of the hits there. Basically and briefly, in terms of the Tao's Template of ontological primitives including emanationism + emergentism, the concept of the Omnijective belongs to the Oneness that produces the Twoness of Subjectivity and Objectivity. These words are just another way of naming the philosophical notion of Dual-aspect Monism in terms of “Awareness” being the fundamental Source. Pure (Oneness) Awareness is aware only of Self; it is not aware of not-self or other-self, meaning (in my terms) that it does not have consciousness. In my

terminology, Consciousness arises where/when Awareness bifurcates into the dichotomy of a self and not-self, aka agent and arena.

Our concept of time and space, the very structure of the universe, are more intimately related to problems and phenomenon of consciousness than we have seriously suspected.... There is no strict division between subjective and objective reality, consciousness and the physical universe are connected by some fundamental physical mechanism. This relationship between mind and reality is not subjective or objective, but 'omnijective'. An omnijective concept of the universe is by no means new ... There is a vast philosophical and metaphysical tradition behind the philosophy that the universe is omnijective: The mystics tell us this is true. The idealists tell us it is true. Most exciting of all, the physicists tell us it is true. [Michael Talbot, *Mysticism and the New Physics*, p.??]

Transjektivty

Syntax + Semantics = Communication

In this section, make the following points:

- Provide an explanation of Syntax + Semantics in terms of Information Theory. Refer to the work of Claude Shannon and his successors.
- Note that some physicists prefer to understand the Cosmos as information-theoretic, e.g.: ><https://www2.perimeterinstitute.ca/conferences/information-theoretic-foundations-physics>< and <https://arxiv.org/abs/1707.05602> and
- Here again, information theory can be understood as the Tao 'relearning' what it 'forgot' in the primordial 'forgetting' when it divided-multiplied itself where/when "Tao produced the One"
- Definitions of Syntax vs Semantics: "Syntax and semantics are two distinct concepts in philosophy of language. Syntax refers to the rules for combining expressions into well-formed sentences within a language, while semantics gives us a theory of the meanings of words and sentences. Syntax is more or less synonymous with grammar, but philosophers often use the term more broadly to refer to any characteristics of a sentence that don't involve semantics. While a linguist would distinguish between phonology and syntax, philosophers may treat phonology and orthography as "syntactic." Semantics is the study of the meanings of linguistic expressions, while pragmatics enables us to apply the correct meaning to the correct situation." (Brave browser LLM — retrieved 16 February 2024) Basically and briefly, meaning is conveyed from mind to mind via words arranged in a way that is mutually comprehensible.
- In terms of the NS schema and the PAS matrix, syntax is Ordinal and semantics is Cardinal. It requires both syntax and semantics to "communicate" in the sense that the message is understood by both the sender and the receiver. Sender and receiver must speak the same 'language' in the same way.
- In terms of Friston's Free Energy Principle. Basically and briefly, the FEP defines the logic and the mathematics where two interacting entities (each having a membrane, separated by an environment), or an entity within an environment separated by a boundary or membrane, transfer data between them so as to learn about each other
- In terms of Tao's Template, depending on Point of View, the minimum One expands Itself externally and the maximum One (All) enriches the One internally = Tao learning about Itself via embodiment in a Cosmos.

Relationalism + Substantialism = Existence

This book, *The Tao of Cosmogony*, is Volume 2 in a series of In my book *The Process/Aspect System*, the presentation was on the Cardinality of the Trait scheme. That is, except for the Worldviews, each Goal, Mode, Attitude, Center, Shadow, and Role were arranged and presented in what I refer to as "Space Structure". Here in the *Natural Sequence* book, the array of Traits is arranged in what I refer to as "Time Structure".

Writers on esoteric topics have noted that the number seven often figures into a systematic explanation of the components of their teaching. They might refer to seven as a "mystical" or "magical" number. However,

when “Sevenness” is understood in the space-time geometry in the PAS and in the NS, it is not magic, it is math; specifically, it is space-time geometry.

Oroboros Principle = Alpha Omega Principle. The innermost Tao versus the outermost Tao: “sparks” = Casting of the minimum ones from the maximum One. In terms of space-time, evolution consists of the universe turning itself end for end in one dimension, top for bottom in two dimensions, and inside for outside in three dimensions.

In the PAS theory of personality, everything is dependent on, is created by, is built upon, Point Of View (POV). ONE has an omnijective, omniscient POV; it sees everything at ONCE. ONE produces the TWO, meaning, it divides/multiplies (Cardinal/Ordinal) into subject and object = time and space = the Singularity Big Bangs. From the POV of ONE, both sides of TWO are identical, but from the POV of each side of TWO, the self is subjective and the other side is objective. This is what I call the Taijitu Tango Principle; it is more fundamental than the TWO that the ONE produces. Nothing exists or functions per se; it is only in relation to another thing that something exists = relationalism versus substantivalism = Tao > One > Two > Three. Theory of relativity (TWO) versus theory of absolutivity (ONE). Both are correct, but at different levels or from different POVs. This is how something from nothing; ontology versus epistemology.

Numbers are Cardinal, operations and relations of numbers are ordinal. Addition and subtraction are 1-D operations; multiplication and division are 2-D operations, rooting and exponentiation are 3-D operations, as are combinations of 1-D, 2-D, and 3-D to make P-D.

[[Move to Ch42:]] The paradoxes of an infinite regress of self-reference in the Mind of God create the Cosmos. Using Tao’s Template (TT), I have cherry picked evidence and argument from numerous sources that support and augment Tao’s Template.

Monadology reverses the algorithm that generates creation in the cascade of Zero > Tao > One > Two > Three > All > Three > Two > One > Infinity.

“God” as the ultimate outside you versus “God” as the ultimate inside you; both are true conceptions, but from different points of view.

Explain induction from the bottom up versus deduction from the top down (first principles) ala Larson. Einstein also had something to say about that.

Dual Substance Monism = Monad = Substance, with Ordinal Physical and Cardinal Mental on either side. Next up in the list of fundamental dichotomies to be reviewed is this pair.

Before we can even begin to discuss the NS Principles, we must discuss the Principle on which they are founded and built, namely that we must come to understand the fundamental ontology of relationalism versus substantivalism. Those are a couple of fancy philosophical terms

INTRODUCTION

Relationalism is any theoretical position that gives importance to the relational nature of things. For relationalism, things exist and function only as relational entities....

Relationalism (philosophical theory)

Relationalism in a broader sense applies to any system of thought that gives importance to the relational nature of reality. But in its narrower and philosophically restricted sense as propounded by the Indian philosopher Joseph Kaipayil and others, relationalism refers to the theory of reality that interprets the existence, nature, and meaning of things in terms of their relationality or relatedness. On the relationalist view, things are neither self-standing entities nor vague events but relational particulars. Particulars are inherently relational, as they are ontologically open to other particulars in their constitution and action. Particulars, as relational particulars, are the ultimate constituents of reality. Particulars interact and make the very fabric of reality.

Relationalism (theory of space and time)

In discussions about space and time, the name relationalism (or relationism) refers to Leibniz’s relationist notion of space and time as against Newton’s substantivalist views. According to Newton’s substantivalism, space and time are entities in their own right, existing independently of things. Leibniz’s relationism, on the other hand, describes space and time as systems of relations that exist between objects. More generally, in physics and philosophy, a relational theory is a framework to understand reality or a physical system in such a way that the

positions and other properties of objects are only meaningful relative to other objects. In a relational spacetime theory, space does not exist unless there are objects in it; nor does time exist without events. The relational view proposes that space is contained in objects and that an object represents within itself relationships to other objects. Space can be defined through the relations among the objects that it contains considering their variations through time. This is an alternative to an absolute theory, in which the space exists independently of any objects that can be immersed in it.

The relational point of view was advocated in physics by Gottfried Wilhelm Leibniz and Ernst Mach (in his Mach's principle). It was rejected by Isaac Newton in his successful description of classical physics. Although Albert Einstein was impressed by Mach's principle, he did not fully incorporate it into his general theory of relativity. Several attempts have been made to formulate a full Machian theory, but most physicists think that none have so far succeeded. For example, see Brans–Dicke theory.

Relational quantum mechanics and a relational approach to quantum physics have been independently developed, in analogy with Einstein's special relativity of space and time. Relationist physicists such as John Baez and Carlo Rovelli have criticised the leading unified theory of gravity and quantum mechanics, string theory, as retaining absolute space. Some prefer a developing theory of gravity, loop quantum gravity, for its 'backgroundlessness'.

Relationalism (sociological theory)

In relational sociology, relationalism is often contrasted with substantivalism. While substantivalism (also called substantialism) tends to view individuals as self-subsistent entities capable of social interaction, relationalism underscores the social human practices and the individual's transactional contexts and reciprocal relations.

[><https://en.wikipedia.org/wiki/Relationalism> — retrieved 25 July 2022]

This notion that relationalism is the fundamental ontology — that nothing exists and functions *per se*, aka in itself — will come as a surprise to most people, because we humans tend to be substantialists, meaning that our default perspective is that reality consists of things that have inherent properties, and those things interact with each other according to those inherent properties. In order to convince you of the primacy of relationalism — at least as far as experience is concerned — I will bang on about it at various places in this *Cosmogony* book, because it is absolutely essential for you to understand it if you are to understand the book as a whole.

In my perspective, both relationalism and substantivalism can be regarded as correct if we agree with the view that space/time is not an ontological primitive as assumed by materialistic philosophers, that there is a realm outside of space/time, that space/time is a superset of an infra-ontology (such as logic-mathematics, aka Platonic forms) and a subset of a supra-ontology such as the planes of esoteric traditions. In other words, the reality system in which our consciousness is embedded is sandwiched between sub-spacetime and super-spacetime.

Make the point that Relationalism = Immanence theology and that Substantivalism = Transcendence theology. Make the point that in the ontological holarchy, Transcendence/Substance/Oneness is more primitive than Immanence/Relation/Twoneess.

The Wikipedia article is inadequate for my purposes, the Stanford Encyclopedia of Philosophy is better:
><https://plato.stanford.edu/entries/spacetime-theories/><

Relational Interpretation of Quantum Mechanics

Here is a list of topics currently discussed in theoretical physics: What is space? What is time? What is the "present"? Is the world deterministic? Do we need to take the observer into account to describe nature? Is physics better formulated in terms of a "reality" or in terms of "what we observe", or is there a third option? What is the quantum wave function? What exactly does "emergence" mean? Does a theory of the totality of the universe make sense? Does it make sense to think that physical laws themselves might evolve? It is clear to me that input from past and current philosophical thinking cannot be disregarded in addressing these topics.

In loop quantum gravity, my own technical area, Newtonian space and time are reinterpreted as a manifestation of something which is granular, probabilistic, and

fluctuating in a quantum sense. Space, time, particles, and fields get fused into a single entity: a quantum field that does not live in space or time. The variables of this field acquire definiteness only in interactions between subsystems. The fundamental equations of the theory have no explicit space or time variables. Geometry appears

only in approximations. Objects exist within approximations. Realism is tempered by a strong dose of relationalism. I think we physicists need to discuss with philosophers, because I think we need help in making sense of all this. [>Carlo Rovelli, ><https://arxiv.org/pdf/1805.10602.pdf><

Nothing + Something = Becoming

Next up in the list of fundamental dichotomies to be reviewed is this pair.

Why is there something rather than nothing? That is said to be the deepest philosophical question of all. Books have been written about it. In a narrower field of inquiry, science, scientists typically do not address “why” questions – they regard them as meaningless – so they prefer to focus on “how” questions. Either way, why or how, it is an unanswered question if you find “God did it” inadequate because that just seems to push the inquiry back another level, and “God has always existed” does not seem like a legitimate answer. What both philosophical and scientific inquiries lead to is a dead end, that is, an end of explanation beyond which the human mind cannot go. There is a bottom to the epistemological chain in searching for the ultimate ontology.

Concrete + Abstract = Entity

One of the premises of these perspectives has to do with the philosophy of Plato about the ‘ontology’ of the world of abstract ‘forms’. There are philosophers who say that ‘abstractions’ are not ontologically ‘real’, and there are those who say that they are. Some philosophers regard only the material world of space/time and matter/energy and particle/wave as real. ‘Mathematics’ is said to exist in the Platonic realm of abstract forms; others deny this. The so-called ‘mind/body’ problem plays a part in this whole discussion. I will not go into that in detail in this book; you can research it for yourself on the internet using the search phrase ‘dual-aspect monism’ in your browser. In this book, ‘abstractions’ are assumed to have a ‘real’ existence, and not just in the minds of philosophers. The ‘abstract’ realm is often contrasted to the ‘concrete’ realm. **Part One** is about the abstract realm as it manifests the NS; **Part Two** is about the concrete realm as it manifests the NS. The ‘laws’ of physics are the ‘mind’ of the universe.

In this complementary pair, concrete = yin/Ordinal and abstract = yang/Cardinal and entity = chi/Neutral. Wikipedia has an article on this instantiation of dual aspect monism:

ABSTRACT AND CONCRETE

In metaphysics, the distinction between abstract and concrete refers to a divide between two types of entities. Many philosophers hold that this difference has fundamental metaphysical significance. Examples of concrete objects include plants, human beings and planets while things like numbers, sets, and propositions are abstract objects. There is no general consensus as to what the characteristic marks of concreteness and abstractness are. Popular suggestions include defining the distinction in terms of the difference between (1) existence inside or outside space-time, (2) having causes and effects or not, (3) having contingent or necessary existence, (4) being particular or universal and (5) belonging to either the physical or the mental realm or to neither. Despite this diversity of views, there is broad agreement concerning most objects as to whether they are abstract or concrete. So under most interpretations, all these views would agree that, for example, plants are concrete objects while numbers are abstract objects.

Numerous other sections in this chapter discuss these five types of abstraction and concretion, including but not limited to (1) “**Transcendence + Immanence = Deity**”, (2) “**Cause + Effect = Time**”, (3) “**Contingency + Necessity**” = ???, (4) “**Particular + Universal = ????**”, and (5) “**Physical + Mental = Consciousness**”.

Abstract objects are most commonly used in philosophy and semantics. They are sometimes called *abstracta* in contrast to *concreta*.... Abstract object theory is a discipline that studies the nature and role of abstract objects. It holds that properties can be related to objects in two ways: through exemplification and through encoding. Concrete objects exemplify their properties while abstract objects merely encode them. This approach is also known as the dual copula strategy.

In philosophy

The type-token distinction identifies physical objects that are tokens of a particular type of thing. The “type” of which it is a part is in itself an abstract object. The abstract-concrete distinction is often introduced and initially understood in terms of paradigmatic examples of objects of each kind:

Examples of abstract and concrete objects:

ABSTRACT

Tennis

Redness

Five

Justice

Humanity (the property of being human)

CONCRETE

A tennis match

Red light reflected off of an apple and hitting one's eyes

Five cars

A just action

Human population (the set of all humans)

Abstract objects have often garnered the interest of philosophers because they raise problems for popular theories. In ontology, abstract objects are considered problematic for physicalism and some forms of naturalism. Historically, the most important ontological dispute about abstract objects has been the problem of universals. In epistemology, abstract objects are considered problematic for empiricism. If *abstracta* lack causal powers and spatial location, how do we know about them? It is hard to say how they can affect our sensory experiences, and yet we seem to agree on a wide range of claims about them.

Some, such as Ernst Mally, Edward Zalta and arguably, Plato in his *Theory of Forms*, have held that abstract objects constitute the defining subject matter of metaphysics or philosophical inquiry more broadly. To the extent that philosophy is independent of empirical research, and to the extent that empirical questions do not inform questions about *abstracta*, philosophy would seem especially suited to answering these latter questions.

In modern philosophy, the distinction between abstract and concrete was explored by Immanuel Kant and G. W. F. Hegel.

Gottlob Frege said that abstract objects, such as numbers, were members of a third realm, different from the external world or from internal consciousness.

Abstract objects and causality

Another popular proposal for drawing the abstract–concrete distinction contends that an object is abstract if it lacks causal power. A causal power has the ability to affect something causally. Thus, the empty set is abstract because it cannot act on other objects. One problem with this view is that it is not clear exactly what it is to have causal power. For a more detailed exploration of the abstract–concrete distinction, see the relevant *Stanford Encyclopedia of Philosophy* article.

Quasi-abstract entities

Recently, there has been some philosophical interest in the development of a third category of objects known as the quasi-abstract. Quasi-abstract objects have drawn particular attention in the area of social ontology and documentality. Some argue that the over-adherence to the platonist duality of the concrete and the abstract has led to a large category of social objects having been overlooked or rejected as nonexistent because they exhibit characteristics that the traditional duality between concrete and abstract regards as incompatible. Specifically, the ability to have temporal location, but not spatial location, and have causal agency (if only by acting through representatives). These characteristics are exhibited by a number of social objects, including states of the international legal system.

Concrete and abstract thought in psychology

Jean Piaget uses the terms “concrete” and “formal” to describe two different types of learning. Concrete thinking involves facts and descriptions about everyday, tangible objects, while abstract (formal operational) thinking involves a mental process.

ABSTRACT IDEA

Dense things sink.

You breathe in oxygen and

breathe out carbon dioxide.

Plants get water through their roots.

CONCRETE IDEA

It will sink if its density is greater than the density of the fluid.

Gas exchange takes place between the air in the alveoli and the blood.

Water diffuses through the cell membrane of the root hair cells.

[>https://en.wikipedia.org/wiki/Abstract_and_concrete< — retrieved 10 June 2023]

Mechanism + Organism = Functionalism

Entropy + Negentropy = Syntropy

Next up in the list of fundamental dichotomies to be reviewed is this pair.

Entropy = forgetting = loss of information; Syntropy = increase of information; Cosmos goes both ways, is balanced as a whole.

The universe that we all know and love seems to be a creative balance of chaos and Cosmos. Meaning that the two actually work together synergistically to move the flow of time forward. Entropy is movement toward chaos, Syntropy is movement toward greater order. Creation myths typically start with chaos and move toward order. Contrariwise, scientists in the form of cosmologists with the big-bang theory typically start with perfect order that they call symmetry (which is in their minds a huge unexplained fact) and move toward chaos via entropy as their arrow of time.

From the back cover blurb for the book *Entropy and Syntropy: Causality and Retrocausality in Physics and Life Sciences: The Vital Needs Model*:

In 1925 the physicists Oskar Klein and Walter Gordon formulated an equation which unites quantum mechanics and special relativity. Studying the properties of the dual solution of this equation, the mathematician Luigi Fantappiè found that the positive solution is governed by the law of entropy (from Greek en=diverge, tropos=tendency), whereas the negative solution is governed by a symmetrical law, which he named syntropy (syn=converge, tropos=tendency). Fantappiè realized that the properties of the law of syntropy (concentration of energy, differentiation, order and organization), describe the fundamental qualities of living systems. This intuition guided him towards the development of a simple, but heterodox, model of life. The law of syntropy shows that each living being has its mission, its finalities, which, in the general economy of the universe, are important, great and beautiful. The purpose of this work is to describe the qualities and implications, in the field of physics, psychology and life sciences, of the two principles of entropy and syntropy. [authored by Antonella Vannini and Ulisse De Carpo, 2011]

Note that entropy vs syntropy is related to the notion of causality vs retrocausality, which is discussed in another section.

The abstract for "Entropy and Syntropy. From Mechanical to Life Science" by Antonella Vannini, published in *NeuroQuantology*, September 2007:

This work describes the qualities and implications, in the field of psychology, of two principles which can be observed in the physical and biological world: the principle of entropy and the principle of syntropy. The description of the qualities of entropic and syntropic phenomena can be found in the works of Luigi Fantappiè (1901-1956), one of the major Italian mathematicians, who, while working on quantum mechanics and special relativity, discovered that all physical and chemical phenomena, which are determined by causes placed in the past, are governed by the principle of entropy, while all those phenomena which are attracted towards causes which are placed in the future (attractors), are governed by a principle which is symmetrical to entropy and which Fantappiè named syntropy. Introduction The concept of time and the correlated concept of causality have always been at the centre of science: but how did these concepts evolve? Galileo and Newton can be considered the theoreticians of "mechanical causality", on the basis of which all that we observe is determined by causes placed in the past. This concept has been the basis of the presumption that it is possible to reproduce any phenomenon in a laboratory. This type of causality is based on the description of a universe that moves from the past to the future: time follows an arrow in which past can never come back, future does not yet exist, and only the present moment is real. In this concept of time, the present is totally determined by past causes. Experimental methodology is based on this concept of time. This method, which allowed us to discover the laws of physics and chemistry with great success, is now showing its limits in the study of living systems, since it can only study cause-effect relations. [PDF downloadable from: ><https://neuroquantology.com/article.php?id=1171><]

From the back cover blurb for the book *The Balancing Role of Entropy/Syntropy* (2014):

The change that is emerging on the horizon involves the paradigmatic shift from the mechanistic vision to the new supercausal and syntropic vision which requires the counterintuitive fact that time flows differently from how we perceive it in our conscious every day experience. While dealing with mechanistic and simple systems, the cause and effect approach is essential and needed, for dealing with complex living systems the reverse order that is retrocausal forces take a prominence, as quantum forces enters into the equation of life. In human life, living

and self-organizing systems, both cause and retrocausal forces are involved and they continuously interact. Therefore, in scientific arena non-duality gains a prominence. Humanity, admittedly being at the threshold of “to be or not to be”, should give a deep thought into all aspects of living and of organizing their lives singularly and communally and beyond, in the light of a broader mind and a broader science.

Notice connections to Animate versus Inanimate, Retro-causality versus Causality, Memory versus Imagination, Teleology – **all of which need to have sections.**

Vannini and DeCarpo have many articles posted on >academia.edu<. They also have a website >sintropia.it<

><https://www.quantamagazine.org/tag/quantum-information-theory/><

><https://www.quantamagazine.org/in-new-paradox-black-holes-appear-to-evade-heat-death-20230606/><

Luigi Fantappiè (15 September 1901 – 28 July 1956) was an Italian mathematician, known for work in mathematical analysis and for creating the theory of analytic functionals: he was a student and follower of Vito Volterra. Later in life he proposed scientific theories of sweeping scope.

In 1941 he discovered that negative energy has qualities that are associated to life: The cause of processes driven by negative energy lies in the future, exactly such as living beings work for a better day tomorrow. A process that is driven by negative energy will increase order with time, such as all forms of life tend to do. This was a very controversial view at the time and not at all accepted by his colleagues. His findings indicate that negative energy is associated to life in the same way as consciousness is. Consciousness could be a process based on negative energy. In 1942 he put forth a unified theory of physics and biology, and the syntropy concept. In 1952 he started to work on a unified physical theory called projective relativity, for which, he asserted, special relativity was a limiting case. Giuseppe Arcidiacono worked with him on this theory.

[>https://en.wikipedia.org/wiki/Luigi_Fantappiè< — retrieved 12 October 2020]

Noise + Signal = Information

There are several ways to explain the cosmogony reviewed in the sections above: Nothing > Chaos / Cosmos. My preferred way is to explain it in terms of information theory. This field of inquiry did not formally exist in ancient times as part of their mythology, although you can see they had an intuition about it; rather, it appeared in modern times, and has been put forward as a component of a theory of everything. The reason that I prefer the information-theoretic explanation of the universe is that it is predicated on the notion that “consciousness” is fundamental, when consciousness is at the bedrock of existence in space and function in time, that consciousness is defined as that which makes and breaks “distinctions”. Let’s capitalize that as “Consciousness” in order to distinguish it from mere human consciousness. The assumption, the unproved axiom, is that consciousness is what processes information and makes meaning out of information. By “bedrock” I mean that consciousness cannot be explained or understood from any deeper concepts. By definition, there is no deeper concept than distinction. Because this notion might be unfamiliar to any particular reader, it bears description.

Information Theory

Summary Comments on Yin + Yang = Chi

There is a discussion of another set of contraries in this series of contraries that is so lengthy that it seemed expedient to make it into a chapter of its own, and that is Reductionism + Emanationism = Emergentism.





Chapter I-x

① REDUCTIONISM + EMANATIONISM = EMERGENTISM

① One of the more significant books that I read in the formation of my understanding of how the universe works is *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*. This book from Oxford University Press was first published in 2006. It is an anthology (collection of essays) that was compiled and edited by philosopher-theologian Philip Clayton and physicist Paul Davies.

Some readers might not have heard of emergence, so let's read that book's back-cover blurb before we get into a detailed description and explanation of the concept as it applies to the Natural Sequence (NS) schema. As usual, underlined words in the following quotation are my emphasis (please note them as you read because they are especially significant), and I have included a few comments in [brackets] within the quotation, and I also intersperse some comments between blocks of quoted text:

The power of science lies in the connection of events into law-like patterns. Many today concede that the reductionist philosophy once dominant in scientific theory has proved inadequate, and significant new work is now being done to formulate its successor. Among the alternatives, the concept of emergence is receiving perhaps the most intense attention and interest.

This collection of essays offers the first systematic presentation of what emergence means across the natural and social sciences and in the sphere of religion. Experts [in essays in the book] lay out the distinctive features of emergence in their respective fields — in quantum physics and astronomy, in cell biology and primatology. Building on this background, leading philosophers of mind [in essays in the book] then debate the perplexing question of whether, and if so how, consciousness emerges from the functioning of the brain. Again drawing on the results of earlier chapters, theologians and philosophers of religion [in essays in the book] speculate on how the sphere of religion [where the opposite of reductionism is referred to as emanationism] might be reconceived in light of the emergentist paradigm. Are there significant parallels between instances of ['bottom-up'] emergent complexity in different sorts of natural systems? Is it acceptable to speak of new, emergent forms of causality? Does emergence further complicate the relation between science and religion, or does it hold a key to overcoming some of the deep tensions between them that have characterized the modern age?

The Re-Emergence of Emergence contains the work both of leading proponents of emergence theory as well as of its most outspoken critics. It provides the clearest presentation yet of this exciting new theory of science — and of its potential pitfalls. It is both an invaluable introduction to the field and a contribution to the ongoing scholarly debate.

There is a lot to unpack here. That book does that, of course, and in this *Cosmogony* book I also provide some explanations in subsequent sections of this chapter. As an introduction to those explanations, I provide some comments on this blurb, as follows:

1. Rather than use the word "hypothesis", the blurb refers to emergence as a "theory", which is a stronger claim about its explanatory power than the word "hypothesis" would imply. I make the same claim for the NS schema in my book: it is more than a speculative hypothesis or conjecture; it is a comprehensive and coherent theory or paradigm with profound, archetypal, and universal explanatory power and application.
2. "Law-like patterns", mentioned in the blurb, are the antithesis of chaos, which was not mentioned in the blurb. However, both orderliness and chaos appear to be present in the workings of the universe, and both are studied by science — and philosophy and theology. One of my claims is that the Natural Sequence schema holds the fundamental law-like patterns discovered by researchers in many fields of inquiry. The purpose of this *Cosmogony* book is to present evidence and argument for this claim.

3. This *Cosmogony* book is a companion book to my *Cosmology* book. The latter is mostly about the structure of the Cosmos in space-like levels, and the former is mostly about the structure of the Cosmos in time-like stages. In the Natural Sequence schema, there are seven levels of being in space, which I refer to as Aspects, and there are seven stages of doing in time, which I refer to as Processes. Both Aspects and Processes share the same Attributes. In terms of language, Aspects are like nouns that refer to being, and Processes are like verbs that refer to doing. The blurb is not as definitive as I am in making this distinction between space-like being and time-like doing. Emergence both exists in space and functions in time.
4. Although it is implied but not stated as explicitly in the blurb as I do here in this numbered item, the law-like pattern of the Cosmos exists in space in levels and functions in time in stages; I refer to the combination of levels and stages as *realms*. Several realms are mentioned in the blurb: quantum physics, biology, primatology, astronomy, science, theology, philosophy, and consciousness. Each particular realm has some attributes that are different from all of the other realms. The study of emergence is about trying to understand the attributes that each and every realm have in common plus trying to understand the relationships of each realm to all of the other realms. This phenomenon — of the entire Cosmos being divided into realms — leads naturally to the division of scientific inquiry and investigation by academics into various fields of study. There are many other realms that are discussed in that book and other books, and in my *Cosmogony* book, such as psychology and sociology.
5. The blurb mentions several stages in the holarchy of emergence, but there are others. In his book *The Emergence of Everything* (2002), academician Harold Morowitz identifies and discussed twenty-eight stages: “Morowitz has provided the first state-of-the-art overview of the theory of emergence across the scientific disciplines. Neither too detailed nor too abstract, his 28 stages of emergence trace the history of the universe from the Big Bang through the appearance of culture, philosophy and spirituality. No other work has laid out the core case for emergence — and hence against the ultimacy of reductionism — across the whole spectrum of science. This introduction to emergence theory should guide philosophers of science and anthropologists, theologians, and metaphysicians, as they reflect on the nature of Homo sapiens and our place in the Cosmos.” —Philip Clayton, Harvard University. My *Cosmogony* book claims that there are seven time-like stages for its fundamental ontology, and it discerns and documents these seven stages in some of these 28 categories.
6. Although this is not stated as explicitly in the blurb as I do here in this numbered item, the law-like pattern of realms that emerge from primordial primitives pertain to both cosmology (structure in space) and cosmogony (structure in time). Emergence as described in the blurb, with its various levels, is about the hierarchical *structure in space*, so to speak. It is as if, for instance, the level of biology is metaphorically in a strata ‘above’ the level of chemistry, the level of psychology is ‘above’ the level of biology. However, the Natural Sequence schema has more to do with *structure in time*; the Natural Sequence describes and explains a progressive sequence in various realms of transitional development over the history of the universe. The metaphor of ‘above and below’ is taken from geology, where sedimentary strata later in time are typically on top of strata earlier in time, and the strata are distinguished from each other by the different things that are contained within them. In terms of stages in time, there is no need for a metaphor: there are earlier and later stages. In the Natural Sequence schema, the structure in space (being, noun) and structure in time (doing, verb) are related to each other through the same, what I call, Attributes.
7. The word “complexity” appears in the blurb but the word “simplicity” does not. As we will see in the discussion of reductionism and emanationism further on in this chapter, both philosophical stances are based on the premise that the starting point is at an ultimate conceptual simplicity, and then complexity is derived step-wise in the realms in a hierarchy from simplicity to complexity. The word “hierarchy” does not appear in the blurb, but it is implied in the names of the various realms that are mentioned in the blurb.
8. Another key point that I want to make here is that there is a difference between those scientists and/or philosophers who study one or another of the realms of nature with a view to merely coming to a better and better *description* of their chosen realm, as distinct from those scientists and/or philosophers who study nature with a view to *explaining* nature in terms of understanding the relationships and

influences of the realms to each other. The very meaning of the word “explanation” in this context is that there is influence from one realm to another, a ‘bottom-up’ explanation in terms of reductionism, and a ‘top-down’ explanation in terms of emanationism.

9. Although it does not explicitly say so in the blurb, one of the fundamental philosophical considerations addressed in the book is the relationship between the abstract and the concrete realms: some of the realms are concrete (e.g., physics, biology, astronomy) and some are abstract (e.g., the laws that govern physics, biology, astronomy). This distinction is found in the Natural Sequence schema in the Attributes of Ordinality (= concrete) and Cardinality (= abstract).
10. An example of what happens between realms that is studied in emergence theory is in chemistry where the realm of atoms is different from the realm of molecules: combine two atoms of hydrogen with one atom of oxygen and you get water. The properties of hydrogen and oxygen (at room temperature) are very different from water (at room temperature). Indeed, the properties of water are very different depending on the environmental conditions of temperature and pressure: solid, liquid, or gas. The reasons for these changes in properties, between realms of the holarchies of nature, are not always immediately obvious; indeed, scientists and philosophers have been happily engaged in trying to solve the puzzles and mysteries of the holarchy of realms for millennia.
11. Although this is not stated explicitly in the blurb, emergentism has two versions, a “weak” version and a “strong” version. In the blurb, reductionism is contrasted with emergentism, but, as I understand it, reductionism is just weak emergence (see further on for the whole story). The science of emergentism is about trying to understand which way the explanatory and influential ‘arrows’ point, metaphorically speaking. In reductionism, the ‘higher’ levels and later stages are explained and influenced by the ‘lower’ levels and earlier stages. That is to say, reductionism postulates that the universe with all of its levels and stages are built “from the bottom up”, as in particles agglomerating into increasingly complex structures in levels and stages, from quarks to nucleons to atomic elements to molecules to polymers to proteins to biology to psychology to sociology to ecology to planets to stars to galaxies.
12. What is not mentioned explicitly in the blurb, but that is discussed at length in that book, is that emergentism also encompasses “emanationism”, a concept from theology. That book does not refer to it with that name, but it does refer to the phenomenon as “strong emergence”. Proponents of strong emergence, aka emanationism, provide evidence and argument that, among other things, the universe with all of its realms is built “from the top down”, metaphorically speaking. That is, the universe can be understood as a breakdown of universal general laws or principles along the spectra of realms, from the largest scale of big-bang cosmology to the smallest scale of quantum physics. This is the reverse order of what reductionism postulates for the influential ‘arrows’. I have heard the word “realization” used for the process of emanation from the most abstract end of the Cosmos to the most concrete end of the Cosmos, because the abstract is made increasingly “real” in the process of “stepping down” by stages. In other words, in emanation, the features and functions of each realm are explained and influenced by the levels ‘above’ it in the abstract > real holarchy.
13. Per the Natural Sequence schema, the situation is that both reductionism and emanationism are true because of the **Relationalism Principle (discussed where?)** the **Reciprocity Principle (discussed where?)** and the **Taijitu Tango Principle (discussed where?)** However, reductionism is strongest at the Ordinal ‘low’ end of the spectrum and emergentism is strongest at the Cardinal ‘high’ end of the spectrum. The two are balanced in their influence at the Neutral Assimilation level or stage midway between the two extremes.
14. The comparison and contrast of reductionism with emanationism is not actually explained in the blurb, but it is explained in that book, of course, and also in sections and chapters below, here in my *Cosmogony* book.
15. One of the biggest arguments among those who study emergence is between proponents of reductionism and proponents of emanationism. One of my claims is that the Natural Sequence borrows evidence and argument from both reductionist and emanationist sciences and philosophies; I regard both reductionism and emanationism as valid, and I look to understand the phenomena and the relationship of realms from both ‘directions’. In other words, the Cosmos exists in space and

functions in time via both ‘bottom-up’ influences and ‘top-down’ influences. In other words, the realms emerge from both ends of the spectrum.

16. It is claimed in the blurb that emergentism, because it embraces reductionism and emanationism, might also be a bridge between the natural and the supernatural, as well as between objective physics and subjective psychology — consciousness. I make the same claim here in my *Cosmogony* book; both nature and supernature, physics and metaphysics, concrete and abstract are examined, and shown to be governed by the same universal general principles formulated in the Natural Sequence schema.
17. So, as stated above, the concept of emergentism has two opposite paradigms, namely ‘bottom-up’ reductionism and ‘top-down’ emanationism. These paradigms reflect the way that different philosophers of science understand the relationship of the (space-like) levels and the (time-like) stages to each other. Reductionism and emanationism are philosophical “ontologies”, meaning that some philosophers of science regard reductionism as the way the Cosmos exists and functions, and some other philosophers (especially of the theological persuasion) regard emanationism as the way the Cosmos exists and functions. This difference in perspective is explained by which dichotomy of the Natural Sequence psychological spectrum the particular philosopher–scientist has their center of gravity in. That is, in terms of what I refer to as “Worldview”, the people who prefer reductionism are typically in the Ordinal Worldviews of the Natural Sequence spectrum, whereas people who prefer emanationism are typically in the Cardinal Worldviews of the Natural Sequence spectrum. Both Ordinal (reductionistic) and Cardinal (emanationistic) Worldviews have merit, as we will see.
18. A synonym of Emanation is interpolation and a synonym of Reduction is extrapolation ...
19. For the final item in this numbered list, in terms of the Natural Sequence schema, I correlate reductionism with Ordinality, emanationism with Cardinality, and emergentism with Neutrality. Just from the above prelude, the relevance of the discussion of emergence to the Natural Sequence might not be immediately apparent, but please stick with me here. The following sections and subsections are presented to clarify these brief and obscure statements. In the sections to follow, we will look at the Ordinal and Cardinal poles of emergence. First we will look at the philosophy of ‘bottom-up’ reductionism, then we will look at the philosophy of emergentism *per se*, and then we will look at the philosophy of ‘top-down’ emanationism. After that, there will be a discussion of how these “-isms” are instantiated in some other -isms, namely the concepts of **organism versus mechanism, of syntropy versus entropy [and others?]**.

So that the reader can check my claims without buying a book or checking a website, I turn to Wikipedia, my usual source of introductory information, and quote from it extensively. In the following quotations in the next several sections, I only extract those portions of various Wikipedia articles that are relevant to that section. As usual, underlines in the following quotations are my emphasis, and my comments are interspersed between paragraphs of the quotation. Sometime I insert clarifying words or phrases in [brackets].

① Reductionism

So that the reader can check my claims without buying a book or checking a website, I turn to Wikipedia, as usual, and quote from it extensively. As usual, underlines in the following quotations are my emphasis, and my comments are interspersed between paragraphs of the quotation. Sometimes I insert words or phrases in [brackets] in order to clarify the quotation or point out a correlation with the Natural Sequence schema. In the following quotation, I only extract those portions of the Wikipedia article that are relevant to the explanation of the fact that there are space-like levels and time-like stages in the structured holarchy of the Cosmos.

REDUCTIONISM

Reductionism is any of several related philosophical ideas regarding the associations between phenomena, which can be described in terms of other simpler or more fundamental phenomena. It is also described as an intellectual and philosophical position that interprets a complex system as the sum of its parts [and nothing more].

Notice that in Reductionism, there is no such thing as a “gestalt”; the system is not greater than the sum of its parts. This feature of Reductionism is made clear further on in the Wikipedia article.

The very use of such words as “simple, complex, fundamental, parts, system” indicates that the phenomenal universe is in some ways holarchical, and that the holarchy is composed of space-like levels and time-like

stages. One of the challenges of science and philosophy during the history of humankind has been to come to understand these phenomena.

The Wikipedia article continues:

DEFINITIONS

The [book] *Oxford Companion to Philosophy* suggests that reductionism is “one of the most used and abused terms in the philosophical lexicon” and suggests a three part division:

1. Ontological reductionism: a belief that the whole of reality consists of a minimal number of parts.
2. Methodological reductionism: the scientific attempt to provide explanation in terms of ever smaller entities.
3. Theory reductionism: the suggestion that a newer theory does not replace or absorb an older one, but reduces it to more basic terms. Theory reduction itself is divisible into three parts: translation, derivation, and explanation.

Reductionism can be applied to any phenomenon, including objects, problems, explanations, theories, and meanings.

In other words, the hierarchical level/stage structure of the phenomenological Cosmos is pervasive throughout, and not only in the concrete objective realm of physical systems but in the abstract subjective realm of ideas and theories. The point I want to emphasize here is that the Natural Sequence schema also applies to the spectrum of concrete objective and abstract subjective, but does so in both directions, abstract to concrete as well as concrete to abstract. The Natural Sequence schema is an example of all three of these types (ontological, methodological, theoretical) of Reductionism (and Emanationism) in the sense that it is proposed to be the method that derives the theory of the essential Cosmos (“all things”) from a minimum number of parts (“Tao, One, Two, Three”).

For the sciences, application of methodological reductionism attempts explanation of entire systems in terms of their individual, constituent parts and their interactions. For example, the temperature of a gas is reduced to nothing beyond the average kinetic energy of its molecules in motion. Thomas Nagel and others speak of ‘psycho–physical reductionism’ (the attempted reduction of psychological phenomena to physics and chemistry), and ‘physico–chemical reductionism’ (the attempted reduction of biology to physics and chemistry). In a very simplified and sometimes contested form, reductionism is said to imply that a system is nothing but the sum of its parts. However, a more nuanced opinion is that a system is composed entirely of its parts, but the system will have features that none of the parts have (which, in essence is the basis of emergentism). “The point of mechanistic explanations is usually showing how the higher level features arise from the parts.”

Several apparently distinct levels of the Cosmos are here named: “psychology, biology, chemistry, physics”. As stated here, the belief of naive reductionists is that the ‘higher’ levels can be explained entirely by the properties of ‘lower’ levels, but the belief of nuanced reductionists, aka emergentists, is that the whole is more than the sum of the parts; this latter is the “weak” emergentism mentioned previously in this chapter. The philosopher Tomas Nagel is a proponent of “strong” emergence, which is discussed further on.

The idea of reductionism can be expressed by “levels” of explanation, with higher levels reducible if need be to lower levels. This use of levels of understanding in part expresses our human limitations in remembering detail. However, “most philosophers would insist that our role in conceptualizing reality {our need for a hierarchy of “levels” of understanding} does not change the fact that different levels of organization in reality do have different ‘properties’.”

This thing about the existence and function of distinct levels in the structure of the Cosmos is the key point that I want to make in this chapter, and it is the point that I will make over and over again. The idea of levels is usually expressed metaphorically as ‘lower’ and ‘higher’, as if the layers were part of the structure of space (cosmology), but in the Natural Sequence schema, the structure is in time (cosmogony), and the stages are literally, not metaphorically, earlier and later in a developmental or evolutionary holarchy. The levels and stages are discernible from each other precisely because they each have “different properties”, and the notion of “holarchy” goes along with that; the holarchy might be defined in terms of size or complexity or inclusiveness or one or another of some other criterion.

Reductionism does not preclude the existence of what might be termed emergent phenomena, but it does imply the ability to understand those phenomena completely in terms of the processes from which they are composed. This reductionist understanding is very different from ontological or strong emergentism [aka emanationism], which intends that what emerges in “emergence” is more than the sum of the processes from which it emerges,

respectively either in the ontological [what is real] sense or in the epistemological [how do we know what is real] sense. Some physicists, however, claim that reductionism and [strong] emergentism [emanationism] are complementary: both are needed to explain natural processes. [<https://en.wikipedia.org/wiki/Reductionism> — retrieved 17 March 2021]

There is much more to the Wikipedia article on reductionism, but what I have quoted is sufficient to make the points that I made in the interspersed comments. The last paragraph of the quotation provides a bridge from ‘bottom-up’ reductionism to emergentism, and also (hint, hint) to ‘top-down’ emanationism with the phrase “strong emergentism”, so let’s take a look at those philosophies in the next two subsections.

By the way, the Natural Sequence has a place for both forms of emergence — ‘bottom-up’ reductionism and ‘top-down’ emanationism — with its concepts of Ordinality and Cardinality respectively. Reductionism understands and explains the levels and stages looking at the Cosmos from one end of the Natural Sequence spectrum, and emanationism understands and explains the levels and stages looking at the Cosmos from the other end of the Natural Sequence spectrum, as represented graphically in **Table Xa** above. The thing about the Natural Sequence schema is that it proposes that the same archetypal Attributes apply to both points of view.

Before we explore Cardinal-viewpoint emanationism in more detail, let’s look at the bridge between it and Ordinal-viewpoint reductionism, namely Neutral-viewpoint emergentism, which encompasses the two.

By the way, applying Natural Sequence Signs (+, =, –) to the emergentism phenomenon, we have this: =Emergentism is Signed as the Neutral Zone in the middle of the spectrum, and it has its Positive and Negative Poles, namely ‘bottom-up’ –Reductionism at the Negative Pole and ‘top-down’ +Emanationism at the Positive Pole.

① Emergentism

So that the reader can check my claims without buying a book or checking a website, I turn to Wikipedia, as usual, and quote from it extensively. As usual, underlines in the following quotations are my emphasis, and my comments are interspersed between paragraphs of the quotation. Sometimes I insert words or phrases in [brackets] in order to clarify the quotation or correlate with the Natural Sequence schema. In the following quotation, I only extract those portions of the Wikipedia article that are relevant to the explanation of the fact that there are space-like levels and time-like stages in the structured holarchy of the Cosmos.

EMERGENTISM

In philosophy, emergentism is the belief in emergence, particularly as it involves consciousness and the philosophy of mind, and as it contrasts with and also does not contrast with reductionism. A property of a system is said to be emergent if it is a new outcome of some other properties of the system and their interaction, while it is itself different from them.

Emergent properties, laws, and principles, appear when a system is studied at a higher level of organization (holistic instead of atomic level). They often show a high level of complexity, despite the fundamental principles that regulate the components of the system being simple. For example, in emergentism, the laws of chemistry are believed to emerge only from a few fundamental laws of physics (some still not discovered), biology from chemistry, and psychology from biology, although we still have not been able to fully deduce these holistic relations from the atomic level because of their complexity. Consciousness is believed to appear in certain large neural networks, but is not an attribute of a single neuron. In [weak] emergentism, no mystic principles are believed to be added at higher level, but [weak] emergentism is naturalistic.

As with the description of reductionism in the previous section, levels of the Cosmos are mentioned in the description of weak emergentism. Unlike weak emergentism, in strong emergentism, some “mystic principles” are believed to be added from a higher level, so strong emergentism is beyond “naturalistic”; it is “super-naturalistic”. Some of the levels mentioned in that quotation (physics, chemistry, biology, psychology) are covered in this *Cosmogony* book because they have been found to partake of the Natural Sequence schema.

The Wikipedia article continues:

Emergent properties are not identical with, reducible to, or deducible from the other properties. The different ways in which this independence requirement can be satisfied lead to variant types of emergence.

FORMS [of emergentism]

All varieties of [weak] emergentism strive to be compatible with physicalism, the theory that the universe is composed exclusively of physical entities, and in particular with the evidence relating changes in the brain with changes in mental functioning. Many forms of emergentism, including proponents of complex adaptive systems, do not hold a material [physicalistic] but rather a [meta-physicalistic] relational or processual view of the universe. Furthermore, they view mind–body dualism as a conceptual error insofar as mind and body are merely different types of relationships. As a theory of mind (which it is not always), emergentism differs from idealism, eliminative materialism, identity theories, neutral monism, panpsychism, and substance dualism, whilst being closely associated with property dualism. It is generally not obvious whether an emergent theory of mind embraces mental causation [top-down strong-emergence] or must be considered epiphenomenal [bottom-up weak-emergence].

My guess is that many readers will not understand much of what this quotation is saying, but there are reasons that I did not omit it from quotation. Unless you are a philosopher, you will probably not be familiar with many of these names of philosophical paradigms listed in the paragraph above. (If you are adventurous and curious, Wikipedia has articles on them.) Some of these “-isms” are even beyond the scope of this *Cosmogony* book, but most of them are not beyond the scope of my *Cosmology* book. Suffice it to say here in this *Cosmogony* book that the Natural Sequence schema is “relational” in that the space-like levels are instantiations of the seven fundamental so-called “Aspects” of the Natural Sequence schema, and that the Natural Sequence schema is “processual” in that the time-like stages are instantiations of the seven fundamental so-called “Processes” of the Natural Sequence schema. The philosophical paradigms named “monism” and “dualism” are very much relevant to the Natural Sequence schema, corresponding as they are to the principles of Oneness and Twoness, as discussed in [Chapter Xx, “The Derivation of the Natural Sequence”](#). The so-called “mind–body” dualism is also relevant to the Natural Sequence in that abstract properties correlate with Cardinality and are mind-like, whereas concrete properties correlate with Ordinality and are body-like.

The Wikipedia article continues:

Some varieties of emergentism [the weak varieties] are not specifically concerned with the mind–body problem [as the strong varieties are], and instead suggest a hierarchical or layered view of the whole of nature, with the layers arranged in terms of increasing complexity with each requiring its own special science. Typically physics (mathematical physics, particle physics, and classical physics) is basic, with chemistry built on top of it, then biology, psychology, and social sciences. Reductionists respond that the arrangement of the sciences is a matter of convenience, and that chemistry is derivable from physics (and so forth) in principle, an argument which gained force after the establishment of a quantum-mechanical basis for chemistry.

An elaboration of arguments for and against weak and strong emergence is beyond the scope of this *Cosmogony* book. The solution to the controversy offered by the Natural Sequence schema is to include both paradigms. In weak emergence, the “increasing complexity” appears in the Natural Sequence as the ‘bottom-up ascent’ from One-dimensional to Two-dimensional to Three-dimensional, whereas in strong emergence, the “increasing complexity” appears in the Natural Sequence as the ‘top-down descent’ from One-dimensional to Two-dimensional to Three-dimensional. The greatest complexity exists in the meeting point or overlap between the two, the Pan-dimensional level. This is [one way](#) that the Natural Sequence incorporates both the weak and the strong emergence paradigms; [there are others](#).

The Wikipedia article continues:

Other varieties see mind or consciousness as specifically and anomalously requiring [strong, top-down] emergentist explanation, and therefore constitute a family of positions in the philosophy of mind. Douglas Hofstadter summarizes this view as “the soul is more than the sum of its parts”. A number of philosophers have offered the argument that qualia constitute the hard problem of consciousness, and resist reductive explanation in a way that all other [merely physical] phenomena do not. In contrast, reductionists generally see the task of accounting for the possibly atypical properties of mind and of living things as a matter of showing that, contrary to appearances, such properties are indeed fully accountable in terms of the properties of the basic constituents of nature and therefore in no way genuinely atypical.

The word “gestalt” refers to phenomena that are “more than the sum of its parts”; more is said about that concept in [numerous places](#) in this *Cosmogony* book. Regarding the word “soul”, the Cardinal Aspects and Processes of the Natural Sequence schema could be regarded as the “gestalt soul” of the Ordinal Aspects and Processes.

As stated in my previous comment, the Natural Sequence schema accommodates both weak and strong emergence. More is said about “living” things further on, but before we get there, let me note that “mind” appears in the Natural Sequence schema as Cardinal Expression, “qualia” appears in Cardinal Inspiration, and “living” appears in Cardinal Action. These three types of Cardinality are holistic gestalts, as are all instantiations of Cardinality, and they constitute the non-physical “soul” in the Natural Sequence schema and its terminology, whereas the Ordinal triad refers to the “body” of the Natural Sequence schema.

Some emergentist philosophers also accommodate both paradigms:

Intermediate positions are possible: for instance, some [strong] emergentists hold that emergence is neither universal nor restricted to consciousness, but applies to (for instance) living creatures, or [non-living] self-organizing systems, or complex systems.

A brief discussion of self-organizing and complex systems is found in [other chapters](#) of this *Cosmogony* book, where my purpose is to demonstrate that the Natural Sequence schema has numerous and various instantiations. I suggest that scientists and philosophers who study self-organizing and complex systems might find the Natural Sequence schema helpful in their attempts to understand what they observe to be happening.

Some philosophers hold that emergent properties causally interact with more fundamental levels, an idea known as downward causation. Others maintain that higher-order properties simply supervene over lower levels without direct causal interaction.

Perhaps I am wading too deep into the weeds here, but some philosophers prefer to limit that word “causation” for influences that happen ‘horizontally’, aka within a level of the holarchy, and they prefer to not use it for the influences that happen between levels ‘up’ or ‘down’ in the holarchy. Some philosophers prefer to use the philosophical word “supervenience” for top-down influence, from level to level. This makes a distinction between strong causation within the same level versus mere influences ‘up’ or ‘down’ between various levels. “Emanation” is the metaphysics word for supervenience; see further on. In a previous section, we discussed the concept of “synergism”, which is where all levels influence all of the others; influence does not just go ‘up’ or just go ‘down’ or just go ‘sideways’ in the holarchy of levels. This notion of synergism (= working together across porous system boundaries), however strong or weak the influence may be, is consistent with the Natural Sequence schema.

Supervenience is said to happen not just from a space-like ‘higher’ level to a ‘lower’ level, it happens from a later time-like stage to an earlier stage:

All the cases so far discussed have been synchronic, i.e. the emergent property exists simultaneously [space-like] with its basis. Yet another variation operates diachronically [time-like]. Emergentists of this type believe that genuinely novel properties can come into being, without being accountable in terms of the preceding history of the universe. (Contrast with indeterminism where it is only the arrangement or configuration of matter that is unaccountable). These evolution-inspired theories often have a theological aspect, as in the process philosophy of Alfred North Whitehead and Charles Hartshorne.

Whitehead and Hartshorne and their process philosophy are discussed in [Chapter Xx](#) in this *Cosmogony* book.

In that quotation we see the distinction made between space-like “synchronic” levels and time-like “diachronic” stages. In my books, I refer to these as the difference between cosmology (structure in space) and cosmogony (structure in time). The Process/Aspect System as a whole has both a space-like and a time-like structure. I refer to the time-like component of the Process/Aspect System matrix as the Natural Sequence schema. What supervenience means in terms of time-like emergence is that, not only does the Cosmos have a memory of the past that drives it forward, it also has an imagination about the future that draws it forward. Philosophers (and theologians) refer to the notion of the Cosmos as having a purpose or of goal-seeking as “teleology”, and it is discussed at length [elsewhere](#) in my *Cosmology* book. In the Process/Aspect System and the Natural Sequence schema, the Cosmos is said to have a teleology (goal, purpose) in seven types, the seven Processes: Termination, Involution, Analysis, Combination, Synthesis, Evolution, Origination.

By the way, in terms of the Natural Sequence schema, philosophy has Cardinal Expression Attributes and theology has Cardinal Inspiration Attributes. And also by the way, “novelty” has Cardinal Action Attributes, and it is related to “vitalism”:

RELATIONSHIP [of emanationism] TO VITALISM

A refinement of vitalism may be recognized in contemporary molecular histology in the proposal that some key organizing and structuring features of organisms, perhaps including even life itself, are examples of [strong] emergent [aka emanation] processes; those in which a complexity arises, out of interacting chemical processes forming interconnected feedback cycles, that cannot fully be described in terms of those processes since the system as a whole has properties that the constituent reactions lack.

In the minds of some philosophers, vitalism is a corollary to ‘top-down’ emergence. aka emanation, as explained briefly below. Vitalism refers to the realm of the so-called “life-force”, and in the Natural Sequence, the life force is an ontological primitive, meaning that it is one of the fundamental functions of the Cosmos; it is one of the seven archetypal functions, the one with Cardinal Action Attributes. Other archetypal features or ontological primitives formulated into the Natural Sequence schema are “the Good” (Cardinal Inspiration), “the True” (Cardinal Expression), and “the Beautiful” (Neutral Assimilation).

The Wikipedia article continues:

Whether emergent system properties should be grouped with traditional vitalist concepts is a matter of semantic controversy. In a light-hearted millennial vein, Kirshner and Michison call research into integrated cell and organismal physiology “molecular vitalism”.

According to Emmeche et al. (1997):

On the one hand, many scientists and philosophers regard emergence as having only a pseudo-scientific status. On the other hand, new developments in physics, biology, psychology, and cross-disciplinary fields such as cognitive science, artificial life, and the study of non-linear dynamical systems have focused strongly on the high level ‘collective behavior’ of complex systems, which is often said to be truly [strong] emergent, and the term is increasingly used to characterize such systems.

Emmeche *et al.* (1998) state that “there is a very important difference between the vitalists and the emergentists: the vitalist’s creative forces were relevant only in organic substances, not in inorganic matter. Emergence hence is creation of new properties regardless of the substance involved.” “The assumption of an extra-physical *vitalis* (vital force, entelechy, *élan vital*, etc.), as formulated in most forms (old or new) of vitalism, is usually without any genuine explanatory power. It has served altogether too often as an intellectual tranquilizer or verbal sedative — stifling scientific inquiry rather than encouraging it to proceed in new directions.”

In this quotation, we see Emmeche *et al* express a physicalist, reductionist bias. Being biased the other way, I would say the opposite of them: the recognition of ‘top-down’ strong emergence should lead to greater explanatory power in scientific inquiry, a new direction. Emmeche’s adherence to the weak emergence paradigm is not endorsed by the Natural Sequence schema, which includes the strong emergence (emanationist) paradigm, which claims that vitalism — as an instantiation of the Cardinal Action Process, Origination — is a ‘force’ or ‘field’ built into the cosmic evolutionary imperative that makes the development of biological life inevitable when the environmental conditions are appropriate.

The Wikipedia article continues:

In [the book] *The Conscious Mind* (1996) David Chalmers argues that comparisons between vitalism and the “hard problem of consciousness” commit a category error, because, unlike life, consciousness is irreducible to lower-order physical facts. It is logically impossible that one could perfectly replicate all the lower order facts of, say, wombat cellular biology without the higher order facts about the wombat coming along for the ride. In contrast, it is logically possible that all the physical facts of the world could be the same without consciousness ever coming into the question (i.e. philosophical zombies). By Chalmers account, facts about consciousness are “further facts about the world in addition to the physical facts”. Chalmers concludes that consciousness is a fundamental fact of nature, and thus has no need to emerge out of anything.

Holarchy and emergence are all about “explaining” phenomena in terms of other phenomena. What philosophers realize but that non-philosophers might not realize is that there is an end point of explanatory exploration, a bedrock concept beyond which we cannot see. With Chalmers that is “consciousness” at the foundation of nature. The Natural Sequence schema has a different view from that of Chalmers in that it allows for reality systems outside of space/time, outside of “nature”, even outside of the Natural Sequence schema.

At this point in my exploration and explanation, it is useful to delve into theological concepts, namely that there is a *transcendent* aspect of deity (beyond nature) and an *immanent* aspect of deity (within nature). This theology is elaborated in other chapters here in Part I, but for here and now note that the Natural Sequence itself exists and functions within space/time physics and time/space psychology — within nature, within the

immanent deity, within consciousness, as Chalmers conceives it. His view of consciousness is consistent with the Natural Sequence to the extent that I understand his view of consciousness to be equivalent with the *immanent* irreducible “fundamental fact of nature”, rather than the transcendent aspect beyond nature. His view of consciousness is consistent with the Natural Sequence notion that nature emerges from the *immanent* deity, from two poles, the minimum pole and the maximum pole. Per the Natural Sequence schema, there is a consciousness that emerges from the minimum pole of the holarchy, from the ‘bottom up’ into seven archetypes, and there is a consciousness that emanates from the maximum pole of the holarchy, from the ‘top down’ into the same seven archetypes, thus the Negative and Positive Poles of each archetype.

In the Natural Sequence schema, the Tao has a negative (yin) pole and a positive (yang) pole. In both the yin view (‘bottom up’ reductionism) and the yang view (‘top down’ emanationism) of the Natural Sequence cosmogony, Tao produces the One, which produces the Two, which produces the Three, which combined comprises the seven archetypes. In the Natural Sequence schema, vitalism is one of the seven archetypes, and it is derivative of consciousness; it is not fundamental, just as Chalmers says.

In the Natural Sequence schema, there is a Consciousness (with a capital “C”) that is beyond the Natural Sequence schema, beyond nature, beyond the consciousness out of which nature emerges; this is described in [Chapter I-x](#), “Derivation of the Natural Sequence”. Basically and briefly, this Consciousness can be conceptualized as consisting of an emerging cascade: 1) the inconceivable ineffable Absolute Absolute which cannot be compared or contrasted with anything and is therefore neither conscious nor unconscious, animate nor inanimate; 2) Pure Consciousness, the Absolute, which can be compared and contrasted with the Relative, and which, in terms of mathematical concepts, has the minimum pole of Zero and the maximum pole of Infinity.

Thereafter in the Wikipedia article was a section on the history of the concept of emergence in modern times, including some technical arguments, but it adds nothing relevant to the Natural Sequence that has not already been noted. Therefore I skip to the next relevant section, the subject of which I have already spoken briefly:

STRONG AND WEAK EMERGENCE

Usage of the notion “emergence” may generally be subdivided into two perspectives, that of “weak emergence” and “strong emergence”. One paper discussing this division is *Weak Emergence*, by philosopher Mark Bedau. In terms of physical systems, weak emergence is a type of emergence in which the emergent property is amenable to [quantitative] computer simulation or similar forms of after-the-fact analysis (for example, the formation of a traffic jam, the structure of a flock of starlings in flight or a school of fish, or the formation of galaxies). Crucial in these simulations is that the interacting members retain their independence. If not, a new entity is formed with new, emergent properties: this is called strong emergence, which it is argued cannot be simulated or analyzed [because it is qualitative].

Some common points between the two notions are that emergence concerns new properties produced as the system grows, which is to say ones which are not shared with its [space-like] components or [time-like] prior states. Also, it is assumed that the properties are supervenient [influential] rather than metaphysically primitive. [<https://en.wikipedia.org/wiki/Emergence> — retrieved 17 March 2021]

In the Natural Sequence schema, Ordinality (and therefore weak emergence) is concerned with the quantitative component of the Cosmos, whereas Cardinality (and therefore strong emergence) is concerned with the qualitative component of the Cosmos.

Correlating the two types of emergence, weak and strong, with Neutral Assimilation in the Natural Sequence septenary, I would correlate weak emergence with the Negative Pole, and strong emergence in the Positive Pole of the Neutral Zone. Viewed this way, we see that both weak emergence and strong emergence are true, but are contingent on the realm being considered.

The Natural Sequence schema assumes that there are some “metaphysical primitives”, namely the three Cardinal Processes; Origination, Evolution, and Synthesis, and then we believers in the Natural Sequence schema check this assumption against empirical and scientific evidence and argument to see if it is viable; that is what these *Cosmology* and *Cosmogony* and *Personality* books are all about.

Beyond the quote above, the section went on to present the arguments for and against strong and weak emergence, but they add nothing of relevance to this Natural Sequence book, so I omitted the conversation.

Emanationism was mentioned and defined briefly in the preceding two sections; the following section elaborates on the concept.

① Emanationism

Emanationism is the opposite of reductionism in that the explanatory and influential ‘arrows’ are said to point in opposite directions. That is to say, in reductionism, the ‘arrows’ are said to point from the “lower-earlier” to the “higher-later” levels and stages of the Cosmic holarchy as discussed above, whereas in emanationism, the ‘arrows’ are said to point from the “higher-later” to the “lower-earlier” levels and stages of the Cosmic holarchy. Recall that reductionism is commonly abbreviated to ‘bottom up’ explanatory epistemology, and emanationism is commonly abbreviated to ‘top down’ explanatory epistemology. Note this as you read the following quotation from Wikipedia.

EMANATIONISM

Emanationism is an idea in the cosmology [space structure in levels] or cosmogony [time structure in stages] of certain religious [theological] or philosophical systems. Emanation, from the Latin *emanare* meaning “to flow from” or “to pour forth or out of”, is the mode by which all things are derived from the first reality, or principle. All things are derived from the first reality or perfect God by [quantitative] steps of [qualitative] degradation to lesser degrees of the first reality or God, and at every step [space-like level or time-like stage] the emanating beings are less pure, less perfect, less divine. Emanationism is a transcendent principle from which everything is derived, and is opposed to both creationism (wherein the universe is created by a sentient God who is separate from creation) and materialism (which posits no underlying subjective and/or ontological nature behind phenomena being immanent).

That is partly what I meant by ‘top-down’ “realization” from abstract to concrete, and what is also referred to as “strong emergence” by philosopher–scientists. Not only is emanationism opposed to creationism and materialism, it is also opposed to the version of reductionism that says that there is nothing really new showing up as spacetime evolves. Emanationism is also opposed to “weak emergence” (see below).

ORIGINS

Emanationism is a cosmological [and cosmogonical] theory which asserts that all things “flow” from an underlying [I prefer “overarching”] principle or reality, usually called the Absolute or Godhead. Any teachings which involve emanation are usually in opposition to creation *ex nihilo* [out of nothing] as emanation advocates that everything has always existed and has not been “created” from nothing.

Ontological questions, which concern the ultimate nature of reality, such as whether ultimate reality be an unconscious principle and/or a conscious deity, are discussed in detail in my book *The Tao of Cosmology*, so I will not delve into that here, other than to say that, in addition to theologians and philosophers, physicists and cosmologist have also been pondering the nature of time and its “flow”, and they are likewise coming around to the notion that time emerges from some as-yet unknown primitive underlying or overarching unconscious and/or conscious logical–mathematical structure.

Some deep thinkers of the theological and philosophical persuasion, from ancient to modern times, are proponents of emanationism:

Kleinham (2007) writes:

Underlying the worldview of traditional [ancient religious] cosmology is the idea that the universe is an emanation of a unitary divine principle. Although this idea has been blended with the revealed creationist doctrines of the major monotheistic religions, orthodox theologians have generally regarded it with suspicion. They have relegated it to the shadowy spheres of mysticism, pantheism, and the occult, which have always been at odds with orthodoxy.

In passing, let me note that in the Natural Sequence schema, the usual canonical stance of monotheistic religions is to function primarily in the Ordinal side of the Natural Sequence spectrum, whereas “mystics”, “pantheists”, and “occultists” function primarily in the Cardinal side of the Natural Sequence spectrum, hence their being at odds with each other. This dichotomy between Ordinal religion versus Cardinal spirituality is discussed in **Chapter V-9** in Part Five, “Stages of Faith Development”. Basically and briefly, the realm of religion and spirituality is just one of many realms where/when there is an evolution, a development, that follows the Natural Sequence schema.

The traditional view is summed in the doctrine of emanation formulated by Plotinus. The primary classical exponent of emanationism was the neoplatonic philosopher Plotinus, who in his [book] *Enneads* described all things phenomenal and otherwise as an emanation ... from the One.... In 5.1.6, emanationism is compared to a diffusion from the One [aka the Absolute], of which there are three primary *hypostases* [sub-stances, principles, archetypes], the One, the Intellect (*nous*), and the Soul (*psyche*).

Neoplatonism and Plotinus are discussed in **Chapter III-x in Part Three**, “Neoplatonism”, in this *Cosmogony* book. Basically and briefly, Plotinus is ambiguous about his use of the concept of “One”, because he said that the One is one of the hypostases or emanations or productions of the One. However, I do make a distinction between “One” as Tao and “One” as produced by Tao. Thus, I understand the three hypostases of Plotinus to be equivalent to the statement in Chapter 42 of the *Tao Te Ching* that “Tao [Absolute] produced the One, the One produced the Two, the Two produced the Three”. Then I correlate these numbers with the Natural Sequence schema thus: the Three (*nous/intellect*) is the three-dimensional Expression Axis, the Two (*psyche/soul*) is the two-dimensional Inspiration Axis, and the One is the one-dimensional Action Axis.

Another advocate of emanationism was Michael Servetus, who was burned at the stake for his nontrinitarian cosmology.

Servetus and the nontrinitarian cosmology called “modalistic monarchianism” is discussed in **Chapter III-x in Part Three**, “Christian Theology”, in this *Cosmogony* book. Basically and briefly, Servetus understood the Christian doctrine of the trinity in a way that somewhat resembles the Neoplatonic and the Taoist notion of the hypostases.

OCCULTISM

Emanationism is a common teaching found in occult and esoteric writings. According to Owen (2005):

Theosophy draws on Neoplatonic emanationism, in particular the concept of separation from and return to the Absolute, and reworks the Eastern concepts of karma and reincarnation to provide an evolutionary theory of both humankind and the universe.

Theosophy contends that all organisms — including animals and human beings — and all matter “flow” from a pure spiritual formation in the Absolute to a material one over time to become materialized and that they will later return to the Absolute after the cosmic cycle of life.

Chapter III-x in Part Three, “Theosophy”, in this *Cosmogony* book discusses the elements of the Natural Sequence that theosophists understood and taught.

As Morgan summarizes: “*The Secret Doctrine* [a book by Theosophist Helena Blavatsky] laid out an emanationist view of the development of the physical universe, a process of ebb and flow in which spirit gradually unfolded itself in matter, attaining consciousness, and returning to spirit in a higher and more realized form.” According to the emanationist cosmology of Madame Blavatsky all monads emerge from divine unity at the beginning of a cosmic cycle and return to this source at its close.

This “ebb and flow”, or efflux and influx, or breathing out and breathing in, or fragmentation and reintegration, is reminiscent of the Dialectic Principle of the Natural Sequence septenary: the interaction of the two phases of the grand cycle of the Cosmos works synergistically to renew that Cosmos *ad infinitum* and *ad aeternum*.

Blavatsky in her book *The Key to Theosophy* (1889) wrote that: “We believe in a universal divine principle, the root of all, from which all proceeds, and within which all shall be at the end of the great cycle of being.”

Occultist Samael Aun Weor taught emanationism from his studies with the Kabbalah and Gnosticism. He mapped out a complex esoteric cosmology with matter flowing from different planes of existence all existing in the absolute. As Dawson (2007) comments:

As with esoteric thought in general, Weor holds that the universe originated in the ordering activity of the absolute upon chaotic primordial matter, giving rise to (emanating) the subsequent planes of the created order (*Pleroma*). [<https://en.wikipedia.org/wiki/Emanationism> — retrieved 17 March 2021]

Refer to **Chapter I-x**, “Chaos + Cosmos = Complexity” for more about that dichotomy and its ramifications and implications. Refer to **Chapter II-x in Part Two**, “The Seven Planes”, in this *Cosmogony* book for more information about the journey of cosmogony through cosmology.

This introduction to emanationism is very cursory; other expositions might be required if the reader is to understand the concept. Among many other introductions that can be found by an internet search engine, there are these:

- ><https://www.britannica.com/topic/emanationism><
- ><https://www.newadvent.org/cathen/05397b.htm><
- ><https://www.newworldencyclopedia.org/entry/Emanationism><

① Summary Tabulations

It might help you to understand this chapter better if you study the table below, and the comments below it.

Table I-Xa — REDUCTIONISM — EMERGENTISM — EMANATIONISM							
YIN+YANG=CHI	REDUCTIONISM (“Bottom-Up/Weak” Emergence)			EMERGENTISM	EMANATIONISM (“Top-Down/Strong” Emergence)		
DIALECTIC	–ORDINAL–			=NEUTRAL=	+CARDINAL+		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
PROCESS	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
REDUC. RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
EMAN. RANK	SEVENTH	SIXTH	FIFTH	FOURTH	THIRD	SECOND	FIRST
DIALECTIC	+CARDINAL+			=NEUTRAL=	–ORDINAL–		

My comments on this table are as follows:

1. The leftmost column in the bottom five rows of this table name the Attributes of the seven archetypes of the Natural Sequence schema. Refer to Chapter I-x, “Attributes of the Natural Sequence”, for an explanation of them. The seven columns to the right of the left-most column show the seven stages of the Natural Sequence schema by their rank in the spectrum.
2. The Natural Sequence word “Attributes” is just another name for what are often referred to as “properties” in the descriptions of the levels and stages of any holarchy in the Cosmos that are studied by science and/or philosophy, whether it be physics or chemistry or biology or psychology or sociology or history or whatever. In various Parts and Chapters in this *Cosmogony* book, I attempt to discern the Attributes, aka the properties, in the descriptions of the stages in various levels of the Cosmos; this is the way to correlate dozens of realms with each other and bring them under the ‘umbrella’ of the Natural Sequence schema.
3. In principle, the reductionist paradigm assumes that all of the archetypes to the right of the left-most stage/rank can be explained in terms of those stages/ranks to their left. Typically, reductionists only acknowledge the reality of the first four, counting from the left-most archetype, because in them the trend is from the simplest to the most complex (1-D > 2-D > 3-D > 4-D), and the complexity peaks at the fourth stage (P-D).
4. In principle, the emanationist paradigm assumes that all of the archetypes to the left of the right-most stage can be explained in terms of those stages to their right. This is called “realization”: moving from right to left from stage/rank to stage/rank, the trend is from the most abstract to the most concrete. Typically, emanationists acknowledge the reality of all seven stages.
5. It is axiomatic in the Natural Sequence schema that all stages/ranks are synergistic: all stages influence all other stages, left and right. The Natural Sequence accepts “teleology”, the notion that the future influences the present (and the past); the Cosmos has a final cause, an end toward which it is evolving; it started out in the One stage (–1-D–) and it returns to the One stage (+1-D+).
6. The seventh row shows the Stages/Ranks numbered from left to right: this is the reductionist perspective. The eighth row shows the Stages/Ranks numbered from right to left: this is the emanationist perspective. Showing them both reflects the Taijitu Tango Principle.

- Assuming that this table shows a septenary in the middle of the entire cosmogonical history from the shortest to the longest time spans, there are septenaries off the left side of the table, and there are septenaries off the right side of the table. This is the Fractality Principle.

There is another way to graphically represent the difference between reductionism and emanationism, which I do in the following table:

Table I-Xb: EMERGENTISM							
PHILOSOPHY	EMANATIONISM						
DIALECTIC	ORDINAL			NEUTRAL	CARDINAL		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
ASPECT	GOAL	SHADOW	ATTITUDE	WORLDVIEW	CENTER	ROLE	MODE
PROCESS	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIALECTIC	ORDINAL			NEUTRAL	CARDINAL		
PHILOSOPHY	REDUCTIONISM						

My comments on this table are as follows:

- This chart uses terminology elaborated at length in this Part and other Parts and Chapters in this *Cosmogony* book, and also elaborated in my books *The Tao of Cosmology* and *The Tao of Personality*.
- The point of this table is to graphically represent so-called ‘bottom-up’ reductionism as contrasted to so-called ‘top-down’ emanationism as they apply to the Process/Aspect System terminology, using the Dialectic and Axial Attributes that I apply to personality traits.
- Note that the so-called “Aspects” are space-like levels of ‘being’. Note that the so-called “Processes” are time-like stages of ‘doing’. Everything in the Cosmos is a combination of Aspect and Process; it has both being and doing, noun and verb. This is all very abstract, but if you persevere in reading to the end of this *Cosmogony* book, you will see that these abstractions are explained in this book in many places with regard to many subjects.
- Notice that the top and bottom rows contain only one item and are therefore are simple, and notice that the top simplicity emerges into complexity moving down the table with three items in the second row and seven items in the third row from the top. Then notice that the bottom simplicity emerges into complexity moving up the table, with three items in the second row and seven items in the third row from the bottom. This makes this table an example of the particular type of graphic representation called “nested hierarchy”, described in the section on Holarchy.
- The meeting point of emanation and reduction is represented by the double thin line in the middle of the table, between the row of seven Aspects and the row of seven Processes. However, recall my statement above that all manifestation is the combination of both being and doing, so there is no actual division in reality. The basic premise of emergentism is that there is influence of all realms upon all of the other realms.

Projection and Simulation

[[This section should be expanded with quotations and comments and relocated to the *Cosmology* book.]]

Some physicists have come to believe that there is something beyond the cosmic system in which we exist and function, their phrase for this is that “spacetime is doomed”. Do an internet search on that phrase and you will see what I mean. Basically and briefly, the cosmic system is sandwiched between an *infra*-cosmic system ‘below’ spacetime/timespace and a *supra*-cosmic system ‘above’ spacetime/timespace — using the metaphors of ‘below’ and ‘above’ in the same way that they are used in the description and explanation of reductionism and emanationism in this chapter, which operate within the spacetime/timespace Cosmos. This is another application of the Meta Principle discussed elsewhere. In other words, the Cosmos is a ‘projection’ from an

infra system based on some sort of logic-mathematics, and the Cosmos is a 'simulation' from the perspective of the supra system, typically called the higher planes in esoteric teachings....

① Concluding Comments on Emergentism

It always helps me to get my thoughts in order when I put my words into a numbered list.

1. For convenience of explanation in the above and throughout this *Cosmogony* book, I limit the use of the word "level" to refer to the space-like manifestation of emergentism, and I limit the use of the word "stage" to refer to the time-like manifestation of emergentism. The *Tao of Cosmology* book is primarily concerned with the space-like structure of the Cosmos; this *Tao of Cosmogony* book is primarily concerned with the time-like structure of the Cosmos.
2. The Natural Sequence schema explains emergentism in that it graphically represents the relationships of each level/stage to its adjacent levels/stages, and the entire spectrum of levels/stages, as what in mathematics is called a "graph", specifically the type of graph that has nodes and arrows. The nodes are the names of the levels/stages arranged in the Natural Sequence, and the arrows represent the relationship of the nodes to each other. The nodes represent space-like being, and the arrows represent time-like doing. In language, the nodes are nouns and the arrows are verbs. In the case of reductionism, aka weak emergence, the arrow points from the first node at the beginning of time in the past to the last node at end of time in the future. In the case of emanationism, aka strong emergence, the arrow points from the last node at the end of time in the future all the way back to the first node at the beginning of time; another word for strong emergence is "teleology". It is axiomatic in the Natural Sequence schema that both directions are operational, and that they meet in the creative Now.
3. In the Natural Sequence schema, one of the holarchies of the Cosmos is levels/stages from "concrete" to "abstract", the former being assigned as the negative pole and the latter being assigned as the positive pole. The bottom-up perspective (reductionism) sees the Cosmos as built up from the concrete negative pole of nature to the abstract positive pole, whereas the top-down perspective (emanationism) sees the Cosmos as built down from the abstract positive pole to the concrete negative pole. It is axiomatic in the Natural Sequence schema that both perspectives are equally valid (emergentism); it is axiomatic that the interaction of reductionism and emanationism drives the emergentism of the system of the Cosmos as a whole; this is what I call the Dialectic Principle.
4. The Emergentism Principle — as an alternative name for the subject of this chapter — together with the Dialectic Principle, are two of several principles that are found in a deep understanding of the Natural Sequence schema; other principles are discussed in [Chapter X-x](#) here in Part One.
5. Another point made in this chapter is the fundamental difference between Ordinality and Cardinality in the Natural Sequence schema, the former emphasizing reductionism and the latter emphasizing emanationism. On that basis, emergentism may be correlated with Neutral Assimilation, where both bottom-up and top-down influences meet in the middle, so to speak.
6. Things get messy real quick, downstream of the primordial emanationism effluence and upstream of the primordial reductionism influence, from which all flows (emergentism). Most people are content to muck around in the messy middle where the primordial principles are obscure, but scientists and philosophers endeavor to understand the primordial principles at the extremes.
7. As stated above, in the Natural Sequence schema, emergentism can be signed as "Chi/Neutral", reductionism can be signed as "Yin/Negative", and emanationism can be signed as "Yang/Positive". However, there is a subtlety that goes by the name of the "Taijitu Tango Principle", which is discussed in numerous other places in this book. Basically and briefly, all phenomena exist and function as a ratio of Yin and Yang, not purely one or the other, and this gives rise to the Cosmic holarchy.





PART II — MODERN-DAY ESOTERIC TEACHINGS



Chapter II-1

INTRODUCTION TO PART TWO

② The reason that I place this Part at the beginning of the Parts is that I was introduced to the Natural Sequence schema via a modern-day esoteric teaching, specifically, the Michaelian teachings, which had its beginning in 1973, and which I first encountered in 1980. That teaching is discussed in **Chapter II-4** of this Part. It so happens that the Michaelian cosmology is built around the notion that sevenness is basic in the structure of the natural and supernatural worlds. And before my involvement with the Michaelian teachings, I wrote a book manuscript on *Bible Chronology and the Hebrew Calendar* as part of my involvement for twenty years in a fundamentalist quasi-Christian group. It so happens that the Biblical cosmology is also built around the septenary: the week of days, the week of years called Jubilee, seven of this and seven of that. Subsequent to my involvement in those two modern-day spiritual teachings, I discovered that sevenness is not limited to those: many other religious and spiritual and esoteric folk have a cosmology built on sevenness.

This fact has not gone unnoticed and undocumented by Wikipedia:

7 (seven) is the natural number following 6 and preceding 8. It is the only prime number preceding a cube. As an early prime number in the series of positive integers, the number seven has greatly symbolic associations in religion, mythology, superstition and philosophy. The seven Classical planets resulted in seven being the number of days in a week. It is often considered lucky in Western culture and is often seen as highly symbolic.
[><https://en.wikipedia.org/wiki/7> — retrieved 07 December 2023]

The septenary is such a common feature of religions and spiritual and esoteric teachings and philosophies that one might be tempted to believe that there might be something to it. This entire *Cosmogony* book provides the evidence and argument that there is indeed something to sevenness, not only in metaphysical realms, but also in physical realms. We start by reviewing the more recent metaphysical teachings, here in Part Two.

② New Religious Movements

In the next Part, Part Three, I provide documentation of characteristics of the Natural Sequence schema to the extent that I have found them in ancient religions and philosophies. In this Part, Part Two, I provide documentation of characteristics of the Natural Sequence schema to the extent that I have found them in modern-day spiritual teachings and philosophies. Academics consider so-called “new religious movements” to be a phenomena worthy of study separate from ancient religions and philosophies, so I honor that distinction in this *Cosmogony* book. Another potential good reason to make the distinction here is that readers are likely to be more familiar with new religious teachings than they are with ancient teachings; perhaps they have even participated in one or two, as I have.

As usual, I quote Wikipedia for an introduction to this subject:

A new religious movement (NRM), also known as alternative spirituality or a new religion, is a religious or spiritual group that has modern origins and is peripheral to its society's dominant religious culture. NRMs can be novel in origin or they can be part of a wider religion, in which case they are distinct from pre-existing denominations. Some NRMs deal with the challenges which the modernizing world poses to them by embracing individualism, while other NRMs deal with them by embracing tightly knit collective means. Scholars have estimated that NRMs number in the tens of thousands worldwide. Most NRMs only have a few members, some of them have thousands of members, and a few of them have more than a million members.

There is no single, agreed-upon criterion for defining a "new religious movement". There is debate as to how the term "new" should be interpreted in this context. One perspective is that it should designate a religion that is more recent in its origins than large, well-established religions like Hinduism, Judaism, Buddhism, Christianity, and Islam. Some scholars view the 1950s or the end of the Second World War in 1945 as the defining time, while others look as far back as the founding of the Latter Day Saint movement in 1830 and of Tenrikyo in 1838.

New religions have sometimes faced opposition from established religious organizations and secular institutions. In Western nations, a secular anti-cult movement and a Christian countercult movement emerged during the 1970s and 1980s to oppose emergent groups.

In the 1970s, the distinct field of new religions studies developed within the academic study of religion. There are several scholarly organizations and peer-reviewed journals devoted to the subject. Religious studies scholars contextualize the rise of NRMs in modernity as a product of, and answer to modern processes of secularization, globalization, detraditionalization, fragmentation, reflexivity, and individualization.

[>https://en.wikipedia.org/wiki/New_religious_movement< — retrieved 16 October 2023]

The Wikipedia article continued with sections on Beliefs and Practices, Membership, Reception, and References. Those topics are irrelevant to my purposes in this *Cosmogony* book.

② Introduction to Chapters in Part Two

This Part Two of this *Cosmogony* book is somewhat awkward in that the information is presented in two ways in order to accommodate the fact that some modern-day spiritual teachings discuss some of the same septenarian subjects, and some modern-day spiritual teachings discuss a unique septenarian subject. I address this fact by having some chapters dedicated to specific modern-day spiritual teachings, and I also address it by having chapters dedicated to specific subjects. To mitigate some of the confusion that this method might foster in the minds of some readers, it seems expedient for me to introduce readers to these chapters here in the Introduction to this Part.

Chapter II-2: THE THEOSOPHICAL TEACHINGS — The roots of Theosophy go back centuries, but its modern incarnation began in the late 1800s with the appearance of a Russian mystical philosopher named Helena Blavatsky. It has been in development ever since then. It got a major boost in the second quarter of the 20th Century with the channeling of Alice Bailey. Theosophy has a comprehensive septenarian cosmology. Theosophy is often credited with forming the core of many so-called "New Age" ideas.

Chapter II-3: THE GURDJIEFFIAN TEACHINGS — A contemporary of Bailey was a Greek/Armenian/Russian mystic by the name of Georges Gurdjieff. He had an elaborate structured teaching about how to attain his version of enlightenment in seven steps. Some founding member of the Michaelian teachings (see next) had been involved in a Gurdjieffian group before breaking away from it in the early 1970s.

Chapter II-4: THE MICHAELIAN TEACHINGS — A group of friends and spiritual aspirants in California came together in 1973, and, using an Ouija board and trance channeling, made contact with what claimed to be a non-physical entity that called itself "Michael". Over the next few years, Michael revealed an elaborate psychological and spiritual cosmology based on the septenary. Part of that revelation was what I came to call the Natural Sequence schema and the Process/Aspect System matrix. Without that revelation, it is unlikely that my books would have been written.

Chapter II-5: THE RA MATERIAL — In the early 1980s, another group of spiritual aspirants, this time in Kentucky, made contact via channeling with another non-physical entity, one that called itself "Ra". Unsurprisingly, it also had an elaborate cosmology built on the septenary. I discovered this material in 1983 and found that it complemented and supplemented the Michaelian teachings nicely.

Chapter II-6: THE SEVEN PLANES — Many spiritual and philosophical and esoteric traditions from ancient to modern time teach that there are seven so-called "planes" or reality systems" in the Cosmos as a whole, with the Physical Plane, the universe that is explored by the scientific method, being the 'lowest' of the

seven. This chapter documents some of those teachings, and demonstrates that the planes follow the Natural Sequence schema.

Chapter II-7: THE SEVEN RAYS — The notion of so-called “rays” is similar to the notion of planes in many ancient and modern esoteric traditions. The basic idea is that the primordial Cosmic singularity bifurcated into opposite kinds of ‘energy’, and then the bifurcations each trifurcated into three distinct ‘energies’, such that there are seven fundamental types of ‘energy’ in the Cosmos. This chapter documents some of those teachings, and demonstrates that the rays follow the Natural Sequence schema.

Chapter II-8: THE SEVEN SOUL AGES/WORLDBIEWS — Many esoteric traditions have taught that human souls evolve through the Physical Plane and the other six planes according to the pattern of the seven Rays, in seven stages on each plane. This chapter documents some of those teachings, and demonstrates that the Soul Ages, aka Worldviews, follow the Natural Sequence schema.

Chapter II-9: THE SEVEN CHAKRAS — The esoteric tradition known as Hinduism claims that the human physical body has seven major ‘energy centers’. They are called “chakras”, and it is claimed that they follow the same pattern as the planes and the rays, and hence they follow the Natural Sequence schema. This chapter documents the ancient and modern understanding of the meaning and functions of the seven chakras.

Chapter II-10: THE SUBTLE BODIES — Many esoteric traditions and teachings claim that the physical body is not all that there is to the human existence and function. Rather, there are so-called “subtle bodies” above and beyond the physical, material body. It so happens that these correlate with the plane and the rays and the chakras, and hence they follow the Natural Sequence schema. This chapter documents some of the esoteric sources that have somewhat to say on the subject.

Chapter II-11: CONCLUSION TO PART TWO — This chapter provides a table that shows the names of the instantiations of the Natural Sequence schema that were documented in the previous chapters of Part Two.

Review of Natural Sequence Principles

[[Modify this section to accord with the final full version of the chapter on Principles in Part One.]]

This section is a condensation of **Chapter I-x in Part One**, “Natural Sequence Principles”. I designate certain notions as “principles” because they can be discerned in many if not most septenaries reviewed in this *Cosmogony* book. To me, it seems potentially helpful to the reader to have a reminder of the Principles here at the beginning of this Part, as at the beginning of other Parts. Reference to some of these principles are noted where relevant to the discussion in the chapters here in Part Two.

Recall the Tao’s Template ontology, which states:

The Tao produced the One, the One produced the Two, the Two produced the Three, the Three produced All things. All things *carry* the Yin and *embrace* the Yang, and through the *blending* of the Chi they *achieve* harmony.

Notice that the Tao’s Template ontology consists of several distinct notions of beingness in space (the underlined nouns), and distinct notions of doingness in *time* (the italicized *verbs*).

The basic concepts embodied in the Tao’s Template Ontology can be shown in a table, as follows:

Table II-1a — TAO’S TEMPLATE in BASIC FORM						
IMMANENT TAO						
Yin/Yang			Chi	Yang/Yin		
First	Second	Third	All	Threeness	Twoness	Oneness
Seventh — Sevenness						

From the tabulation of the Tao’s Template ontology a number of principles can be deduced:

1. SEPTENARIAN: The derivation of sevenness is that Oneness bifurcates into Twoness, and each Twoness trifurcates into Threeness. Add the Oneness to the Two Threenesses and we have a total of Sevenness. The boxes in the table are delimited by horizontal and vertical lines. One can think of

those lines as separating the boxes from each other, and one can think of those lines as joining the boxes to each other.

2. **TRANSITION:** In the Natural Sequence schema, it is axiomatic that the stages of the septenarian time-cycle are separated by a troubled, turbulent, traumatic, tortured transition phase. Typically and normally, there is a relatively stable phase between unstable phases. Because this principle applies to many realms of nature, various names have been given to these transitions, such as: quantum jump, phase transition, punctuated equilibrium, tipping point, metamorphosis, revolution, identity crisis, paradigm shift, metasystem transition, and critical junction.
3. **FRACTALICITY:** This is my invented word for the combination of “fractal” with “cyclicity”. In the Natural Sequence schema, it is axiomatic that the stages of the septenarian time-cycle are repeated at all time scales, from slowest to fastest. The entire spectrum from the shortest to the longest time cycles is commonly referred to as the “Great Chain/Nest of Being/Doing”. Each instantiation of the septenarian time cycle in the GC/NB/D has different qualities and characteristics due to the differing types of feedback that are found at differing circumstances and situations at that time scale, but there is a similarity from one time cycle to another, which is what one sees in a fractal. Fractalicity is really just an extension of the Hierarchy Principle into septenaries ‘above’ and ‘below’ whatever septenary in the GC/NB/D is under discussion. There is also Fractalicity inside of whatever septenary one is looking at.
4. **DIMENSIONALITY:** In the Natural Sequence schema, it is axiomatic that the stages of the septenarian cycle consists of three (or four) “dimensions”. In the terminology of the Natural Sequence schema, these dimensions have numbers and names: 1-D Action, 2-D Inspiration, 3-D Expression, and P-D Assimilation. In the Natural Sequence schema, there are three Ordinal (yin, negative) Dimensions, and there are three Cardinal (yang, positive) Dimensions, and there is a central Neutral zone between the Ordinal and the Cardinal stages of the septenarian (seven step) time-cycle. A corollary to the Dimensionality Principle is the turning point that happens in the middle of cycle: whereas the Dimensionality increases (–1-D– > –2-D > –3-D–) in the Ordinal phase of the cycle, the Dimensionality decreases (+3-D+ > +2-D+ > +1-D+) in the Cardinal phase of the cycle.
5. **DIALECTIC:** [1-D] One of the assumptions of the Natural Sequence schema is that there are “positive and negative poles” to every phenomenon. In the Natural Sequence schema, it is axiomatic that the progress through the stages of the septenarian time-cycle is driven or catalyzed by the resolution of a struggle between these positive and negative phenomena. This application of the word “dialectic” is derived from the work of Fichte and Hegel, two German philosophers from a couple hundred years ago. You might have heard of “thesis, antithesis, synthesis”. This is the notion that progress is made in the Cosmos by the reconciliation of positive versus negative complementary contraries that work through their issues with each other until they arrive at a neutral state, and then the cycle of reconciling contraries repeats *ad aeternum*. In the Natural Sequence schema, “thesis” is an Ordinal or negative assertion that is countered by its “antithesis”, a Cardinal or positive assertion, such that the two combine into a Neutral state ... until the harmony of the plateau is disrupted at the beginning of the next stage via the appearance of another Ordinal/negative assertion that upsets the equilibrium.
6. **HOLARCHY:** [2-D] (This principle is another way to understand the Dialectic Principle.) In the Natural Sequence schema, it is axiomatic that each stage of the septenarian time-cycle is built on the foundation of the experiences had during ‘earlier’ stages, such that each stage includes the previous stages, but transcends it or them. Another generic name for this phenomenon is “nested hierarchy”. This means that, at each stage, there are additional and different characteristics and qualities; specifically, each succeeding stage provides a more mature perspective and perception than the previous stages. I often use the hyphenated phrases “higher-later” and “lower-earlier” to refer to the relative position of stages in the spectrum of the holarchy. Because this principle applies to many realms of nature, it has other names, such as: progress, development, evolution, advancement, and emergence.
7. **FEEDBACK:** [3-D] (This principle is another way to understand the Dialectic Principle.) In the Natural Sequence schema, it is axiomatic that the stages of the septenarian cycle are driven by the “feedback” between “nature” and “nurture” influences the characteristics and qualities of each stage. Sometimes this Principle is referred to as “agent/arena” catalyst. The basic idea is that “it takes two to tango” —

without the interaction of self and not-self, no progress is made. This principle embodies a deep philosophical insight about how the universe ‘dances’ through cycles of time. That is, as a person develops over the course of a lifetime from birth to death, different internal systems come ‘on line’, so to speak. At the same time, the developing person enlarges and changes their environment, and this external system provides feedback to the internal system. Thus, back and forth and round and round we go in an ascending spiral of perceptual-behavioral, emotional-social, mental-cognitive, and consciousness-ego development as the inner world processes and assimilates the outer world, and *vice versa*. This Principle is a variation on the Dialectic Principle.

8. ME-WE: (This principle is another way to understand the Dialectic Principle.) In the Life-Stages and in many other DevPsy models, each stage typically starts out with the egocentric so-called “me” stage. This is because the person is focused on dealing with, and hopefully resolving, the Transition at the start of a new stage. If the Transition is in fact resolved in a healthy way, then the person can refocus on the socio-centric so-called “we” stage, during the stable plateau phase of the stage. The Me-We Principle applies to each stage, and in the entire septenarian (seven step) Natural Sequence schema, the “me” phase correlates with the Ordinal stages of the Natural Sequence septenary, and the “we” phase correlates with the Cardinal stages of the Natural Sequence septenary. This Principle is a variation on the Dialectic Principle.

9.





Chapter II-2

① THE THEOSOPHICAL TEACHINGS

Considering the possibility that some readers might not have heard of this modern spiritual teaching, a definition of the word “theosophy” is provided:

1: teaching about God and the world based on mystical insight

2: often capitalized; the teachings of a modern movement originating in the United States in 1875 and following chiefly Buddhist and Brahmanic theories especially of pantheistic evolution and reincarnation

The word theosophy, combining roots meaning “God” and “wisdom”, appeared back in the 17th century, but the well-known religious movement by that name, under the leadership of the Russian Helena Blavatsky, appeared only around 1875. Blavatsky’s theosophy combined elements of Plato’s philosophy with Christian, Buddhist, and Hindu thought (including reincarnation), in a way that she claimed had been divinely revealed to her. The Theosophical Society, founded in 1875 to promote her beliefs, still exists, as does the Anthroposophical Society, founded by her follower Rudolf Steiner. [<https://www.merriam-webster.com/dictionary/theosophy> — retrieved 27 October 2023]

Whereas Theosophy refers to the wisdom of God, Anthroposophy refers to the wisdom of humanity. One of the goals of both Theosophy and Anthroposophy has been to bridge the gap between deity and human. That is also one of my goals for this *Cosmogony* book, so let’s review how we help each other.

History of Theosophy

It may be that some readers of this book are not familiar with Theosophy, so it behooves me to bring those readers ‘up to speed’. As usual, I turn to my preferred source of general information, Wikipedia, to fulfill that task.

INTRODUCTION

Theosophy is a religion established in the United States during the late 19th century. It was founded primarily by the Russian Helena Blavatsky and draws its teachings predominantly from Blavatsky’s writings. Categorized by scholars of religion as both a new religious movement and as part of the occultist stream of Western esotericism, it draws upon both older European philosophies such as Neoplatonism and Indian originated religions such as Hinduism and Buddhism.

Readers of this *Cosmogony* book and my other books will recognize the underlined philosophical spiritual traditions that I discuss at length in my books. Both syncretism (assembling a synthesis of ideas from various places) and Perennialism (the notion that various spiritual philosophies have similar core ideas) are evident in Theosophy.

As presented by Blavatsky, Theosophy teaches that there is an ancient and secretive brotherhood of spiritual adepts known as the Masters, who — although found around the world — are centered in Tibet. These Masters are alleged by Blavatsky to have cultivated great wisdom and supernatural powers, and Theosophists believe that it was they who initiated the modern Theosophical movement through disseminating their teachings via Blavatsky. They believe that these Masters are attempting to revive knowledge of an ancient religion once found around the world and which will again come to eclipse the existing world religions. Theosophical groups nevertheless do not refer to their system as a “religion”. Theosophy preaches the existence of a single, divine Absolute. It promotes an emanationist cosmology in which the universe is perceived as outward reflections from this Absolute. Theosophy teaches that the purpose of human life is spiritual emancipation and says that the

human soul undergoes reincarnation upon bodily death according to a process of karma. It promotes values of universal brotherhood and social improvement, although it does not stipulate particular ethical codes.

Theosophy played a significant role in bringing knowledge of South Asian religions to Western countries, as well as in encouraging cultural pride in various South Asian nations. A variety of prominent artists and writers have also been influenced by Theosophical teachings. Theosophy has an international following, and during the 20th century had tens of thousands of adherents. Theosophical ideas have also exerted an influence on a wide range of other esoteric movements and philosophies, among them Anthroposophy, the Church Universal and Triumphant, and the New Age. [<https://en.wikipedia.org/wiki/Theosophy> — retrieved 11 October 2023]

Those paragraphs are a fair introduction, not only to Theosophy, but to the other two “new religious movements in the occultist stream of Western esotericism” that I feature prominently in this Part, namely the Gurdjiaffian teachings and the Michaelian teachings, in the next two chapters. All three of these are extensions of what is generally called Perennialism, the notion that philosophical spirituality and mysticism tend to converge on a common set of fundamental principles about how the Cosmos works from top to bottom.

Septenaries of Theosophy

The following entry about the fundamentality of the septenary could have been placed in Part I, the Introduction to this book, but I found it, not in Wikipedia, but in Theosophy Wiki, so I include it here as part of an introduction to the various septenaries that are found in the ancient and modern spiritual teaching that goes by the name of Theosophy.

The Septenary Principle refers to the primacy of the number seven in the manifested Cosmos. Number seven is prominent in many ancient traditions. For example, in Christianity there are the seven gifts of the Holy Spirit, seven deadly sins, the seven sacraments, the duty to forgive seventy times seven that Jesus indicated to Peter, among others. The Book of Revelation also has many septenaries. In Hinduism there are seven sages (Saptarishi), seven shaktis, seven chakras, seven lokas and talas, and many more. Other septenates in the Western antiquity are the seven classical planets, seven seas, seven sages of Greece, seven Kings and Emperors of Rome, seven hills of Istanbul and of Rome, Seven Liberal Arts, Seven Wonders of the ancient world.

Humans have also classified aspects of the natural world in septenates, such as the seven days in the week, the seven colors in the rainbow, and the seven main musical notes.

One of the septenaries listed in that quotation, chakras, is reviewed in Chapter II-8 of this *Cosmogony* book.

In Theosophical teachings the number seven is also prominent, there being seven eternities, seven rays, seven primordial beings, seven hierarchies of being, seven planes, seven principles, seven globes in a planetary chain, seven rounds of evolution, seven root-races and seven sub-races, etc.

[https://theosophy.wiki/en/Septenary_Principle — retrieved 04 February 2022]

Two of the septenaries listed in that quotation, planes and rays, are reviewed in other chapters here in Part Two, namely Chapter II-6 on planes and Chapter II-7 on rays.

One other septenary espoused by Theosophists, not listed in the quotation above, has to do with one of their instantiations of the seven rays, namely:

The Seven Human Temperaments

In this section we review seven so-called “temperaments” as found in Theosophy. Because the word “temperaments” has a special meaning in Theosophy, just as Role has a special meaning in the Michaelian teachings (see Chapter II-4 further on here in Part Two), I capitalize it henceforth: Temperaments.

In Theosophy, the seven Temperaments are thought of as personifications of the seven “Rays”, which are reviewed in Chapter II-7. In the Theosophical cosmology, the primordial, undifferentiated Source of all things differentiates itself in the seven archetypal Rays, and the Rays were said to manifest in seven archetypal human personality types that they refer to as Temperaments.

Wikipedia has a general article on “temperaments”, <https://en.wikipedia.org/wiki/Temperament>, and it leads to other articles on temperaments, but these are distinct from and other than the seven Temperaments espoused in Theosophy, which are the subject of the remainder of this section.

The book from which I took the following descriptions is *The Seven Human Temperaments (TSHT)* by Geoffrey Hodson. There is a Wikipedia entry on this person: https://en.wikipedia.org/wiki/Geoffrey_Hodson. The book

was first published in 1952, and it had several editions up to 2006, a Kessinger Publishing reprint. I own a used copy, and other used copies are available via online booksellers. However, you do not need to purchase a printed copy; a freely downloadable ePub version is available on the internet at this website: ><https://www.theosophy.world/resource/ebooks/seven-human-temperaments-g-hodson><, and a PDF is available at this website: >www.mysticknowledge.org/09-The_Seven_Human_Temperaments.pdf<. This type of unencumbered availability leads me to believe that the book is now in the public domain, so I quote from it freely in this section.

On the Theosophy World website, link given above, you can read this brief introduction to the book:

In the esoteric tradition, the number seven occurs frequently. The Seven Rays refer to seven different human temperaments. The author describes the characteristics of people in each of these rays, their strengths and weaknesses, ideals and methods. He also points out that most people show forth in daily life the characteristics of several Rays. Ultimately, we must develop the qualities of all the Rays [during the reincarnation cycle], although the unique characteristics of one of them will predominate [in any particular lifetime].

The following quotations are taken from Chapter Ten — “The Personal Ray” — of *TSHT*, which begins on page 65 and ends on page 76.

Take a look at the brief description of each Ray in the quotations below, and compare it with the lineup of names given to the Septenarian Attributes and the Processes (discussed in [Part One, Chapter I-X](#)), and the “Overleaves” (personality traits) of the Michaelian teachings (discussed in [Chapter II-4](#)), aka the Traits of the Process/Aspect System matrix. I believe you will agree with my perception that the correspondence of each Ray with the Septenarian Attributes, particularly the Role, is solid. My name for the Ray is in quotation marks following the rank of the Ray. The underlined words are my way of pointing out what I regard as the best words to correlate the Ray/Temperament with the Role.

First Ray = “Energy”

Cardinal Action = Origination Process = the Process/Aspect System Traits of Dominance Goal, Aggression Mode, Impatience Shadow, **King Role**, Realist Attitude, Excitation Center, Messianic Worldview/Activation Zone.

If the following attributes of first Ray people are notable features of a person’s character, then it would be fair to assume a first Ray individuality: will power, determination, and a tendency to override the wishes and limit the freedom of others; ardent wish for positions of power and a natural capacity to rule and lead; the use of superior force in most emergencies, often without regard for the feelings of others, and a tendency to sulk when obstructed.

Second Ray = “Love”

Cardinal Inspiration = Evolution Process = the Process/Aspect System Traits of Growth Goal, Passion Mode, Arrogance Shadow, **Priest Role**, Spiritualist Attitude, Sympathy Center, Transpersonalism Worldview/Transcendence Zone.

Recognition of the fact that happiness depends upon freedom of thought and action; readiness to grant that freedom; a capacity to make wise decisions and plans; a universality of affection; a great desire to save, uplift and bestow happiness upon others, particularly by sharing possessions; a gift of teaching and a preference for winning enemies over so that they become friends and collaborators, and the weaknesses of sentimentality and sensuality — if these are displayed in any one person, then they may fairly be regarded as being on the second Ray.

Third Ray = “Truth”

Cardinal Expression = Synthesis Process = the Process/Aspect System Traits of Acceptance Goal, Power Mode, Greed Shadow, **Sage Role**, Idealist Attitude, Concept Center, Holism Worldview/Unification Zone.

If the ready comprehension of abstract ideas and of the meaning, intention and character of people; the faculty of impartial examination; adaptability and tact; capacity to organize, plan and order with farseeing intelligence and play a good game of chess; the love of philosophy; admiration for great philosophers and strategists; a readiness to comprehend and explain varied phenomena by reference to a fundamental principle; ability to engage in prolonged contemplation, and, on occasion, indecision, aloofness and a tendency to intrigue even to the extent of unscrupulous deceit, are marked characteristics of one’s nature, then one is probably on the third Ray.

Fourth Ray = “Beauty”

Neutral Assimilation = Combination Process = the Process/Aspect System Traits of Stagnation Goal, Observation Mode, Stubbornness Shadow, **Scholar Role**, Pragmatist Attitude, Impulse Center, Collectivism Worldview/Experience Zone.

If love of beauty and harmony, and a natural sense of rhythm and balance; a life devoted to one or other of the Arts; an aspiration to shed beauty upon the world; a tendency to dramatize and illustrate expounded ideas with rhythmic forms; a certain power of allurements, and the weaknesses of self-conceit, self-indulgence and surrender to moods, are outstanding qualities, then the fourth Ray is indicated.

Fifth Ray = “Mentality”

Ordinal Expression = Analysis Process = the Process/Aspect System Traits of Rejection Goal, Caution Mode, Renunciation Shadow, **Artisan Role**, Skeptic Attitude, Intellect Center, Materialism Worldview/Separation Zone.

If the mind is analytical and legal, prizing logic above all else; the scientific method of thought strongly appeals and the establishment of incontrovertible facts is a driving impulse; charts and diagrams are used in study and teaching; and the analytical mind is used in perpetual probing and searching for ultimate fact, and the weaknesses of egoism, excessive criticism of others, self-righteousness, pedantry, narrowness, materialism, and prying inquisitiveness, are marked characteristics, then fifth Ray qualities are being displayed.

Sixth Ray = “Emotionality”

Ordinal Inspiration = Involution Process = the Process/Aspect System Traits of Reduction Goal, Repression Mode, Lowliness Shadow, **Server Role**, Stoic Attitude, Emotion Center, Traditionalism Worldview/Immanence Zone.

If fiery enthusiasm; a strong sense of loyalty; a certain single-mindedness in everything that is thought and done; and capacity for devotion and self-sacrifice, particularly in service; if resolve burns within one as an irresistible spiritual power, and the weaknesses of emotionalism, impulsiveness, fanaticism and sensuality are consistently displayed, then the sixth Ray predominates.

Seventh Ray = “Physicality”

Ordinal Action = Termination Process = the Process/Aspect System Traits of Submission Goal, Perseverance Mode, Martyrdom Shadow, **Warrior Role**, Cynic Attitude, Motion Center, Primitivism Worldview/Resolution Zone.

If one is attracted to occult science and its expression through ceremonial and magic and has a highly developed sense of order, system and method; if one likes to combine a number of influences in order to give expression to ideas and successfully appeal to the senses and intellect; if grace and splendor and the ideals of chivalry and knightliness make strong appeal; if the instinct to harness invisible forces for the fulfillment of human needs, and the weaknesses of formalism and of love of power and office are all marks of one's nature, then one is evolving, at least for the time being, on the seventh Ray.

Concluding Remarks on Temperaments

In my view, the descriptions of Temperaments given in Theosophy are unmistakably talking about the same thing, Roles, as are discussed in the Process/Aspect System matrix. However, I would also say that the Theosophists would have had a deeper and more definitive understanding and description if they had known about the other six Overleaf/Trait categories to compare and contrast with the Temperaments. It can be said that the Michaelian teachings added to, and improved on, Theosophy and Neo-Theosophy with their names and descriptions of the seven Roles.

Another unmistakable conclusion from the Theosophical conception of Temperaments is that they clearly follow the Natural Sequence schema.

It is obvious from reading these detailed descriptions that the author of the *TSHT* book was basing his descriptions on actual observations of people with various Temperaments, and that he was seeing the same characteristics in people that Michaelian teachings students see when observing various Roles.

It is stated in the Introduction to the *TSHT* book that people do not just have one Temperament; there is a primary, but also a secondary and maybe a tertiary Temperament; we are all mixtures of Temperaments / Roles. This mixing of types potentially makes the descriptions ambiguous, especially if one is going by

observation of people rather than by an understanding of the pure abstract archetype and its Attributes. The mixing of types has obscured the characteristics of the pure type. With a deep understanding of the Overleaf System, aka Process/Aspect System matrix, as a whole, we gain a much clearer picture of Roles and Temperaments.

My perception is that if the Theosophists had understood the logical underpinning and mathematical framework of the Rays, they would have gotten the descriptions of them more archetypal and less ambiguous, with less overlap of one Ray/Temperament with another. To reveal and explain that foundation of Tao's Template, the Natural Sequence, and the Process/Aspect System, is one of the purposes served by my *Process/Aspect System* book and the *Cosmogony* book.

Table II-2a — TEMPERAMENTS, RAYS, ROLES, PROCESSES, ASPECTS, ATTRIBUTES							
RAY RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
TEMPERAMENT RAY NAME	Will or Power	Love-Wisdom	Active Intelligence	Harmony thru Conflict	Concrete Knowledge	Devotion	Ceremonial Order
WITTMAYER'S RAY NAME	Energy	Love	Truth	Beauty	Mentality	Emotionality	Physicality
ROLE	King	Priest	Sage	Scholar	Artisan	Server	Warrior
PROCESS	Origination	Evolution	Synthesis	Combination	Analysis	Involution	Termination
ASPECT	Mode	Role	Center	Worldview/Zone	Attitude	Shadow	Goal
DIALECTIC ATTRIBUTE	Cardinal			Neutral	Ordinal		
AXIAL ATTRIBUTE	Action	Inspiration	Expression	Assimilation	Expression	Inspiration	Action

My comments on this table are as follows:

- This table is worth studying if you really want to understand what I am saying in this Part. Furthermore, its contents and correlations are to be found throughout this *Cosmogony* book and my other books.
- This table is structured in what I call the “Canonical Septenary”. Any seven items in a list can be arranged in any one of seven factorial ($7! = 5040$) ways, but Theosophy and the Tao's Template ontology agree on the particular arrangement shown in this table — it is very special in both systematic cosmologies. A Cardinal triad and an Ordinal triad are on two sides of a Neutral; Action, Inspiration, and Expression dimensions are in mirrored or reversed order in the triads.
- TEMPERAMENT RAY RANK: In the first row, the Temperament Rays are ranked from first to seventh. As you can see by comparing it with the other rows, this is the same sequence but in reverse ranking order to the way it is done in the Natural Sequence schema.
- THEOSOPHY RAY NAME: The second row shows some of the names of the Temperament Rays as given in Theosophy. For alternative names, refer to https://en.wikipedia.org/wiki/Seven_rays. That article has several tables showing many sources and many alternative names.
- WITTMAYER RAY NAME: The third row shows what I regard as the best single-word names for the Rays. They are not far from the names or descriptions given in Theosophy, as we see in this chapter.
- ROLE: The fourth row shows the seven “Roles” which, in the Michaelian teachings have become a sort of a ‘stand-in’, or ‘personification’ of the seven Rays. The Theosophical concept of Temperaments appears to be somewhat equivalent to the concept of Roles in the Michaelian teachings. The Michaelian teachings community has gone much further in its explanation and description of Roles than Theosophy has in describing Temperaments in the *TSHT* book. The seven Temperaments are an

instantiation of the seven Rays in the same way that the seven Roles are an instantiation of the seven Rays. Thus, Roles and Temperaments are two names for the same phenomenon.

- PROCESSES: The fifth row shows the seven “Processes” in the Process/Aspect System matrix that correlate with the Rays. What I refer to as Processes are just one-word descriptions of the “Septenarian Attributes”, which are the composite of Dialectic and Axial Attributes.
- ASPECTS: The sixth row shows the “Aspects” in the Process/Aspect System matrix that correlate with the Rays. Note that the seven Aspects have the same Septenarian Attributes as the seven Processes.
- DIALECTIC: The seventh row shows the names of the Dialectic Attributes, the names given in the Michaelian teachings. As demonstrated throughout this *Cosmogony* book, the first three Rays are the mirror image of the last three Rays, the pivot being the Fourth Ray. That is why Cardinal is the opposite of Ordinal in this table. This is a claim of both Theosophy and the Michaelian teachings. Theosophy does not use the words “Cardinal” and “Ordinal”, but it does use the words “Upper” and “Lower”, as explained fully at this website: ><https://www.uppertriad.org/main.html><. That website has a huge amount of information on the Rays. Theosophists did not understand the Axes of Action, Inspiration, Expression, and Assimilation as they are understood in the Michaelian teachings and by me, but they did understand the Dialectic Attributes of Cardinal, Ordinal, and Neutral using different terms.
- AXIAL: The eighth row shows the names of the Axial Attributes, the names given in the Michaelian teachings. The combination of the names of the Dialectic Attributes and the names of the Axial Attributes generates the names of the Septenarian Attributes. The names of the Septenarian Attributes provide the characteristics of the named things in the same column.

A much more thorough review of the seven human Temperaments is provided in my book *A History of the Overleaf Chart* in Chapter 1F.

Planes, Rays, Soul Ages, Chakras, and Subtle Bodies

This chapter on the seven human Temperaments is not the only component of Theosophy that is reviewed in this Part of this *Cosmogony* book. Indeed, entire chapters in this Part are dedicated to Planes (Chapter II-6), Rays (Chapter II-7), Soul Ages/Worldviews (Chapter II-8), Chakras (Chapter II-9), and Subtle Bodies (Chapter II-10). The reason that I provide whole chapters on those subjects is that other modern day spiritual teachings also have somewhat to say on those subjects. The point of this chapter and those other chapters is that Theosophy understood all of these various septenaries in terms of the basic structure of the Natural Sequence schema: a ‘lower–earlier’ triad and a ‘higher–later’ triad and a transition zone between the triads.

If the reader is interested in exploring the septenarian component of Theosophy in greater detail, beyond what I briefly review in this chapter and those other chapters, then I suggest that the following websites are good places start:

- [https://en.wikipedia.org/wiki/Septenary_\(Theosophy\)](https://en.wikipedia.org/wiki/Septenary_(Theosophy))
- https://theosophy.wiki/en/Septenary_Principle
- https://theosophy.wiki/en/Primordial_Seven
- https://theosophy.wiki/en/Seven_Rays
- <https://en.wikipedia.org/wiki/7>





Chapter II-3

① THE GURDJIEFFIAN TEACHINGS

Georges Gurdjieff was an esoteric teacher, born about 1867, who was prominently teaching during the first half of the 20th Century. He originally came from a Russia-dominated area of Turkey/Armenia, and later in life, after wide travels, settled in Paris, where he founded a self-development school which exists to this day. Many Gurdjieffian groups have been founded all over the world. He wrote several books himself, and many books have been written about him and his teachings. I read several of them myself in the 1980s. Like so many other spiritual teachings and teachers, he also had a “cosmology of sevenness”; he called it the “Law of Seven”. Like so many other spiritual teachings and teachers, Gurdjieff’s septenarian cosmology followed the Natural Sequence schema, in the Ordinal triad at least. In this chapter I document this claim.

Some notable students of Gurdjieff derived their own teaching based on what they learned from Gurdjieff, such as Peter Ouspensky, Maurice Nicoll, Rodney Collin, and John Bennett. Because these students developed ideas of their own beyond what Gurdjieff taught to them, I refer to their collective work as the Gurdjieffian teachings.

The component of the Gurdjieffian teachings that most concerns us in this *Cosmogony* book is the so-called “Centers”, and, of course, the reason that the Centers are relevant herein is that there are seven of them, and they follow the Natural Sequence schema. The names, as they eventually came to be known to some, are these: (Lower) Moving, (Lower) Emotional, (Lower) Intellectual, Instinctive, Higher Intellectual, Higher Emotional, and Higher Moving. From these names and your own personal experience of them, you would be correct to assume that these are types of experiences that are common to the human condition at various times and in various circumstances. Furthermore, these types of experience are so common and so well known that many other instantiations of the Natural Sequence schema can be more easily understood when we know their correlation with the Centers, and that is why I note the correlation in so many chapters in this book.

After I briefly review Gurdjieff’s biography and his basic ideas in the next two sections, I describe the Centers in some detail, and then I discuss some ramifications and implications of the Centers per the Gurdjieffian teachings in some more sections.

Biography of Gurdjieff

As usual, I turn to my favorite information resource on the internet, Wikipedia, as inspiration for my exposition in this chapter. That is to say, I quote Wikipedia, I underline words or phrases that I want to emphasize and that I comment upon, I insert comments in [brackets] that either explain something or show correlations with components of the Natural Sequence schema, and I provide explanatory commentary between blocks of quoted text.

George Ivanovich Gurdjieff (c. 1866–1877 – 29 October 1949) was a Russian philosopher, mystic, spiritual teacher, and composer of Armenian and Greek descent, born in Alexandropol, Russian Empire (now Gyumri, Armenia). Gurdjieff taught that most humans do not possess a unified consciousness and thus live their lives in a state of hypnotic “waking sleep”, but that it is possible to awaken to a higher state of consciousness and achieve full human potential. Gurdjieff described a method attempting to do so, calling the discipline “The Work” (connoting “work on oneself”) or “the System”. According to his principles and instructions, Gurdjieff’s method for awakening one’s consciousness unites the methods of the fakir, monk, and yogi, and thus he referred to it as the “Fourth Way”

According to Gurdjieff, only one dimension of the three dimensions of the person — namely, either the emotions [Emotional Center], or the physical body [Moving Center], or the mind [Intellectual Center] — tends to develop

in such schools and sects, and generally at the expense of the other faculties or centers, as Gurdjieff called them. As a result, these paths fail to produce a properly balanced human being. Furthermore, anyone wishing to undertake any of the traditional paths to spiritual knowledge (which Gurdjieff reduced to three — namely the path of the fakir, the path of the monk, and the path of the yogi) were required to renounce life in the world. But Gurdjieff also described a “Fourth Way” which would be amenable to the requirements of modern people living modern lives in Europe and America. Instead of developing body, mind, or emotions separately, Gurdjieff’s discipline worked on all three to promote comprehensive and balanced inner development....

After Gurdjieff’s death, J. G. Bennett researched his sources extensively and suggested that these characters [in Gurdjieff’s book *Meetings with Remarkable Men*] were symbolic of the three types of people to whom Gurdjieff referred: No. 1 centered in their physical body [Moving Center]; No. 2 centered in their emotions [Emotional Center], and No. 3 centered in their minds [Intellectual Center].

[>https://en.wikipedia.org/wiki/George_Gurdjieff< — retrieved 30 July 2023]

As hinted at in the last two paragraphs of that quotation, as I said in the introduction to this chapter, the notion of Centers is central to the Gurdjieffian teachings.

In case you are interested in pursuing the matter, know that much more is said about the man and his methods in this Wikipedia entry regarding his biography and his teachings. And there are an abundance of books and internet websites devoted to him and his teachings. The teaching is so widespread and so popular that one might even be able to find a local meetup study group.

The Seven Centers

The notion of so-called “Centers” has been mentioned previously in this chapter, and the word is a common occurrence in this entire *Cosmogony* book. The notion originated, in its modern form, with Gurdjieff, as we see documented in the Wikipedia article on the subject:

In G.I. Gurdjieff’s Fourth Way teaching, also known as The Work, centers or brains refer to separate apparatuses within a being that dictate its specific functions. There are three main centers: intellectual, emotional, and physical. These three centers in the human body are analogous to a three storey factory: the intellectual center being the top storey, the emotional center being the middle storey, and the physical center being the bottom storey. The physical center, or the bottom storey is further divided into three separate functions: sex, instinctive, and motor.

The use of the word “storey”, as in the floors of an architectural structure, is just another word for what I call the “Holarchy Principle”. The fact that there are discernible divisions between storeys is embodied in what I call the “Transition Principle”.

In the book *The Fourth Way*, Ouspensky refers to the “center of gravity” as being a center which different people primarily operate from (intellectuals, artists, and sports enthusiasts, for example, might represent each of these centers).

Moving or physical center. This brain is located in the spinal column. This brain makes beings capable of physical actions, and can be further divided into three distinct centers:

Motor: Controls motor functions. The acts of walking, the physical aspects of talking, as well as even functions that are considered “reflexive,” are all part of this sub-center.

Instinctive: Controls faculties which are completely involuntary. This does not typically encompass “knee-jerk” reactions, nor what we would typically consider reflexes. A common example of the functioning of this center is the contracting of blood vessels to facilitate the pumping of blood.

Sexual: Controls sexual functions. This one is exceedingly complex, encompassing conversion of energies within a being. This center is implicated in abnormal human development. *The Fourth Way* uses the disharmonious functioning of this sub-center to explain a very large array of issues.

Emotional or feeling center. This faculty makes beings capable of feeling emotions. This brain is dispersed throughout the human body as nerves which have been labeled as the “nerve nodes”. The biggest concentration of these nerves is in the solar plexus.

Intellectual or thinking center. This center is the faculty which makes a being capable of logic and reasoning. This one is located in the head.

Higher centers: While the lower centers are considered separate faculties of one’s material body, one can think of these higher centers as being faculties for “higher bodies”.

Higher Emotional Center: faculty of the astral body. It enables one to have sustained states of [subjective] self-consciousness, self-awareness, and other deep feelings. It does not replace, nor is it an “upgraded” version of the emotional center, as it a completely separate center.

Higher Intellectual Center: faculty of the mental body. It enables one to have sustained states of objective consciousness and superior intellect. As above, it does not replace, nor is it an “upgraded” version of the intellectual center. [http://en.wikipedia.org/wiki/Centers_Fourth_Way< — retrieved 17 September 2023]

From what I have read of the Gurdjieff material, this seems to be correct. Almost surely serious Gurdjieff students are responsible for the Wikipedia article

Instinctive Center per Gurdjieff

Gurdjieff introduced the term “Instinctive Center” and its description to his students and the world early in the Twentieth Century. Actually he first used a Russian word, then probably a French word, but whatever those words were, they have always been translated into English as “Instinctive”. It is useful to this *Cosmogony* book in several contexts to examine its original meaning in the GT.

In the GT and many subsequent Fourth Way groups, the Instinctive Center is said to be a Part of the Moving Center: The following quotation was taken from the Wikipedia article on The Fourth Way:

Moving or physical center. This brain is located in the spinal column. This brain makes beings capable of physical actions. Some, but not all, Fourth Way schools have further divided this Center into three distinct parts:

Motor: Controls motor functions. The acts of walking, the physical aspects of talking, as well as even functions that are considered “reflexive”, are all part of this sub-center.

Instinctive: Controls faculties which are completely involuntary. This does not typically encompass “knee-jerk” reactions, nor what we would typically consider reflexes. A common example of the functioning of this center is the contracting of blood vessels to facilitate the pumping of blood.

Sexual. Controls sexual functions. [[http://en.wikipedia.org/wiki/Centers_\(Fourth_Way\)](http://en.wikipedia.org/wiki/Centers_(Fourth_Way))< — retrieved 20 January 2019]

Although this text says the Instinctive Center is “distinct”, it is also said to be a “sub-center” of the Moving or Physical Center. Elsewhere in GT and Fourth Way publications, a sub-center is called a “Part” of a Center. (Hereinafter Part is capitalized because of its special usage in the GT.) The Gurdjieffian definition of the Instinctive Part of the Moving Center is explained by one of Gurdjieff’s star pupils, Peter Ouspensky; he made a clear distinction between Instinctive Center and Moving Center:

Then there are two other functions which no system of ordinary psychology divides and understands in the right way — instinctive function and moving function. Instinctive refers to the inner work of the organism: digestion of food, beating of the heart, breathing — these are instinctive functions. To instinctive function belong also ordinary senses — sight, hearing, smell, taste, touch, the feeling of cold and warmth, things like that; and this is all, really. Of outer movements, only simple reflexes belong to instinctive function, because more complicated reflexes belong to moving function. It is very easy to distinguish between instinctive and moving functions. We do not have to learn anything that belongs to instinctive function, we are born with the capacity to use all the instinctive functions. Moving functions, on the other hand, all have to be learned — a child learns to walk, to write and so on. There is a very great difference between the two functions, since there is nothing inherent in moving functions, and instinctive functions are all inherent. [P. D. Ouspensky, *The Fourth Way*, pp. 3–4, emphasis mine]

Therefore, Gurdjieff’s teaching about the Instinctive Center is that it referred to the *physiology* of the body, and has nothing to do with the *movement* of the skeletal frame of the physical body, or the *personality* of the psyche. The word “function” is used numerous times in this quote, and it will be used further on, because *function* can refer to both physiology and personality.

It is perhaps because of this distinct and obvious difference between physiological and moving functions of the body that one of Gurdjieff’s students, Rodney Collin, departed somewhat from this understanding, and made the Instinctive Center distinctly separate from the Moving Center, not a Part of it. Collin was not the only one, as we see in the following quotation from Wikipedia.

The following quotation was taken from the Wikipedia article on The Fourth Way:

Rodney Collin in his book “*The Theory of Celestial Influence*” [1968] says that he believes that the three centers seem to be a simplification of four centers: the emotional center, the instinctive center, the moving center, and the intellectual center. He believes that there is a clear separate existence of an instinctive and a moving center,

as the instinctive center is born complete: nobody teaches the newborn baby how to breathe at birth, or to suck to be fed some hours later; however, it has to learn how to hold his feeding bottle some months later, or to stand and walk by himself some time later yet. Susan Zannos in her book *"Human Types: Essence and the Enneagram"* [1997], writes that the four suits of the common deck of playing cards represent the four lower centers: diamonds for the intellectual center, hearts for the emotional center, spades for the moving center, and clubs for the instinctive center. She shows how the three court cards (jack, queen, and king) are used to represent three levels of attention within man for each of the lower centers. She states that the sex center is represented by the ace of each suit, indicating how sex energy enters the other four lower centers.
[>[http://en.wikipedia.org/wiki/Centers_\(Fourth_Way\)](http://en.wikipedia.org/wiki/Centers_(Fourth_Way))< — retrieved years ago; since removed from the Wikipedia article]

Maurice Nicoll, another student of Gurdjieff, also separated Instinctive and Moving Centers in his six-volume work *Psychological Commentaries on the Teaching of Gurdjieff and Ouspensky* (1952). There are pie charts of the Intellectual, Emotional, Moving, and Instinctive Centers, one each on four pages of Volume 1 of *PCTGO*, pages 76–79. The pie charts show the Parts of each of the four Centers. What I find interesting is that in the pie-chart of the Instinctive Center, the top half of the pie is labeled Positive Part with three equal slices labeled the Positive Moving, Positive Emotional, and Positive Intellectual Parts. The bottom half of the Instinctive Center pie also has three equal slices, in this case labeled the Negative Moving, Negative Emotional, and Negative Intellectual Parts. This layout is predictive of the way the Centers were later conceptualized in the Michaelian teachings, with Negative and Positive Poles that encompass the lower Center triad (Moving, Emotional, Intellectual) and the higher Center triad (Higher Intellectual, Higher Emotional, Higher Moving).

Anyway, these various sources seem to indicate that some students of the Gurdjieffian teaching moved away from the original idea that the Instinctive Center and the Sexual Center were Parts of the Moving Center, and made them separate Centers. Thus far in my investigation, I have not discovered where Nicoll, Collin, and Zannos relocated the Instinctive Center and the Sexual Center in the septenary of Centers, or even found out whether they understood the Centers as a septenary or not.

Whatever may have gone before in the Gurdjieffian teaching and subsequent Gurdjieffian communities, in the Michaelian communities (see next chapter), Instinctive, Sexual, and Moving Centers are three separate Centers. The quote above relates some of the history of the separation of the Instinctive Center from the Moving Center, but it does not relate the history of the migration of the Instinctive Center from the lowest position in the Septenary to the middle of the Septenary, where the Michaelian teachings has it, and where it is placed according to the Natural Sequence schema. I have not done enough research — and the information might actually be unavailable — to know if some post-Gurdjieffian teaching that preceded the Michaelian teaching moved the Instinctive Center to the central position in the Septenary, which would explain why we find it there in the Michaelian teachings. However, there are clues in the Gurdjieffian teachings itself that lead one to suspect that the migration was reasonable. The Wikipedia quote above relates that there was a rationale for separating the sub-Centers (Instinctive Center and Sexual Centers) from the Moving Center, but it turns out that there is also a rationale for sequencing them in a certain pattern, the Septenarian pattern: three “lower” and three “higher” Centers with an “intermediate” Center. You will recognize this as the Dialectic pattern of Ordinal and Neutral and Cardinal described in numerous chapters of this *Cosmogony* book.

The reason that I pursue this documentation regarding the Instinctive Center — as having to do with physiology and not personality — is that it figures into the solution to a ‘problem’ with some other instantiations of the Natural Sequence schema, namely where there are eight stages rather than seven; the solution for all three instantiations is to assume a “zeroth” stage. This happens with Maslow’s Hierarchy (Chapter V-4) and with chakras (Chapter II-9).

The following section presents another case for that rationale.

Balanced Man per Gurdjieff

The phrase “Level of Being” is Gurdjieff’s name for the stages of development on his version of the spiritual path, the path from a “sleeping” person to a fully “awake” person. (On this subject, refer to Chapter VI-2, “Level of Being”, in Part Six of this *Cosmogony* book.) Another way to state this is that there is a rank-order development from lower states of spiritual awareness and consciousness to higher states. Following are some verbatim quotes on Gurdjieff’s teaching from a couple of books. A few explanatory comments in *[bracketed italics]* have been added. Notice that the Levels of Being are correlated with the Centers, and therefore this aspect of Gurdjieff’s teaching has bearing on an understanding of the Centers, including the Instinctive

Center. After a description of Man Numbers One through Three, and before a description of Man Number Five through Seven, there is this:

Man number FOUR is not born as such. He is a product of school culture [that is, training in an esoteric school]. He differs from man number 1, number 2, and number 3 by his knowledge of himself, by his understanding of his position, and as it is expressed technically, by his having acquired a permanent center of gravity. This last means that the idea of acquiring unity, consciousness, permanent 'I', and will [dominates]. The idea of his development has already become for him more important than his other interests. It must be added to the characteristics of man number 4 that his functions and centers are more **balanced**, in a way in which they could not be **balanced** without work on himself, according to school principles and methods. [P. D. Ouspensky, *The Psychology of Man's Possible Evolution*, pp. 53–56]

The above items, and perhaps more that I have not discovered, is what the original Michaelian group members had to work with until the Michaels came along and moved the Instinctive Center to the center of the septenary of Centers as documented in the next chapter.

Higher Centers per Gurdjieff

The description and understanding of the lower Centers — Moving, Emotional, Intellectual — does *not* differ much between the Gurdjieffian and the Michaelian communities. The description and understanding of the Instinctive Center *does* differ between these groups, and I sorted that out in the previous section. That leaves the so-called “higher” Centers to discuss in this chapter. Let me quote from Ouspensky in his book *In Search of the Miraculous* for these.

Sexual Center

As stated in the Wikipedia article in a prior section of this chapter, Gurdjieff taught that the sexual function was a Part of the Physical Center, along with Motor Part and the Instinctive Part. In the following passage quoted from Ouspensky's book *In Search of the Miraculous*, he is ambiguous about whether Sex is a Part of a Center or a Center of its own:

It [sexual center] can [be regarded as an independent center]. At the same time if all the lower storey [Motor, Sexual, Instinctive] is taken as one whole, then sex can be regarded as the neutralizing part of the [triadic partitioned] moving [Physical] center.

Then, to immediately confuse matters even more, he characterized it as being similar to the two higher centers:

In the first place it must be noted that normally in the sex center as well as in the higher emotional and the higher thinking centers, there is no negative side. In all the other centers except the higher ones, in the thinking, in the emotional, in the moving, in the instinctive, in all of these there are, so to speak, two halves — the positive and the negative, affirmation and negation, or “yes” and “no” in the thinking center, pleasant and unpleasant sensations in the moving and instinctive centers.... Sex, in fact, governs all other centers....

Thereafter follows a page where it seems that Gurdjieff hints that the Sexual Center is different from and higher than the lower Centers:

... the energy of other centers which is much lower and coarser than its own. And yet the sex center is very important for the general activity, and particularly of the inner growth of the organism, because, working with “hydrogen” 12 [a high-quality energy], it can receive a very fine food of impressions, such as none of the ordinary centers can receive.

That statement reinforces the notion that the Sexual Center was special and apart from the ordinary, lower Centers. The course of this discourse, recounted across three pages of this book, is proceeding from the Sexual Center being a part of a lower Center, to a Center of its own, to somewhat like a higher Center, to perhaps the highest Center. Ouspensky's discourse continued this progression upward:

The role of the sex center in creating a general equilibrium and a permanent center of gravity can be very big. According to its energy, that is to say, if it uses its own energy, the sex center stands on a level with the higher emotional center. And all the other centers are subordinate to it. Therefore it would be a great thing if it worked with its own energy. This alone would indicate a comparatively very high level of being. And in this case, that is, if the sex center worked with its own energy and in its own place, all other centers would work correctly in their places and with their own energies. [P. D. Ouspensky, *In Search of the Miraculous*, pp. 257–259]

The phrase, Level of Being, is discussed in a chapter of its own in this *Cosmogony* book, [Chapter VI-2](#). Briefly: there are seven Levels of Being in Gurdjieff's version of the spiritual path, and the seven steps are characterized by the qualities of the Centers. According to this passage, mastering one's sexual energy is tantamount to advancing to a very high spiritual level. My book *Making Love — a Spiritual Path* elaborates on this idea considerably.

The last quoted passage could be used as justification for placing the Sexual Center at the top of the hierarchy of Centers. In fact, that is where it finally landed in the Michaelian teachings community, as documented in the next chapter.

As an introduction to Gurdjieff's understanding of two higher Centers, I quote from the same book:

The two higher states of consciousness — "self-consciousness" and "objective consciousness" — are connected with the functioning of higher centers in man. In addition to those centers of which we have so far spoken there are two other centers in man, the "higher emotional" and the "higher thinking". These centers are in us; they are fully developed and are working all the time, but their work fails to reach our ordinary consciousness. [*ISM*, p. 142]

Higher Emotional Center

In those cases where the work of the emotional center reaches the intensity and speed of existence which is given by hydrogen 12, a temporary connection with the higher emotional center takes place and man experiences new emotions, new impressions hitherto entirely unknown to him, for the description of which he has neither words nor expressions. But in ordinary conditions the difference between the speed of our usual emotions and the speed of the higher emotional center is so great that no connection can take place and we fail to hear within us the voices which are speaking and calling to us from the higher emotional center. [Ouspensky, *ISM*, pp. 194–195]

It is clear from this passage that Gurdjieff regarded experience of the Higher Emotional Center as very rare and very unusual. This understanding was adopted by students of the Michaelian teachings.

What is called according to one terminology the "astral body", is called in another terminology the "higher emotional center", although the difference here does not lie in the terminology alone. These are, to speak more correctly, different aspects of the next stage of man's evolution. It can be said that the "astral body" is necessary for the complete and proper functioning of the "higher emotional center" in unison with the lower [centers]. Or it can be said that the "higher emotional center" is necessary for the work of the "astral body". [*ISM*, p. 197]

It is clear from these passages that Gurdjieff regarded the Higher Emotional Center as a gateway to what in the Michaelian teaching and many other esotericists refer to as the Astral Plane. This understanding did not get adopted into the Michaelian teachings. Instead, the Higher Emotional Center is correlated with the sixth plane, a higher plane, not the Astral Plane, which is a lower Plane and which is referred to as the Emotional Plane in many esoteric sources. Refer to [Chapter II-6](#), "The Seven Planes", for elaboration.

Higher Intellectual Center

The higher thinking center, working with hydrogen 6, is still further removed from us, still less accessible. Connection with it is possible only through the higher emotional center. It is only from descriptions of mystical experiences, ecstatic states, and so on, that we know cases of such connections. These states can occur on the basis of religious emotions, or, for short moments, through particular narcotics; or in certain pathological states such as epileptic fits or accidental traumatic injuries to the brain.... [Ouspensky, *ISM*, p. 195]

It is clear from this passage that Gurdjieff regarded experience of the Higher Intellectual Center as very rare and very unusual. This understanding was fostered in the Michaelian teachings.

The "mental body" corresponds to the "higher thinking center". It would be wrong to say that they are one and the same thing. But one requires the other, one cannot exist without the other, one is the expression of certain sides and functions of the others. [Ouspensky, *ISM*, p. 197]

It is clear from these passages that Gurdjieff regarded the Higher Intellectual Center as a gateway to the third plane, usually called the Mental Plane. This understanding did not get adopted into the Michaelian teachings. Instead, the Higher Intellectual Center is correlated with the fifth plane, a higher plane, not the Mental Plane, which is a lower Plane in many esoteric sources. Refer to [Chapter II-6](#), "The Seven Planes", for elaboration.

In this section discussing the three higher Centers, I listed them in what I refer to as the Gurdjieff Sequence. That is, #5 Sexual Center > #6 Higher Emotional Center > #7 Higher Intellectual Center. This sequence repeats

the same order as the lower Centers: Moving, Emotional, Intellectual. Decades later, in Michaelian teachings communities, this sequence of Centers gradually got transformed into the Natural Sequence schema, where the order is: Higher Intellectual > Higher Emotional > Higher Moving; this evolution of understanding of the sequence of the Centers is documented in my book *A History of the Overleaf Chart*.

Gurdjieff's "Law of Three"

Every septenary that we examine in this *Cosmogony* book is divided into a triad of components with the Ordinal Attribute, a triad with the Cardinal Attribute, and a component with the Neutral Attribute. These are referred to as the Dialectic Attributes (the reason for this is explained in the next chapter, the one on the Michaelian teachings). Gurdjieff's notion of Levels of Being is a septenary, and these three types of Attributes apply to it.

These three words — Ordinal, Neutral, Cardinal — have a strong similarity to a component of the Gurdjieff teaching (GT). Gurdjieff taught an idea that he called the "Law of Three" (Lo3); it defined how "passive-negative-denial" and "neutral-reconciliation" and "active-positive-affirmation" forces are necessary for anything to happen.

Gurdjieff taught in the first half of the 20th Century but the Lo3 concept itself is actually quite ancient. For instance, in an Oriental philosophy, the synonymous words were "yin", "chi", and "yang"; Wikipedia has an entry on the concepts behind those words: >https://en.wikipedia.org/wiki/Yin_and_yang<. In more modern times, the words sometimes used as equivalent in meaning to the Dialectic Attributes and the Lo3 are "thesis", "antithesis", and "synthesis". As it so happens with so many realms of knowledge, Wikipedia has an entry on those words: >https://en.wikipedia.org/wiki/Thesis,_antithesis,_synthesis<. If you read those wikis, and the discussion of the Dialectic Principle in Part One, you will have a good foundation for understanding concepts that are important to an understanding of the Dialectic Attributes. The similarity of these various triads of words to Ordinal-Neutral-Cardinal in the Natural Sequence schema should be obvious to the reader without explanation if they have read the previous Parts and chapters and sections of this *Cosmogony* book.

In this section we investigate only Gurdjieff. Obviously the Lo3 refers to "threeness". To quote Gurdjieff's student Ouspensky:

The number of fundamental laws which govern all processes both in the world and in man is very small. Different numerical combinations of a few elementary forces create all the seeming variety of phenomena. In order to understand the mechanics of the universe it is necessary to resolve complex phenomena into these elementary forces. The first fundamental law of the universe is the law of three forces, or three principles, or, as it is often called, the law of three. According to this law every action, every phenomenon in all worlds without exception, is the result of a simultaneous action of three forces — the positive, the negative, and the neutralizing. [P. D. Ouspensky, *In Search of the Miraculous*, p. 122]

The Law of Three, in a short description, means that three 'forces' enter into every manifestation, into every phenomenon and every event. They are called (but these are only words, because they do not express their qualities) positive, negative and neutralizing, or active, passive and neutralizing, or still more simply they may be called first force, second force and third force.... Everything in the world, all manifestations of energy, all kinds of action, whether in the world or in human activity, whether internal or external, are always manifestations of three forces which exist in nature. [P. D. Ouspensky, *The Fourth Way*, pp. 16 and 189]

This website, >https://en.wikipedia.org/wiki/Fourth_Way_enneagram<, had this to say about the Lo3:

The Law of Three holds that three forces act on any event, which can be called Active, Passive, and Neutralizing forces, or simply First, Second, and Third forces respectively. These three forces can appear in any order, 123 for example or 312, giving 6 possible "triads" of forces describing 6 very broad types of events. Humanity is said to be "third force blind", to have difficulty recognizing the third force, which may appear to us in the guise of a result or of a background environment. "People cannot perceive the third force directly any more than they can spatially perceive the 'fourth dimension'" Gurdjieff is quoted as saying. [retrieved 11 July 2019]

Another Wikipedia article, >https://en.wikipedia.org/wiki/Fourth_Way<, says this about the Lo3:

The Law of Three is described by Gurdjieff as "the second fundamental cosmic law". This law states that every whole phenomenon is composed of three separate sources, which are Active, Passive, and Reconciling or Neutral. This law applies to everything in the universe and humanity, as well as all the structures and processes. The Three Centers in a human, which Gurdjieff said were the Intellectual Center, the Emotional Center and the Moving Center, are an expression of the law of three. Gurdjieff taught his students to think of the law of three forces as

essential to transforming the energy of the human being. The process of transformation requires the three actions of affirmation, denial and reconciliation. This law of three separate sources can be considered modern interpretation of early Hindu philosophy of Gunas. We can see this as Chapters 3, 7, 13, 14, 17 and 18 of Bhagavad Gita discuss Guna in their verses. [http://en.wikipedia.org/wiki/Fourth_Way< — retrieved 30 July 2023]

Underlines in all of these quotations are my own emphasis. Their correlation with the Natural Sequence schema is as follows:

What the Natural Sequence refers to as Ordinal, Gurdjieff referred to as passive and negative and denial.

What the Natural Sequence refers to as Cardinal, Gurdjieff referred to as active and positive and affirmation.

What the Natural Sequence refers to as Neutral, Gurdjieff referred to as neutralizing and reconciliation.

The neutralizing force, Gurdjieff's third force, is the "balancing" force. Third force is not a static condition between first force and second force; it is a force of its own that, as stated above, has benefits on the spiritual path, the graduation from stage to stage in the Levels of Being from the lower Centers to the higher Centers. Using another term mentioned above, it is the "synthesis" force, the force that seeks to reunite what is fragmented to what is united. Without this force, there would be no progress; there would only be an eternal war between light and dark, good and evil, positive and negative, active and passive, and so on. One of the functions of third force is to keep the metaphorical 'train' of progress from 'going off the rails' on either the yin (negative) side or the yang (positive) side of the 'tracks'. And, specifically in regard to Centers, the above is another advocacy statement for becoming Balanced in the Neutral Center. The stability achieved by Balanced Man is not the static end of the spiritual path, however. It is a precondition to progressing onward and upward, to becoming enlightened in the higher Centers, at Levels of Being beyond Man # 4.

All spiritual paths discussed in this Part of this *Cosmogony* book involve both teacher and student, teaching and learning; these are the Cardinal and Ordinal poles of the interactive process that results in spiritual growth, in accordance with the Feedback Principle discussed throughout this book. Spiritual paths are not true unless they consist of these three factors: learning, teaching, and growing.

For the convenience of the reader, the following table of correspondences for Lo3 and Dialectic Attributes is provided.

Table II-3a — CORRESPONDENCES to the LAW OF THREE			
GURDJIEFFIAN LAW OF THREE	Negative, Passive, Denying "First Force"	Neutralizing, Reconciling "Third Force"	Positive, Active, Affirming "Second Force"
MICHAELIAN DIALECTIC ATTRIBUTES	Ordinal	Neutral	Cardinal
ORIENTAL TERMS	Yin	Chi	Yang
PHILOSOPHICAL TERMS	Antithesis	Synthesis	Thesis

My comments on this table are as follows:

- GURDJIEFFIAN LAW OF THREE: The first row shows some of the descriptive words given to the three laws in the GT.
- MICHAELIAN DIALECTIC ATTRIBUTES: The second row shows the names given to the Lo3 in the Natural Sequence schema.
- ORIENTAL TERMS: The third row shows the names given to the three laws in Oriental philosophy. Recall Tao's Template, which I quote a number of times in this book: "All things carry the Yin and embrace the Yang / Through the blending of the Chi they achieve harmony." That is the Lo3, known from ancient times, and in many cultures, by various names.
- PHILOSOPHICAL TERMS: The fourth row shows the names given to the Lo3 in Hegel's dialectic philosophy. Refer to <https://plato.stanford.edu/entries/hegel-dialectics/> for an excellent overview.

Even though the Gurdjieffian phrase Law of Three and the equivalent Michaelian word Monads (discussed in the next chapter) are different words based on different numbers, we see that they do point to the same

fundamental phenomenon. Interestingly enough, others, usually philosophers, notably Hegel, teach about the same fundamental principle using the word “dialectic”, a word that emphasizes the “twoness” of this phenomenon. Refer to the dictionary definition of “dialectic” at <https://www.merriam-webster.com/dictionary/dialectic> for more about that.

So much for the Law of Three; now what about the Law of Seven? We must review that Gurdjieffian notion before we get to the actual subject of this chapter, Gurdjieff’s Levels of Being.

Gurdjieff’s “Law of Seven”

The previous section discussed Gurdjieff’s teaching about the Law of Three (Lo3), and we saw that there was a correlation to the structure of the Natural Sequence schema. Gurdjieff’s so-called “Law of Seven” (Lo7), or “Octaves”, is often mentioned in conjunction with the Lo3, and both laws are said to be fundamental to the working of the universe.

Law of Octaves

In the GT, the Lo7 is also called the Law of Octaves. “Octave” is, of course, a word that refers to the number eight. The reason for this choice of words is that Gurdjieff relates this alleged law of the universe to one particular phenomenon of it, namely the musical scale of the western tradition, in which there are eight notes divided into seven intervals, with the last (highest) note of each individual octave being twice the vibration speed of the first (lowest) note of that octave, reiterating *ad eternum* from the slowest possible vibration to the fastest possible vibration. Gurdjieff claimed that truths about the workings of the Cosmos, from slow to fast and including human experience, are embodied in the workings of the music scale. Refer to pages 124–137 and pages 285–294 of Ouspensky’s book, *In Search of the Miraculous*. The relevant sentences expressing some principles of the Lo7 were extracted from those pages in the following quote:

The number of fundamental laws which govern all processes both in the world and in man is very small. Different numerical combinations of a few elementary forces create all the seeming variety of phenomena. In order to understand the mechanics of the universe it is necessary to resolve complex phenomena into these elementary forces. ... The next fundamental law of the universe is the law of seven or the law of octaves. In order to understand the meaning of this law it is necessary to regard the universe as consisting of vibrations. In this connection according to the usual views accepted in the West, vibrations are continuous. This means that vibrations are usually regarded as proceeding uninterruptedly.... So that one of the fundamental propositions of our physics is the continuity of vibrations.... In this instance the view of ancient knowledge is opposed to that of contemporary science because at the base of the understanding of vibrations, ancient knowledge places the principle of the [stepwise] discontinuity of vibrations. The principle of the discontinuity of vibration means the definite and necessary character of all vibrations in nature ... to develop not uniformly but with periodical accelerations and retardations.... In order to determine these moments ... the lines of development of vibrations are divided into periods corresponding to the doubling or the halving of the number of vibrations in a given space of time... This means that within vibrations other vibrations proceed, and that every octave can be resolved into a great number of [fractal] inner octaves. Each note of any octave can be regarded as an octave on another plane.... We have spoken earlier of the law of octaves, of the fact that every process, no matter upon what scale it takes place, is completely determined in its gradual development by the law of the structure of the seven-tone scale.

The underlined words are my emphasis. They reveal four principles of the Lo7, and these are as follows. Someone who has read Part I will recognize these principles as Principles of the Natural Sequence schema:

The Lo7 expresses a stepwise rather than a smooth, continuous development — this is the Transition Principle.

The development is an unalterable sequence with certain characteristics of each step that unfolds over time — this is the Hierarchy Principle.

The Lo7 applies to all of time (not space), from the shortest to the longest spans.

The Lo7 is fractal; that is, it is a repeating nested pattern, each octave nested inside the next higher octave, perhaps with slight variations within each octave — this is the Fractality Principle.

The Lo7 was significant in the GT in several ways, among them the seven Centers, as explained in the next section.

Concluding Remarks on the Law of Seven

On page 286 of Ouspensky's book *In Search of the Miraculous* we find a description of how Gurdjieff ingeniously combined the Law of Three and the Law of Seven to come up with the Enneagram, which is a geometric figure based on the number 9. An internet search will provide a thorough description of the Enneagram. The Enneagram is not something that is relevant to the Natural Sequence schema. Instead, the Natural Sequence schema combines threeness and sevenness in a different way, which in the Natural Sequence schema I call the Dialectic and Axial Attributes. Neither Gurdjieff's Law of Seven nor the Enneagram embody all features of the Natural Sequence schema, namely the Septenarian Attributes.

Gurdjieff taught that one of the fundamental aspects of reality was the existence of vibration, or frequency, and he proposed that the musical scale was an aspect of this law of nature. He read a lot into this notion. For instance, the notes of the scale are distinct so that there is an obvious difference between *do* and *re* and *mi* and *fa* and *sol* and *la* and *ti*. The intervals between the notes are not all equal, so as to preserve harmonies between them; otherwise the music would be very disharmonious. However, if one were to try to relate the characteristics of, for instance, the seven Centers to the notes of the music scale, it obviously fails to account for the difference between Motion and Emotion and Intellect and Impulse and Concept and Sympathy and Excitation. Therefore, whatever legitimacy there might be in the way Gurdjieff understood the Lo7, that is not the way it is understood in the Natural Sequence schema. How is it to be understood in the Natural Sequence schema? This *Cosmogony* book explains the Lo7 as it applies to nature in general: space, time, and dimension in various realms of nature and supernature.

The previous sections were an introduction to the actual subject of this chapter. They laid the foundation, they made the point, that the Gurdjieff system was consistent with certain components of the Natural Sequence schema. Now we get to the point.

Gurdjieff's Levels of Being

There is one more component of the Gurdjieffian teachings that is relevant to the Natural Sequence schema, and that is referred to as "Levels of Being". This is Gurdjieff's map of the spiritual path, his version of an ascent through stages of enlightenment. The discussion of Levels of Being belongs in Part Six of this book, "Stages of Enlightenment", though introducing some essentials of Gurdjieffian thought before introducing Michaelian teachings is important.





Chapter II-4

① THE MICHAELIAN TEACHINGS

This chapter happens to be about the modern-day spiritual teaching that I am most familiar with, having been involved with it since 1980. The Michaelian teachings is strong on structure, which is also the case with the other modern-day spiritual teachings that are reviewed in this Part of this *Cosmogony* book, Theosophy and Gurdjieff. The same as with those other modern-day spiritual teachings, the Michaelian teachings has a fondness for the number seven. In this chapter, we will review those instances. Because I have written extensively on those septenaries in my other books (wherein I demonstrate that the Natural Sequence provides the best explanation for several of the Michaelian teachings septenaries) in this book I provide only an introduction. Those septenaries are Planes and Sub-planes, Culture, Soul Ages and Levels, Life-Stages and Sub-stages, and Enlightenment.

History of the Michaelian Teachings

A very brief introduction to the Michaelian teachings is found in Wikipedia, as follows:

The Michael teachings is a body of channeled New Age spiritual doctrine that originated in the early 1970s as a 'conversation' via an Ouija board between members of a spiritual study group in the San Francisco Bay Area and a channeled spiritual entity who became known as "Michael". The teachings received from the entity were first published in book form in 1979 as *Messages from Michael*, by novelist Chelsea Quinn Yarbro, the first in a series of four books by Yarbro chronicling the Bay Area sessions. Since that time, the teachings purportedly from the same entity have continued to accumulate and expand via a growing number of channels based in other locations.

The core belief of the Michael teachings is agape (unconditional love) — specifically, teaching people how to love themselves and how to love others through personality understanding methods, communication skills and other practices that encourage deeper self-awareness.

Modern schools of philosophy and psychology represent facets of this system. Readers of Abraham Maslow, Carl Jung, Erik Erikson and Sigmund Freud, as well as others, will find a ring of familiarity there. Elements of this system were being taught in the 1920s by George Gurdjieff, P.D. Ouspensky, and later Rodney Collin.

Beginning with a few friends gathered in Sarah Chambers' living room seeking answers to their own questions, there are now more than 40 books published about the body of work that came to be called the Michael teachings. As students became teachers of the material and it moved out of the United States, many of the books about the teachings have been translated into other languages. The work of José and Lena Stevens has been translated into Finnish. Shepherd Hoodwin's books have been translated into Russian, Spanish, Indonesian, Dutch and German. Websites in other countries evolved to cover the material in the United Kingdom, Germany, South Africa, Brazil, and Czechia. [https://en.wikipedia.org/wiki/The_Michael_Teachings — retrieved 04 July 2022]

Following that are sections on Reception by academics and on Sarah Chambers, the original channel. The article mentions the fact that the Michaelian teachings is the collective work of numerous channels, about a dozen by my count. Because it has been conveyed by several channels over several decades and has some variations in content, I prefer to call it the Michaelian teachings. What is not stated in the article is that "Michael" claimed to be a united group of more than a thousand souls that reincarnated as humans on earth for thousands of years, ending about 1500 years ago. Because "Michael" claims to be a plural being, myself and some others prefer to refer to them as "the Michaels". They named their teaching "The Synthesis", implying that their teaching is a syncretism of philosophies and spiritual teachings that they encountered during their many incarnations. Personally, I also recognize their Synthesis as a newcomer in the Perennialism lineage, meaning that it subscribes to the notion that the world's philosophies and spiritual teachings are

instantiations of a core body of coherent and consilient understanding and wisdom and truth. It was due to contact with the Michaelian teachings that I first understood the gist of what I came to call the Natural Sequence schema, and it was from a reformulation of the personality system (called the “Overleaf” system) revealed in the Michaelian teachings that I formulated what I came to call the Process/Aspect System matrix, which is my enhanced understanding of the Overleaf System in terms of logic, mathematics, and physics. Consequently, it is appropriate to use the Michaelian teachings as a framework to compare and contrast these other teachings to it in this Part, and in other Parts.

As I said in the previous paragraph, I refer to the collective body of work that claims to be “Michael” channeling as the “Michaelian” teachings. The situation, as I see it, is that the information has numerous inconsistencies between the various channels, the information lacks coherence because it has come through the various channels in piecemeal fashion in answers to various questioners, and some of the information is not consilient with other channeled information or ancient or modern spiritual, philosophical, or religious teachings. As such, there is not a single “Michael teaching”; it is patchwork of Michael-ish teachings. My claim is that — the same as with the various cosmological systems reviewed in this *Cosmogony* book — it could benefit from a scholarly academic review (which I do in my other books), and it could benefit from the understanding contained in the Natural Sequence schema and Process/Aspect System matrix. I will indicate my suggested corrections and improvements and additions where appropriate in the remainder of this chapter.

Revelation of the Overleaf System

As hinted at indirectly in the Wikipedia article, the founding members of the original Michaelian group (OMG) had been members of a local study group for the Gurdjieffian teaching. (I say “Gurdjieffian” because a number of other people built upon the work of Gurdjieff subsequent and consequent to him, providing several derivatives.) Components of that teaching that are relevant to the Natural Sequence schema and the Process/Aspect System matrix are reviewed in Chapter II-3, “The Gurdjieffian Teachings”.

The original Gurdjieff teaching had a septenary as part of its personality system, the so-called “Centers”, and their names as originally given are: Moving, Emotional, Intellectual, Instinctive, Higher Intellectual, Higher Emotional, and Sexual. These also served as the framework for a holarchy of spiritual development called “Levels of Being”; these are described in Chapter VI-2 in Part Six. In the decade after Gurdjieff died, a student of Gurdjieff, Rodney Collin, added a septenarian component to the Gurdjieffian teaching that he called “Body Types”. Both of those septenaries came into the Michaelian teachings via the Gurdjieffian group that founding OMG members passed through. The Body Types, as understood in the Gurdjieffian teachings and in the Michaelian teachings, are not relevant to the Natural Sequence schema, but the Centers are.

About two weeks after the Michaels presented themselves to the OMG during Ouija board sessions, at about one-month intervals, the Michaels began to reveal six septenaries in addition to Centers, as components of an extensive personality typology. Those septenaries were originally named Goal, Chief Feature, Attitude, Soul Age, Role, and Mode. In the Michaelian teachings, these are called “Overleaves” because they allegedly overlay the characteristics of the soul. This grid of $7 \times 7 = 49$ personality traits is the template for what I refer to as the Process/Aspect System matrix. In addition to those septenaries of personality traits, Michaelian channeling over the decades has provided numerous other septenaries that are relevant to the human condition, some of which are relevant to the Natural Sequence schema. It was the study of that information primarily, and other information secondarily, that led to my understanding of the Natural Sequence schema and the Process/Aspect System matrix and the writing of this *Cosmogony* book.

The table below shows the Process/Aspect System matrix of personality traits and their Attributes. The Process/Aspect System matrix is derived from the Overleaf System revealed by the Michaels during the OMG. By “derived”, I mean that I made what I regard as improvements in the Overleaf System in terms of understanding its structure and arrangement. My book *A History of the Overleaf Chart* explains how and why the derivation occurred. For the benefit of any Michaelian students who read this book, I note my departures from Michaelian orthodoxy in what follows.

Table II-4a — The PROCESS/ASPECT SYSTEM MATRIX — “Time Structure”								
A T T R I B U T E S	RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
	DIALECTIC	– ORDINAL –			= NEUTRAL =	+ CARDINAL +		
	AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
	DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
	DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
	ASPECT →	GOAL	SHADOW	ATTITUDE	WORLDVIEW	CENTER	ROLE	MODE
	PROCESS ↓							
+ C A R D I N A L +	ORIGINATI’N FORWARD ACTION +1-D+	+Leadership DOMINANCE –Dictatorship	+Audacity IMPATIENCE –Intolerance	+Perception REALIST –Supposition	+Revolution MESSIANISM –Provocation	+Vitality EXCITATION –Arousal	+Mastery KING –Tyranny	+Dynamism AGGRESSION –Belligerence
	EVOLUTION UPWARD INSPIRATION +2-D+	+Development GROWTH –Confusion	+Pride ARROGANCE –Vanity	+Aspiration SPIRITUALIST –Superstition	+Liberation TRANSPERSON’ –Catharsis	+Empathy SYMPATHY –Sensitivity	+Compassion PRIEST –Zeal	+Enthusiasm PASSION –Extremism
	SYNTHESIS INWARD EXPRESSION +3-D+	+Inclusion ACCEPTANCE –Ingratiation	+Egotism GREED –Voracity	+Coalescence IDEALIST –Naivety	+Philosophy HOLISM –Ideology	+Integration CONCEPT –Fantasy	+Exhibition SAGE –Oration	+Authority POWER –Oppression
N E U T	COMBINAT’ COMPLEX ASSIMILATI’N =P-D=	+Suspension EQUILIBRIUM –Inertia	+Determination STUBBORN’ESS –Obstinacy	+Practicality PRAGMATIST –Dogma	+Consensus COLLECTIVISM –Ambiguity	+Intuition IMPULSE –Instinct	+Knowledge SCHOLAR –Conjecture	+Clarity OBSERVATION –Surveillance
– O R D I N A L –	ANALYSIS OUTWARD EXPRESSION –3-D–	+Distinction REJECTION –Prejudice	+Sacrifice RENUNCIATI’N –Self-hatred	+Investigation SKEPTIC –Suspicion	+Production MATERIALISM –Exploitation	+Thought INTELLECT –Reason	+Creation ARTISAN –Artifice	+Deliberation CAUTION –Phobia
	INVOLUTION DOWNWARD INSPIRATION –2-D–	+Evaluation REDUCTION –Withdrawal	+Humility LOWLINESS –Abasement	+Tranquility STOIC –Resignation	+Propriety TRADITION’S –Conformity	+Sensibility EMOTION –Sentimentality	+Service SERVER –Bondage	+Restraint REPRESSION –Inhibition
	TERMINAT’ BACKWARD ACTION –1-D–	+Dedication SUBMISSION –Subservience	+Selflessness MARTYRDOM –Defeatism	+Contradiction CYNIC –Denigration	+Preservation PRIMITIVISM –Security	+Endurance MOTION –Activity	+Persuasion WARRIOR –Coercion	+Persistence PERSEVERANCE –Immutability

My comments on this table are as follows:

- What I say in this bulleted list is described and explained more extensively in Part One, so consider this a brief review.
- The title indicates that this is the “Time Structure” arrangement of the personality traits. It shows them per the Natural Sequence on both the vertical and the horizontal axes, which is why this is called a “matrix”. There is a different version of the chart that is called “Space Structure”, and it juxtaposes the Ordinal and the Cardinal Traits in the same Dimension, in ascending order: 1-D, 2-D, 3-D, and P-D . My book, *The Tao of Cosmology*, focuses on describing and explaining the Space Structure of the Cosmos, whereas this book, *The Tao of Cosmogony*, focuses more on the Time Structure of the Cosmos.

- The first five rows show the Attributes of the Natural Sequence schema and Process/Aspect System matrix. The Michaels revealed Rank, Dialectic, and Axial Attributes; Dimension and Direction Attributes are my contribution. These Attributes apply on the vertical axis of the table as well as the horizontal, but not all of them are labeled in the first and second columns.
- RANK: The first row heads up the seven ranks of the Natural Sequence. Although not labeled as such, the columns have the same rank names, with the Termination Process being First and the Origination Process being Seventh. That the names of the Ranks are contrary to the names of the Processes is explained by the Taijitu Tango Principle, which is described in various sections of this *Cosmogony* book, including a section further on in this chapter, because I learned of the Taijitu Tango Principle from the Michaelian teachings.
- DIALECTIC: The second row shows the names of the Dialectic Attributes as given in the Michaelian teachings. This name is derived from one of the central doctrines of the Michaelian teachings, the doctrine of Monads. Basically and briefly, this is the notion that humans learn lessons by experiencing something and also the opposite of that something, thereby propelled along the holarchy to the next higher-later stage of development. This is the Michaelian version of the Dialectic Principle, described and explained in Part One. This is also Twoness in Tao's Template.
- AXIAL: The third row shows the names of the Axial Attributes as given in the Michaelian teachings. The name refers to the fact that contrary personality traits represent the poles of an axis. This is Threeness in Tao's Template.
- The Michaels did not declare it, and Michaelian students seem not to have realized it, but Ordinal and Cardinal are mathematical terms, as is the term Axis. Mathematics is used to model physics phenomena, and through mathematics, objective physics and subjective personality are united in the Process/Aspect System.
- DIMENSION: The fourth row shows the Dimensions that correlate with the Axial Attributes. The Michaelian teachings did not reveal, but I did, that the Cartesian Coordinate System explains the Axes of Action, Inspiration, Expression, and Assimilation in terms of mathematics, specifically, geometry.
- DIRECTION: The fifth row shows the names of the metaphorical types of movement of personality traits along the axes of the Cartesian Coordinate System.
- ASPECT: The sixth row shows the names of the seven categories of personality traits as I prefer them. My preference is the same as in the Michaelian teachings except that what I call Shadow is called Chief Feature in the Michaelian teachings, and except that what I call Worldview is called Soul Age in the Michaelian teachings. The Michaelian teachings does not understand, as I do, that the Aspects are space-like in that they define the personality in terms of Being, in terms of the feature of language called Nouns.
- PROCESS: The last seven rows show the names of the seven Processes. shown in headers in the second column. The Michaelian teachings does not understand, as I do, that the Processes are time-like in that they define the personality in terms of Doing, in terms of the feature of language called Verbs.
- Each of the $7 \times 7 = 49$ personality traits is a combination of an Aspect and a Process, a Being and a Doing, a Noun and a Verb. The metaphor is that each personality trait is like a motion in subjective time/space, the same as objects that move in objective space/time. This Process/Aspect, Time/Space metaphor is some of what I mean when I say that the Natural Sequence schema and the Process/Aspect System matrix are explained by logic, mathematics, and physics.
- The middle Aspect is called Worldview in the Process/Aspect System matrix, but it is called Soul Age in the Michaelian teachings. That is the component of this table that is most relevant to the Natural Sequence schema; more is said about it further on in this chapter.

Attributes of the Overleaf System

The Michaelian teachings has a systematic cosmology, and by "systematic cosmology" I mean that it has a simplified model of the orderly features of the entire universe, as distinct from the disorderly or chaotic features of the entire universe. That cosmology is discussed at greatest length in my book *The Tao of Cosmology*. In this book, *The Tao of Cosmogony*, in its Part One "Introduction", I present an abbreviated version of *Cosmology*. As a

further simplification, in this chapter I only discuss those parts of the pattern of the Cosmos that are known in the Michaelian teachings. Those parts have to do with what I refer to as the Attributes of the Process/Aspect System matrix. My discovery of the Michaelian instantiation of the Natural Sequence schema in 1986 was my original introduction to the Natural Sequence schema, and it has been the guiding light of all consequent and subsequent discoveries of other instantiations of the Natural Sequence schema.

Basically and briefly, the Overleaf System is a grid of seven rows and seven columns, an array of forty-nine personality traits. Each of the seven columns and rows is headed up with some so-called “Attributes”. There are the three what I call “Dialectic” Attributes of Ordinal, Neutral, and Cardinal, and there are the four what I call “Axial” Attributes of Action, Inspiration, Expression, and Assimilation. Add these together and we have seven what I call “Septenarian” Attributes. Arranged in the Natural Sequence these are Ordinal Action, Ordinal Inspiration, Ordinal Expression, Neutral Assimilation, Cardinal Expression, Cardinal Inspiration, Cardinal Action. Besides application to the Overleaf System, these seven Attributes are applied to numerous other instantiations of the Natural Sequence throughout this *Cosmogony* book.

The following subsections review what has been said about these Attributes in various Michaelian sources over the decades of its progressive revelation.

Attributes of the Overleaf System per the Original Michaelian Group (OMG)

The OMG members named the Dialectic Attributes and had a shallow understanding of them, as documented in Chapter 2B, “Attributes of Overleaves”, in my book *A History of the Overleaf Chart*. Basically and briefly, the Michaels indicated that the septenary was divided into a triad of “Ordinal, yin, feminine, lower, negative, passive, and outward” personality traits versus a triad of “Cardinal, exalted, yang, masculine, higher, positive, active, and inward” personality traits versus “Neutral, intermediate, androgynous, balanced, and mid” personality traits. What the OMG members were not given to understand was what later came to be called the four “Axial Attributes”, Action, Inspiration, Expression, and Assimilation. Yarbro elicited that information from the Michaels in time to publish it in her first book about the Michaelian teachings, namely *Messages from Michael*:

“Can you tell me what the significance of the number seven is?” Corrine asked at one of these sparsely attended sessions.

Seven is the closest thing we know of to a “universal” number. It expresses not only the three aspects of duality, but the resolution of the dualities. It is thesis [Ordinal], antithesis [Cardinal], and synthesis [Neutral]. In the dualities, or polarities, there are those that are concerned with expression, action, and inspiration, and the seventh is assimilation. Consider expression, which makes things accessible, either through the act of creating things, building things, and shaping things with its higher polarity, which is the realization of the thing built, created, or shaped. In action, there is the action itself, the exploration, the extension, and the cohesion of the results of the exploration and extension. In inspiration there is the lifting up, and the pursuit of that beyond what has been lifted up. And then, there is the contemplation and understanding of the dualities in a single experience [assimilation]. [Yarbro, *MFM* (1979), p. 43]

Notice that the channeling made a reference to the dialectic notion of thesis, antithesis, and synthesis — these are equivalent to the Dialectic Attributes, as discussed in Part I of this *Cosmogony* book. As for the Axial Attributes of Expression, Inspiration, Action, and Assimilation, a vague description was provided per the quotation above, but that was not an explanation, and no explanation for them was given in the Yarbro books — or any subsequent Michaelian books, as we will see further on ... until my books were written.

A brief description of Ordinality and Cardinality was provided in Yarbro’s second book on the Michaelian teachings, *More Messages from Michael*:

Cardinality and ordinality also have polarities, of course. The positive polarity of cardinality is lucidity and the negative is activity. The positive polarity of ordinality is responsiveness and the negative is passivity. If you wish to think of cardinality as will and ordinality as muscle, although this description is vastly oversimplified, there is some validity to it, nonetheless. [Yarbro, *MMFM* (1986), p. 29]

This passage is just more description without explanation of the deeper reality (logic and mathematics and physics) out of which these Attributes emerge into the realm of the Cosmos, including human personality.

Other synonyms for Ordinality and Cardinality are found further on in this book:

He is receptive [Ordinal] rather than catalytic [Cardinal].... [Yarbro, *MMFM* (1986), p. 195]

Other than that, the Yarbro books are very light on providing a description, let alone providing an explanation, for the nature of the Attributes of the Overleaf System. Therefore, let's look at what other channels had to say, as recorded in their books.

Attributes of the Overleaf System per José Stevens in The Michael Handbook (1986)

The first Michaelian book to be published by the non-Yarbro contingent of the Michaelian teachings was *The Michael Handbook*, which had this to say:

THE THREEFOLD FOCUS: ORDINAL, NEUTRAL AND [CARDINAL]

All the Overleaves are divided into three types of energy: ordinal, neutral, or exalted....

ORDINAL

If you refer to the Overleaf Chart you will see that the ordinal roles comprise server, artisan, and warrior. They are narrow focused, and oriented to more immediate tasks. They have a distinctly practical, down-to-earth approach.... They are like one-on-one interactions rather than standing up and addressing the masses.

NEUTRAL

The neutral category stands alone and for the roles it is the scholar who is neutral. The neutral quality here allows for the ability to step back and be able to interact with all the other types and even assist them to understand one another.

[CARDINAL]

The [cardinal] roles (priest, sage, and king), are wide focused, and oriented toward the big picture. They provide the leadership by their ability to deal with large groups of people. In general they prefer larger, more stage-like appearances and stand out more.... The [cardinal] Overleaves in general affect others more and the self less....

Characteristics of Ordinal Overleaves: Passive, inner process, one-on-one, introverted, homing in

Characteristics of [Cardinal] Overleaves: Active, outer process, one-to-many, extroverted, broadening out

THE FOUR AXES

The roles and all the Overleaves are also categorized under four axes that determine the essential flavor or unique specialty of the character. The four axes are inspiration, expression, action, and assimilation.

The inspiration axis includes roles of server (ordinal) and priest ([cardinal]). The roles experience their primary beingness by being inspired by life. They urge and motivate people to new heights, whether it be career, love, or inner revelations. Inspiration axis Overleaves such as passion are related especially to feeling and the senses.

The expression axis includes the roles of artisan (ordinal) and sage ([cardinal]). These roles are gifted at communicating ideas or feeling through signs, symbols, gestures, speech, color, and form. These creative roles bring beauty and drama, passion and color, into our lives. The Overleaves in the expression axis such as skepticism, are just that — more expressive.

Warrior (ordinal) and king ([cardinal]) are the action axis roles. They are characterized by groundedness, physicalness, and a love of getting things done. All the action axis Overleaves such as aggression, are characterized by doing, rather than expressing or inspiring.

The neutral role of scholar falls under the assimilation axis. This means that the scholar experiences life primarily by absorbing information, organizing it, and storing it. All the assimilation axis Overleaves such as observation, have a neutral quality and are oriented toward absorption of one kind or another. [Stevens, *The Michael Handbook* (1986, 1987), pp. 76-80]

In the OMG and in *MMFM* the word "Exalted" was used, but I prefer the word "Cardinal", which Yarbro introduced in *MMFM*, so I have substituted it in the previous and the following quoted material.

That was a more thorough description than provided by Yarbro. However, there was no explanation or derivation of the Attributes from more primitive notions or principles, so let's keep looking.

Attributes of the Overleaf System per the book Michael: The Basic Teachings (1988, 1990)

This book, authored by Aaron Christean, JP Van Hulle, and M. C. Clarke, had little if anything to say about the Attributes of the Overleaves until the Glossary at the end of the book:

ACTION AXIS: Roles and Overleaves that express themselves through movement, how one behaves in the world and what one does.

ASSIMILATION AXIS: The hub of the wheel position. Can slide to either the ordinal or cardinal positions of any Overleaf.

ASSIMILATIVE: Absorbing all action, knowledge, emotion. A historical, preservation, gathering-of-experience stance.

AXIS: Overleaves are grouped into three pairs of one ordinal and one [cardinal] each, along three axes — inspirational, expressive and action — which correspond roughly to Truth, Love, and Energy. The fourth axis, assimilative, has one neutral Overleaf (able to be either ordinal or cardinal) and encompasses the other three.

[CARDINAL]: Having a quality that puts one out in the world in a more noticeable fashion. Feeling comfortable dealing with larger groups.

EXPRESSION AXIS: Roles and Overleaves noticeable because of their expressive quality. More emotional in nature. Flamboyant.

INSPIRATION AXIS: Roles and Overleaves that lend to more philosophical, spiritual, healing, or care-taking pursuits. Evolutionary, connected to other planes, expansive energy.

NEUTRAL: Taking no stance. Holding the space, observing what is happening, making no judgment. Taking neither a positive nor a negative stance.

ORDINAL: Dealing with life on a more one-on-one level. Quieter and more withdrawn.

TRIAD: A group of three. This group is best for working on karma and lessons. The three positions are affirming, denying, and neutral. These positions can be held by three people, two people and the issue or one person and two sides of an issue. [MTBT, pp. 213-232]

These descriptions have an anomaly when compared to descriptions by others in that the Overleaves in the Expression and Inspiration Axes are switched, not only here in the Glossary, but in the Overleaf Chart and in other diagrams in that book. However, I regard this as an error. Besides that, this book, same as the others, provides a description but does not provide an explanation of the Attributes, so let's keep looking.

Attributes of the Overleaves per Shepherd Hoodwin's books (The) Journey of Your Soul (1995, 2013)

Shepherd Hoodwin has been a channel for Michaelian teachings since the late 1980s. You are invited to check out his website at ><https://shepherdhoodwin.com/><. These two of his books (1st & 2nd Editions) themselves are each almost 500 pages long, but the description of the Attributes is very brief:

[AXIAL ATTRIBUTES:] On the Michael chart preceding this chapter, we can see that each role and Overleaf is classified as being on one of the four axes, or dominant universal qualities: inspiration, expression, action, and assimilation. The axes are fairly self-explanatory. A role or Overleaf on the inspiration axis has an inspirational quality; in other words, it has to do with the inner world. (A definition of inspiration is "the act of drawing in.") The expression axis has to do with manifesting the inner world outwardly, such as through communication and creativity; it is the bridge between inspiration and action. The action axis relates to the outer world, or doing. The assimilation axis is objective and neutral. It provides a resource for the other axes and helps integrate them.

That was a shallow attempt to make sense of the Axial Attributes; it does not actually make deep sense of them.

[DIALECTIC ATTRIBUTES:] Each of the first three axes is divided into two parts, ordinal (contracted) and cardinal (expanded). (The word *exalted* is a synonym for *cardinal*.) Along with the assimilation axis, which is neutral — neither cardinal nor ordinal — and not divided, that makes seven parts in all, with a position for each of the seven roles and Overleaves.

The ordinal side of an axis can be compared to a camera's zoom lens — it deals with the specific, concrete, and immediate. The cardinal side is like a wide-angle lens — it deals with the general, abstract, and far-reaching. The ordinal is contracted, oriented toward detail, whereas the cardinal is expanded, broad and encompassing. Both sides are necessary, and contraction here is not negative — it is not the same as restriction. In order to move, our muscles must both contract and expand. [Hoodwin, *Journey of Your Soul* (2013), pp. 114-115]

Here again, there is only a description and no explanation of the origin or basis of the pattern of the Attributes: the geometric dimensionality of space/time and time/space.

Previous descriptions of the Attributes are anemic, but the following source is much more robust. Even so, it still lacks anything remotely resembling an explanation of them in terms of the fundamental pattern or framework such as that provided by the Natural Sequence schema, namely logic, mathematics, and physics.

Dialectic Attributes of the Overleaves per Stephen Cocconi's Michael Motivation Cards (2011)

Stephen Cocconi is a Michaelian channel who got his start in the 1980s. You are invited to check out his website is ><https://www.themichaelteaching.com><. As part of his service to the Michaelian student

communities, he has produced the so-called “Michael Motivation Cards”, which are like a deck of Tarot cards, but with Michaelian symbols and terminology on them instead of the traditional Tarot structure. They can be used somewhat like Tarot cards, for divination purposes, to elicit insights about questions that a student might have about their life.

Cocconi has an extensive description of the Dialectic Attributes. Cocconi used the word “Exalted” per the OMG, but because of its mathematical significance I prefer the word “Cardinal” that was introduced by Yarbro in *MMFM*, so I have substituted it in the following quoted material:

SCOPE MICRO AND MACRO — CONTRASTING ORDINAL AND CARDINAL PERSPECTIVES

<u>Ordinal can mean...Micro</u>	<u>Cardinal can mean...Macro</u>
Personal	Impersonal
Private	Public
Inward	Outward
Plan (short run)	Vision (long run)
Masculine	Feminine
Informal	Formal
Exclusive (Specific, Fragmented)	Inclusive (General, Integrated)
Together [other-dependent]	Solitary [self-sufficient]
Labor	Management
Details (small picture, microscopic)	Big Picture (telescopic)
Parts	Whole (Holistic)
Mundane	Abstract
Small Scale	Large Scale
Plebeians — Proletariat — Populous	Patricians — Plutarchs — the 1%
Immediate gratification, reinforcement	Delayed gratification
External reinforcement	Internal reward
(Individualism	Collectivism)
(Follower	Leader)
(Content	Context)
(Body	Mind)
(Analytic	Synthetic)
(Present	Future)
(Tangible	Intangible)

Words in parentheses were gleaned from paragraphs (omitted here for the sake of brevity) of descriptions of the differences between Ordinal and Cardinal as they manifest in personality, not as they manifest in other domains of existence and function. So, although Cocconi’s descriptions are much more extensive than the descriptions documented above, there is still no explanation of the underlying structure of logic, mathematics, and physics emerging from which personality is an instantiation. Understanding the abstract explanation as I do, I do not always agree with the placement of the words. For instance, I would switch masculine and feminine.

Following those paragraphs of descriptions, there was another list of synonyms for the Dialectic Attributes:

<u>QUALITIES</u>	<u>CARDINAL</u>	<u>ORDINAL</u>	<u>NEUTRAL</u>
Scale	Macro	Micro	Assimilative
Interest	Group	Individual	System
Dimension	Vertical	Horizontal	Depth
Purview	General	Specific	Suspension
Reception	Analog	Digital	Nonaligned
State of Being	Expanded	Contracted	Inert
Appearance	Reflective	Opaque	Transparent

Concern	Conceptual	Tangible	Void
Focus	Broad	Narrow	Instance
Creation	Plan	Build	Utilize
Mathematics	Positive-Additive	Negative-Subtractive	Equivalence
Analysis	Thesis	Antithesis	Synthesis

[Cocconi, ><https://www.themichaelteaching.com/michael/scope-exalted-ordinal/>< — retrieved 03 May 2022]

Thereafter followed some more paragraphs of descriptive prose.

The above was about the Dialectic Attributes. If anything is said about the Axial Attributes on Cocconi's website, I did not find it. The point to be made here is that it has neither seemed important to the Michaels to reveal, nor for their students to ask about, the explanation of the pattern of the Overleaf System. This lack of curiosity seems strange to me. When one has the explanation — logic and mathematics and physics — it opens the bridge between the personality of humans and the 'personality' of the Cosmos; we can understand the one in terms of the other, and *vice versa*.

Attributes of the Overleaves per Troy Tolley

[[There might have been something on the old TLE website but I could not find anything on the new TLE. This bears more research.]]

Monads per the Michaelian Teachings

In the previous section, there was documentation of what the Michaelian teachings had to say about the Dialectic Attributes: Ordinal + Cardinal = Neutral. They were not given that collective name by the Michaels or their channels; I did it, because the Michaels did have a teaching about what they called "Monads", which is their version of the Dialectic Principle as it applies to the human learning process. The Dialectic Principle is covered extensively in Part One, and the Monadic phenomenon is a minor corollary to it. Basically and briefly, it means that people learn and develop by experiencing something and the opposite of that something. In other words, people do not fully understand something unless they experience, for instance, both poverty and wealth, both power and powerlessness, both ugliness and beauty, both foolishness and wisdom, both ignorance and knowledge, and so on. So far as I know, Michaelian students other than myself have not recognized the Dialectic Principle in the Monads, so this is one of my contributions. I mention Monads in this chapter because I first learned of the Dialectic Principle subsequent to learning about the Monadic principle that is espoused in the Michaelian teachings. Rather than repeat here what I have said elsewhere about the Monads, I refer the reader to the lengthy chapter on the subject in my book, *Study Papers on the Original Michael Group*.

Planes per the Michaelian Teachings

The Michaelian teachings have an understanding that there are seven so-called "planes" of the Cosmos as a whole. Six of these planes are generally said to be 'above' or 'beyond' the so-called "Physical Plane", which is also known as the universe that is studied by science. The Michaelian teachings about planes is not documented here; rather, it is documented in a section in Chapter II-5, "The Seven Planes", along with sections that cover the planes per many other esoteric teachings. There you will read that they typically are said to follow the Natural Sequence, even though they do not refer to it with that name; the Natural Sequence is my nomenclature. I mention this here because all instantiations of the Natural Sequence that are reviewed in this *Cosmogony* book are to be regarded as subsets of this largest set, the seven Planes.

Centers per the Michaelian Teachings

The fifth column in Table II-4a near the beginning of this chapter is labeled "Center". The Michaelian teachings borrowed much of its understanding of the Centers from the Gurdjieffian teachings; some components of the Gurdjieffian teaching relevant to this *Cosmogony* book, including Centers, were reviewed in the previous chapter. However, the Michaelian teachings modified and enlarged the Gurdjieffian teaching in ways that are also relevant to this *Cosmogony* book. For myself, I have made some significant modifications to the understanding of Centers given in the Gurdjieffian and in the Michaelian teachings, but I choose not to document them here because the modifications are so extensive. However, they are documented in my other books, particularly *The Tao of Personality* and *A History of the Overleaf Chart*. I mention the Centers here in this

chapter because many times throughout this *Cosmogony* book, it is convenient to compare the instantiation of the Natural Sequence schema under discussion with the Centers.

Worldviews per the Michaelian Teachings

The fourth column in the table near the beginning of this chapter is labeled “Worldview”. That is my name for what is called “Soul Age” in the Michaelian teachings, which espouses the doctrine of reincarnation as a soul-maturing phenomenon. It is not necessary to subscribe to that doctrine to validate the reality that people seem to have an inherent Worldview or innate maturity that is present from birth to death, along with other stable personality traits that appear in the Overleaf System. The Michaelian teachings is not the only esoteric cosmologies to espouses this doctrine, so I have dedicated a chapter to it further on here in Part Two, namely Chapter II-8, “The Seven Soul Ages/Worldviews”. There you will see that they typically follow the Natural Sequence schema. Part Three of my book *The Tao of Personality* is dedicated to a lengthy discourse on the Worldviews.

Cultures per the Michaelian Teachings

It is said in the Michaelian teachings that humanity is currently in a transition phase between a predominance of Young Souls to a predominance of Mature Souls. For instance, refer to Yarbrow, *Messages from Michael* (1979), Chapter 4, “The Nature of the Soul”, and refer to Hoodwin, *Journey of Your Soul* (2013), pp. 335–337. In terms of Process/Aspect System terminology, that is the cusp of the Materialism Worldview and Collectivism Worldview. Note that saying that there is change in the “predominance” of a Worldview does not mean that no other Worldviews are present in a population, only that the proportions of the Worldviews presented have shifted. To say that the state of Wisconsin has a “predominance” of persons of European ancestry does not imply that all Wisconsins have that ancestry, and the situation with Worldviews is similar.

It is also said in the Michaelian teachings that at some point in the distant future, humanity as a whole will go through another major transition, that being from the predominance of Mature Souls to the predominance of Old Souls (= Holism Worldview), with the Old Soul era being characterized as “philosophical” (MFM, p. 68).

In terms of socio-cultural development, Young Souls are said in the Michaelian teachings to be the “architects of civilization”, and civilization covers the last five or six thousand years, depending on what part of the world is under discussion, and which have been recorded in written history. The era that spanned a few thousand years before that is known to anthropologists as the agricultural-pastoral era of socio-cultural development. My guess is that this era reflects the predominance of the Baby Soul aka the Traditionalism Worldview. The era before that is known to anthropologists as the hunter-gatherer era of socio-cultural development. My guess is that this era reflects the predominance of the Infant Soul aka the Primitivism Worldview.

Socio-cultural development is discussed at length in several chapters in Part Four, “Natural Evolution”. There you will read that several lines of evidence indicate that the stages of development follow the Natural Sequence schema. I mention it here because I first read about the phenomenon in the Michaelian teachings.

The Seven Life-Stages per the Michaelian Teachings

Part Five of this *Cosmogony* book, “Developmental Psychology”, is a review of more than a dozen academic research projects that define stages that people commonly go through during the story arc of a full lifetime from birth to death. In that Part, I demonstrate that the Natural Sequence schema provides a credible framework for correlating the various research projects. The academic researchers gave various names to the phenomenon that they studied, but the name that I prefer is “Life-Stages”

As with other components of the Natural Sequence schema — namely Centers and Planes and Worldviews and Cultures — I was first introduced to the concept of Life-Stages in the Michaelian teachings book, *Messages from Michael* (MFM), which I read in 1980. In my book, *A History of the Overleaf Chart*, I wrote a lengthy chapter, Chapter 4Q, “The Seven Live-Stages”, on the subject. In that chapter, I reviewed the published Michaelian teachings material on the subject, and then commented on the information extensively. There is no use repeating that chapter here, but, as a conclusion to that chapter, I provided a table that showed the names of various septenaries discussed in that chapter as given by various Michaelian teachings sources, and it does seem expedient to reproduce that table here in this chapter. Some brief commentary on the meaning of the names in the rows and columns of the table are shown after the table.

Table II-4b — LIFE-STAGES per the MICHAELIAN TEACHINGS							
RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
DIALECTIC	–ORDINAL–			=NEUTRAL=	+CARDINAL+		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
PROCESS ASPECT	TERMINATION GOAL	INVOLUTION SHADOW	ANALYSIS ATTITUDE	COMBINATION WORLDVIEW	SYNTHESIS CENTER	EVOLUTION ROLE	ORIGINATION MODE
ORIGINAL MILESTONES	BIRTH	INDIVIDUAT'N	DIFFERENTIATION	MANIFESTAT'N	RECONCILIATION	DYING	DEATH
STEVENS MILESTONES	BIRTH	AUTONOMY	PUBERTY – ADOLESCENCE	MANIFESTATION	RETIREMENT	[IMMINENT DEATH]	DEATH
CHAMBERS MILESTONES	INITIATION	NURTURE	SUPPORT	CHANGE & BALANCE	MATURATION	END OF LIFE	JOYOUS TRANSITION
COCCONI MILESTONES	BIRTH	SEPARATION	INDIVIDUATION	SELFHOOD	FULFILLMENT	REVIEW	DEATH
YARBRO MILESTONES	+Vitality BIRTH –Life	+Identity EGO-RECOGNIT' –Solipscism	+Differentiation OUT OF NEST –Separation	Self-realization MID-LIFE CRISIS –Acquiescence	+Appreciation LIFE REVIEW –Evaluation	+Catharsis PREPARE TO EXIT –Capitulation	+Transcendence EXIT THE LIFE –Fatalism
TOLLEY MILESTONES	+Success BIRTH –Failure	+Confidence AUTONOMY –Co-dependence	+Differentiation INDEPENDENCE –Separation	+Self-realizat'n STABILIZAT'N –Acquiescence	+Rejoicing RECREATION –Regretting	+Surrender COMPREHENS'N –Disengagement	+Success DEATH –Failure
TOLLEY STAGES	INITIATION	INTRO-SPECTION	REALIZATION	MANIFESTATION	CONTENT-MENT	MAGNETIZATION	EMANATION
MARINA–T. MILESTONES	+Vitality BIRTH –Life	+Self-identity IDENTITY –Narcissism	+Independence INDEPENDENCE –Separation	Self-realization MANIFESTAT'N –Acquiescence	+Appreciation REVIEW –Evaluation	+Catharsis [FATALITY] –Capitulation	+Transcendence DEATH –Fatalism
GREGG MILESTONES AND STAGES	+Viality BIRTH INITIATION –Life	+Identity CHILDHOOD INTEGRATION –Solipsism	+Differentiation ADOLESCENCE PRODUCTION –Separation	Self-realization MIDLIFE CONSOLIDAT'N –Acquiescence	+Appreciation REVIEW EXPANSION –Evaluation	+Catharsis DYING APPRECIATION –Capitulation	+Transcendence DEATH COMPLETION –Fatalism
WITTMAYER LIFE-STAGES	+Coordination INFANCY –Clumsiness	+Socialization CHILDHOOD –Codependence	+Independence YOUTH –Irresponsibility	+Authenticity MIDDLE AGE –Falseness	+Legacy SENIORITY –Self-indulgenc	+Gratitude ELDERHOOD –Regret	+Anticipation DYING –Disengagement

My comments on this table are as follows:

1. My books *The Tao of Cosmology*, *The Tao of Cosmogony*, and *The Tao of Personality* provide the evidence, the argument, the rationale, the explanation, the description of/for the structure of this table. The first six rows contain elements that are arranged in the Natural Sequence from left to right. The Natural Sequence is the archetypal developmental sequence; it is the fundamental cyclical time structure of the Cosmos. This means that involution and evolution follow this sequence from the shortest time scale to the longest time scale. Life-Stages are a developmental sequence, the one that is at the scale of a full human lifetime, from birth to death in advanced old age.
2. RANK: The first row shows the rank order numbers of the various septenaries tabulated here.
3. ATTRIBUTES: The first five rows (Rank, Dialectic, Axial, Dimension, Direction) show the Attributes of the Natural Sequence schema and Process/Aspect System matrix. These are briefly explained and described as follows:
 - DIALECTIC: The first row shows the names and the Signs (–, =, +) of the Dialectic Attributes that apply to the columns below this row. The names of the Dialectic Attributes were first made known

to me via the Michaelian teachings. The Dialectic Attributes are the Process/Aspect System terms for the Dialectic Principle: Thesis + Antithesis = Synthesis.

- AXIAL: The second row shows the names of the Axial Attributes that apply to the columns below this row. The names of the Axial Attributes were first made known to me via the Michaelian teachings.
 - The combination of Dialectic and Axial Attributes yields the Septenarian Attributes. Septenarian Attributes apply to the Life-Stages in the same column. The Septenarian Attributes can be codified and understood in terms of a couple of mathematical concepts having to do with the structure of space and time, specifically geometric Dimensions and vectorial Directions:
 - DIMENSION: Dimensionality with Signs (-, = , +) is another way to express the nature of the Septenarian Attributes. Basically and briefly, Dimensionality has to do with space/time geometry in physics and time/space 'geometry' in personality. The difficulties of climbing the 'cliffs' (metamorphoses) between Life-Stages ('plateaus') are caused by the change in Septenarian Attributes (aka Dimensions and Directions and Signs) in the transition from Life-Stage to Life-Stage.
 - DIRECTION: Basically and briefly, this has to do with the mathematical framework called the Cartesian coordinate system, which is typically applied to motions in objective physical space/time, but can also be applied analogically to 'motions' in subjective psychological time/space. The names of the directional vectors shown in the table are so self-evident and intuitively obvious that they are commonly used as metaphors in our language when referring to 'where we are headed' in our lives, so Directionality is fitting to the discussion of Life-Stages.
4. PROCESS and ASPECT: The sixth row shows, in the upper lines the names that I have given to the seven so-called "PROCESSES" of the Process/Aspect System matrix. These are one-word concrete descriptive names for the abstract Dialectic + Axial = Septenarian Attributes. In the lower rows are the names of seven so-called "ASPECTS" of the Process/Aspect System (Goal, Shadow, Attitude, Worldview, Center, Role, Mode).
 5. ORIGINAL MILESTONES: This row shows the names that I have chosen to give to the seven Milestones based on the descriptions found in the first three Yarbrow books, *MFM*, *MMFM*, and *MP*. The names were implied from the description, so I show that. As you can see by looking down the columns below this row, these names are identical to or similar to the names given to the seven Milestones by subsequent Michaelian sources.
 6. JOSÉ STEVENS MILESTONES: This row shows the names that José Stevens gave to the seven Milestones in one of his books about the Michaelian teachings, namely *Tao to Earth*. Except that Stevens did not actually name the sixth Milestone, but only described it, so I provided a proposed name in [brackets].
 7. CHAMBERS MILESTONES: This row shows the names that Sarah Chambers, the original Michaelian channel, channeling in 1996, gave to seven types of "Pathfinders". These people are said to have a specialized mission to shepherd people through the difficult transitions of each particular Milestone. This revelation provided another set of names for each Milestone.
 8. COCCONI MILESTONES: This row shows the names of the Milestones as given by Stephen Cocconi on his website >www.themichaelteachings.com<. He provided names for the Milestones but he did not provide names or even descriptions for the Poles of the Milestones.
 9. YARBROW MILESTONES: This row shows the names of the Milestones as found on an Overleaf Chart that was published by Steve Mature Scholar in 2009. I showed this on Chart #18 in Part Three of *A History of the Overleaf Chart*.
 10. TOLLEY MILESTONES: This row shows the names of Milestones as given by Troy Tolley's channeling and posted on his former internet website >our.truthloveenergy.com<. The names of their Poles are not explicitly stated in the channeling, but the description of positive and negative expressions of each Monad prompted me to choose words that seemed to me to best fit those descriptions.
 11. TOLLEY STAGES: This row shows the names of the seven Stages within each Milestone according to Tolley's channeling.
 12. MARINA-TOMPKINS MILESTONES: This row shows the ranks and the Poles of the Milestones as given by Victoria Marina-Tompkins in her book *Spiritual Turning Points*. The book itself is not channeled, but

apparently the names of the Poles were, apparently by someone in the Yarbrow contingent; notice the similarity to the names and Poles of the Yarbrow Milestones three rows up.

13. GREGG MILESTONES AND STAGES: This row shows the names of the Milestones and their Poles as given by David Gregg on his website >michaelteachings.com<. Notice that the Poles are identical to those given by Yarbrow four rows up, whereas the names of the Milestones are a mixture of the time-span and the characterization. This row also shows the names of the seven Stages within each Milestone according to Gregg's channeling. Compare these with the names of the Stages two rows up.
14. WITTMAYER LIFE-STAGES: Obviously, I have named the Life-Stages after obvious time spans of a full lifetime. My purpose in coming up with my own names for Life-Stages and their Poles was to show the greatest amount of respect for, and do the least amount of violence to, the work of other Michaelian students, and also show respect for developmental psychology models discussed in my Part Five of this *Cosmogony* book, as constrained by the theoretical framework of Septenarian Attributes as embodied in the Process/Aspect System matrix and the Natural Sequence schema.

The Taijitu Tango Principle

Yet again, it was from the Michaelian teachings that I first came to be aware of what I came to refer to as the Taijitu Tango Principle, which is mentioned in numerous places in this *Cosmogony* book because it is relevant to some instantiations of the Natural Sequence schema.

Although I do it throughout this *Cosmogony* book, it is not entirely proper to label the first three Stages of the Natural Sequence as Ordinal and the last three as Cardinal. Rather, it would be more accurate to say that the first three Stages are Ordinal/Cardinal, and the last three Stages are Cardinal/Ordinal. That is the meaning of what is said in the paragraph at the bottom of *More Messages from Michael* (1986), p. 189:

"You can perceive that while one [and two and three] is ordinal and [five and six and] seven is cardinal, that the first half [minus the neutral] is cardinal and the last half [minus the neutral] is ordinal — in other words, the pattern 'doubles back on itself'. This is what is implied by the 'yin-yang' symbol, and it would probably be of use to keep the 'yin-yang' in mind while considering what we tell you of the function of levels and numbers."

(As you all know but I will remind you, the yin-yang symbol is symmetrical: a white dot in a black field is separated by a sinusoidal curve from a white field with a black dot in it, all contained within a large circle. This is representative of the principle that everything is defined by its complement.) There is text before and after this text that explains this principle in more detail. So, according to the Michaels (they declare thus but do not explain why thus beyond the reference to the yin-yang symbol), there is a reciprocal relationship between what might be called "numerical attribution" (Cardinal or Ordinal) or Being in Space versus what might be called "numerical location" (Ordinal or Cardinal) or Doing in Time. Because this Principle is explained in numerous other places where appropriate, I will not provide an extensive description here.

Conclusion to Chapter II-4 on the Michaelian Teachings

There are many other septenaries found in the Michaelian teachings, but the ones discussed above — namely Planes, Cultures, Worldviews, Life-Stages, and Centers — are the ones that are most relevant to this *Cosmogony* book. Therefore, as part the conclusion to this chapter on the Michaelian teachings, and for your convenience, in the following table I provide the Attributes of the Natural Sequence scheme, and the names of the various septenaries discussed in this chapter, as give by various Michaelian Teachings sources.

Table II-4c — MICHAELIAN TEACHINGS SEPTENARIES							
RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
DIALECTIC	–ORDINAL–			=NEUTRAL=	+CARDINAL+		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
PROCESS → ASPECT ↓	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
CENTER	+Endurance MOTION –Activity	+Sensibility EMOTION –Sentimental’ty	+Thought INTELLECT –Reason	+Intuition IMPULSE –Instinct	+Integration CONCEPT –Fantasy	+Empathy SYMPATHY –Sensitivity	+Vitality EXCITATION –Arousal
MICHAELIAN PLANE	PHYSICAL	ASTRAL	CAUSAL	AKASHIC	MENTAL	MESSIANIC	BUDDHIC
WITTMAYER PLANE	ETHERIC PHYSICAL	EMOTIONAL ASTRAL	MENTAL CAUSAL	AKASHIC	TRUTH	LOVE	ENERGY
YARBRO SOUL AGE (ISSUE)	+Experience INFANT (EXISTING) –Apathy	+Acculturation BABY (IDENTIFYING) –Subsumation	+Intention YOUNG (DEFINING) –Judgemental’n	+Cognizance MATURE (PERCEIVING) –Ratiocination	+Substantiat’n OLD (BEING) –Self-envelop.	+Cohesion ASTRAL (INTEGRATING) –Manipulation	+Consumation CAUSAL (UNIFYING) –Prescriptivation
WITTMAYER WORLDVIEW	+Preservation PRIMITIVISM –Security	+Propriety TRADITIONAL’ –Conformity	+Production MATERIALISM –Exploitation	+Consensus COLLECTIVISM –Ambiguity	+Wisdom HOLISM –Speculation	+Liberation TRANSPERSON’ –Catharsis	+Revolution MESSIANISM –Provocation
YARBRO LEVEL	+Purpose FIRST –Simplicity	+Stability SECOND –Balance	+Enterprise THIRD –Versatility	+Consolidation FOURTH –Achievement	+Expansion FIFTH –Adventure	+Harmony SIXTH –Connection	+Inculcation SEVENTH –Eclecticism
WITTMAYER ZONE	+Institution RESOLUTION –Regulation	+Affiliation IMMANENCE –Indoctrination	+Individuation SEPARATION –Alienation	+Consolidation EXPERIENCE –Achievement	+Philosophy UNIFICATION –Ideology	+Ascension TRANSCENDENC’ –Exaggeration	+Causation ACTIVATION –Agitation
ORIGINAL MILESTONES	BIRTH	INDIVIDUAT’N	DIFFERENTIAT.	MANIFESTAT’N	RECONCILIAT.	DYING	DEATH
WITTMAYER LIFE-STAGE	+Coordination INFANCY –Clumsiness	+Socialization CHILDHOOD –Codependence	+Independence YOUTH –Irresponsibility	+Authenticity MIDDLE AGE –Falseness	+Legacy SENIORITY –Self-indulgenc	+Gratitude ELDERHOOD –Regret	+Anticipation DYING –Disengagement

My comments on this table are as follows:

- RANK: The first row shows the rank order numbers of the various Canonical Septenaries tabulated here. The names (and numbers) in headers of rows and columns are described and explained in Part One, Chapter I-x, “Structure of the Natural Sequence”.
- ATTRIBUTES: The first five rows (Rank, Dialectic, Axial, Dimension, Direction) show the Attributes of the Process/Aspect System matrix. These are explained and described in Chapter Xx in Part X, “Attributes of the Natural Sequence”.
- PROCESS: The sixth row shows the names that I have given to the seven so-called “Processes” of the Process/Aspect System matrix.
- ASPECT: The names of five so-called “Aspects” of the Process/Aspect System matrix (Center, Plane, Soul Age/Worldview, Level/Zone, Milestone/Life-Stage) are shown in the first column.
- CENTER: The seven Centers shown in the seventh row are not a developmental sequence in the context of this table, as are those Aspects shown in the rows below it, but they do correlate with the Process/Aspect System matrix Attributes, and they are part of many academic developmental psychology models in terms of the so-called “dimensions” of personality, namely the sensorial-

behavioral dimension (“Action” in the Natural Sequence schema), the emotional-social dimension (“Inspiration” in the Process/Aspect System matrix), the mental-cognitive dimension (“Expression” in the Process/Aspect System matrix a), and experience in general (“Assimilation” in the Process/Aspect System matrix). It is most obvious in the Ordinal (first three) Life-Stages that the Ordinal Centers are being developed during the first third of life, but ideally the last four Centers get successively developed in the last two-thirds of a full lifespan. Centers are discussed at length in [Chapter Xx in Part X](#), “The Seven Centers”.

- The bottom nine rows tabulate developmental tracks that run on different time scales or schedules, all having to do with ‘growing up’ — increasing “maturity”. The longest time scale is Planes and the shortest time scale is Life-Stages. The timescales are septenarian cycles that are nested within each other per the Fractalicity Principle.
- MICHAELIAN PLANES: This row shows the names of the seven so-called “planes” of the Cosmos as given in the non-Yarbro contingent of the Michaelian teachings.
- SOUL AGE/WORLDVIEW: The so-called “Zones” and “Worldviews” of the Process/Aspect System matrix, named in the ninth and tenth rows of the table, are inborn personality traits. Worldview is primary and Zone is secondary; one may picture each of the seven Worldviews as containing all seven Zones as a subset in the GC/NB. (In the opinion and belief of some transpersonal psychologists, these are the stages of maturity of the “soul” or “essence” in the story arc of reincarnation. However, it is not necessary to believe in reincarnation as the explanation of Zone and Worldview; whatever their cause, left unexplained, one can still find the categories to be valid and useful.) They share the same Attributes as the Life-Stages. The general idea is this: as a person matures during a lifetime, ascending through the Life-Stages, they tend to rise to the stage of their Worldview/Zone and stop there. Thus, there is an inherent “ceiling” in the Worldview/Zone Aspect, beyond which one does not evolve in a lifetime. (This ceiling in some DevPsy models has been noted as an empirical fact by some DevPsy researchers.) Worldviews/Zones are discussed at length in Part Four of my book *The Process/Aspect System*. For convenience, the name of this ‘growing up’ time track is abbreviated to “Worldview”.
- YARBRO LEVEL: This row shows the ranks of the Levels and the names of the Poles of the Levels as given in Yarbro’s book *MMFM*. These alleged names for the Poles lack resonance with the alleged names of the Poles of other Overleaves in the same Process, and these alleged names of the Poles lack complementarity with the alleged names of the Poles of the Levels on the other side of the same Axial Dimension. This departure from the norm impelled me to devise my own names, which do have resonance and complementarity with the entirety of the Overleaf System:
- WITTMAYER ZONE: For the purpose of mainstreaming the Overleaf System outside of the Michaelian teachings communities, I have renamed Level to Zone, and given each Zone a name, not just a rank. This row shows my alleged names and Poles of the Zones.
- ORIGINAL MILESTONES: These are the names that I have chosen to give to the seven Milestones based on the descriptions in the first three Yarbro books, *MFM*, *MMFM*, and *MP*.
- WITTMAYER LIFE-STAGES: My purpose in coming up with my own names for Life-Stages and their Poles was to show the greatest amount of respect for, and do the least amount of violence to, the work of other Michael students, and also show respect for developmental psychology models discussed in [Part Five](#), as constrained by the theoretical framework embodied in the Process/Aspect System matrix, which I regard as canonical, based on the evidence and argument presented throughout this *Cosmogony* book.
- These three Aspects (Life-Stage, Level/Zone, Age/Worldview) of the Process/Aspect System matrix determine a person’s overall psychological maturity. Each person is usually at a different stage of each of the four Aspects. Each Aspect influences how each of the other Aspects manifests, such that it is difficult to sort out where exactly a person is “coming from” in general and in specific instances. This is one of the facts of life that makes “pigeon-holing” people so difficult when assessing their psychological maturity. One might hope that information in this Part of this *Cosmogony* book will assist the reader with the task of understanding and tolerating the lack of psychological maturity in oneself and others, and show the way to greater psychological maturity where that is a possibility. In

other words, this *Cosmogony* book need not be a mere academic exercise in understanding how the world works, even if that is its main function.





Chapter II-5

THE RA MATERIAL

The Ra Material, also known as the Law of One material, is another channeled body of information that has somewhat to say on the subjects of interest to my *Cosmogony* project. Here is an introduction to it, found on the website that hosts the material:

The Law of One material is a series of 106 conversations, called sessions, between Don Elkins, a professor of physics and UFO investigator, and Ra, speaking through Carla Rueckert. Ra states that it/they are a sixth-density social memory complex that formed on Venus about 2.6 billion years ago. Ra says that they are “humble messengers of the Law of One” and that they previously tried to spread this message in Egypt with mixed results.

The material was channeled by L/L Research (Carla Rueckert, Don Elkins, and Jim McCarty) between 1981 and 1984. It has been published in book form, and the books can be freely downloaded from L/L Research’s library or purchased from Amazon. The methodology that L/L Research used to contact Ra is described in detail in the introduction to the original Book I. [<https://www.lawofone.info/> — retrieved 08 June 2020]

The Ra Material is a rather structured teaching; it is not amorphous like many other spiritual teachings. That the Law of One is rather structured means to me that it is intellectual, as well as being spiritual. The three other modern structured spiritual teachings that I prefer are reviewed in the three previous chapters: Theosophical, Gurdjieffian, and Michaelian.

Notice that the person who questioned Ra was a professor of physics, which indicates to me that he had a scientific mind that was keen on understanding how the universe works. This penchant is very evident in the questions he asked Ra, and I believe it will be very obvious to you as you read this lengthy chapter, which is full of quotations from the Ra Material.

It so happens that many of the principles and elements of the Natural Sequence schema and the Process/Aspect System matrix, introduced in previous chapters, are present in the Ra Material. The following **half dozen** sections are a review and an elaboration of the factors presented in previous chapters, with a sprinkling of some new information.

The information from the Ra Material that concerns this *Cosmogony* book, is the correlation of the Natural Sequence with Ra’s teaching on “planes” and “bodies” and “rays” and “chakras” and colors. Caretakers of the referenced “Law of One” website have conveniently collected quotations on these and other subjects:

COSMOLOGY: ><https://www.lawofone.info/c/Cosmology><

LOGOS: ><https://www.lawofone.info/results.php?q=logos><

MATHEMATICS AND PHYSICS: >

DENSITIES: ><https://www.lawofone.info/c/Densities><

ENERGY CENTERS: ><https://www.lawofone.info/c/Energy%20Centers><

SCIENCE: ><https://www.lawofone.info/c/Science><

TIME/SPACE: ><https://www.lawofone.info/c/Time/Space><

Among the subjects is one on “energy centers”, which was Ra’s name for the chakras. One can also do a word search on a subject of interest, such as “seven”, and the results are conveniently displayed.

In the following quoted material, the session number and the Q&A exchange number, separated by a period, are shown in brackets after the quotation. As usual, I underline words and phrases in the quoted material that I believe are significant, and that I usually comment on in my remarks interspersed among the quoted material. Sometime I provide clarifying comments in [brackets] within the quoted material. Ra was

interviewed by a questioner, and those questions are shown in *italic sans serif* text. Ra's answers are shown in sans serif text.

Cosmology and Cosmogony

The following series of quotations have been extracted from a compilation found at this [website address](#):

We have been over this before in previous chapters, but, in my terminology in this book, "cosmology" refers to a study of the space-like structure of the Cosmos, and "cosmogony" refers to a study of its time-like structure, its creation and evolution. Ra has a lengthy description of these, and it so happens they are reminiscent of what we have already seen in Part One of this *Cosmogony* book. So ... consider the following to be a review of what was discussed at greater length there. The abstractions discussed here are ultimate, and you might need to study the following exposition if you are not accustomed to thinking abstractly. According to Ra, just as with Tao's Template ("Tao produced the One"), there is a logical sequence of abstract concepts leading from nothing to something to All creation:

Can you tell me of the earliest, first known thing in the creation?

The first known thing in the creation is infinity. The infinity is creation. [13.5]

This statement seems incomplete to me in light of what is said about cosmogony in Part One. Whereas Infinity can be compared and contrasted to Finitude, some deep thinkers propose a _____ that cannot be compared and contrasted with Infinity, I would interpret the first "thing in creation" as the Absolute "substance" from which all is generated via a cascade of distinctions. In other words, Infinity is not-nothing, and not-nothing is Something, the ultimate ontological primitive, even if that Something is Infinity *per se*. With Infinity there are simply no boundaries, internal or external. Infinity could also be equated with the "Tao" of Tao's Template. Infinity could also be equated with what theologians refer to as the "Transcendent". Infinity is inconceivable to our finite human minds.

From this ineffable Infinite substance, all is produced, all is generated, all emerges:

From this infinity then must have come what we experience as creation. What was the next step or the next evolvment?

Infinity became aware. This was the next step. [13.6]

The words "step" and "evolvment" imply structure, where the amorphous Infinite takes on form, a morphology.

This "awareness" might also seem ambiguous to the reader, but in light of what is said about cosmogony in Part One, I would interpret this "awareness" as pure awareness *per se*; that is, not yet awareness of self (an internal dichotomy) or of other self (an external dichotomy). In other words, it is a "non-dual" awareness. This type of awareness cannot be described but it can be experienced by mere humans. In fact, the experience of pure awareness is considered the ultimate stage of enlightenment, sometimes the culmination of meditation on non-duality in such practices as Advaita Vedanta.

After this, what happened?

Awareness led to the focus of infinity into infinite energy. You have called this by various vibrational sound complexes, the most common to your ears being "Logos" or "Love." The Creator is the focusing of infinity as an aware or conscious principle called by us as closely as we can create understanding/learning in your language, intelligent infinity. [13.7]

The word "focus" is consistent with the use of the words "awareness" and "consciousness"; this is a narrowing or concentration of the indefinite primordial substance upon qualities and quantities that are definite. To my way of thinking, this step perhaps corresponds to the emergence of Self-awareness from Awareness, as discussed in Part One. In this usage, I would say that "Love" has a subject/object dichotomy, in this case. All That Is becomes aware that it is All That Is; that it exists as something distinct from nothing, and that it would love to continue to exist. In theology and philosophy, the word "logos" often refers to that which has the property of making orderly or systematic distinctions in Awareness. That would seem to be the case with Ra's cosmogony:

Can you state the next step?

The next step is still at this space/time nexus in your illusion achieving its progression as you may see it in your illusion. The next step is an infinite reaction to the creative principle following the Law of One in one of its primal distortions, freedom of will. Thus many, many dimensions, infinite in number, are possible. The energy moves from the intelligent infinity due first to the outpouring of randomized creative force, this then creating

patterns which in holographic style appear as the entire creation no matter which direction or energy is explored. These patterns of energy begin then to regularize their own local, shall we say, rhythms and fields of energy, thus creating dimensions and universes. [13.9]

I understand this statement in terms of information theory, where it is said that there is a states of being that has no information: perfect chaos; this is appropriate when we refer to the ground of being as consciousness and awareness. In terms of number theory, chaos equates with infinity. I take the references to “freedom” and “randomized” as equivalent to chaos, having no structure of any kind. It is not nothing, it has substance, but it has no orderliness. That is one way of characterizing the ultimate substance, the primordial Awareness that has no characteristics. But then *voila!* It is not explained how or why “patterns” and “regularities” and “rhythms” emerge from chaos, but I would say that Awareness conceived that the opposite of chaos is Cosmos, aka order. My interpretation of the reference to “holographic” is that, scientifically speaking, this means that information is encoded in a dimensionality lower than what it appears to be. In terms of cosmogony, the illusory emerges, dimension by dimension, from an underlying reality; each stepped-down dimensionality is more illusory than the prior dimension; only the primordial Awareness is real. This idea is a common trope in esoteric cosmogonies.

Then can you tell me how [the] galaxy and this planetary system were formed?

You must imagine a great leap of thought in this query, for at the last query the physical, as you call, it, universes were not yet born.

The energies moved in increasingly intelligent patterns until the individualization of various energies emanating from the creative principle of intelligent infinity became such as to be co-Creators. Thus the so-called physical matter began. The concept of light is instrumental in grasping this great leap of thought as this vibrational distortion of infinity is the building block of that which is known as matter, the light being intelligent and full of energy, thus being the first distortion of intelligent infinity which was called [forth] by the creative principle.

This light of love was made to have in its occurrences of being certain characteristics, among them the infinite whole paradoxically described by the straight line, as you would call it. This paradox is responsible for the shape of the various physical illusion entities you call solar systems, galaxies, and planets, all revolving and tending towards the lenticular. [13.9]

In Part One, we saw that an infinite regress of self-reference appears to be the source of everything: the Cosmos is a magic show of “smoke and mirrors all the way down”, as I like to say. I believe that is what Ra refers to here with the words “co-Creators” and “paradoxically”. After the existence of substance that mysteriously becomes Self-aware, creation “emanates” therefrom; it bootstraps itself into “patterns” with “individualized” “characteristics”. If we consider “intelligent infinity” to be like a “point” in geometry, which has zero “dimensions”, then when it “moves”, the first creation is a “straight line”, which is one-dimensional.

I think I made an error in asking that question, getting ahead of the process that [you were] describing. Would it be helpful to fill in that great leap that I mistakenly made?

I attempted to bridge the gap. However, you may question me in any manner you deem appropriate. [13.10]

Could you tell me — taking the question previous to the one that I asked about galaxy and planets, would you tell me the next step that occurred after that step?

The steps, as you call them, are, at the point of question, simultaneous and infinite. [13.11]

Ra finally gets around to noting that it has been inappropriate for the questioner to refer to these as “steps” in the “evolution” of creation, because this cosmogony is not of time (and therefore “simultaneous”) and not of space (and therefore “infinite”). In other words, creation just is, but it is also complex at its foundation. Space/time and time/space emerge and emanate from this complex primordial substance.

Could you tell me how intelligent infinity became, shall we say (I’m having difficulty with some of the language), how intelligent infinity became individualized from itself?

This is an appropriate question.

The intelligent infinity discerned a concept. This concept was discerned due to freedom of will of awareness. This concept was finitude. This was the first and primal paradox or distortion of the Law of One. Thus the one intelligent infinity invested itself in an exploration of many-ness. Due to the infinite possibilities of intelligent infinity there is no ending to many-ness. The exploration, thus, is free to continue infinitely in an eternal present. [13.12]

So, the Infinite Awareness with “freedom of will”, aka random chaos, having contradiction to itself being one of the latent possibilities, somehow actualized the idea of finite order, first embodied in the Oneness, which

then diversified into many-ness in a paroxysm of paradoxical infinite regress of Self-reference. This is inexplicable, but we have traced this “mental breakdown” in the “mind” of God previously in this *Cosmogony* book. So, Self divides into Self and not-Self (one-ness from zero-ness; something from nothing) as stated previously, and then into Self and other-self, and then other selves, aka “many-ness”. These other selves are actually other Selves, aka co-Creators, as we see in the following:

Was the galaxy that we are in created by the infinite intelligence or was it created by a portion of the individualized infinite intelligence?

The galaxy and all other things of material of which you are aware are products of individualized portions of intelligent infinity. As each exploration began, it, in turn, found its focus and became co-Creator. Using intelligent infinity each portion created a universe and allowing the rhythms of free choice to flow, playing with the infinite spectrum of possibilities, each individualized portion channeled the love/light into what you might call intelligent energy, thus creating the so-called natural laws of any particular universe.

Each universe, in turn, individualized to a focus becoming, in turn, co-Creator and allowing further diversity, thus creating further intelligent energies regularizing or causing natural laws to appear in the vibrational patterns of what you would call a solar system. Thus, each solar system has its own, shall we say, local coordinate system of illusory natural laws. It shall be understood that any portion, no matter how small, of any density or illusory pattern contains, as in an holographic picture, the One Creator which is infinity. Thus all begins and ends in mystery. [13.13]

Let’s focus on the word “focus” here, as an appropriate word for one of the ways that cosmogony is explained in various esoteric sources. Namely, awareness or consciousness narrows and concentrates its focus. By that I mean, it takes a point of view. In other words, it forgets that it is All That Is, and views Itself *as if* it were not Itself. The phrase, *as if*, is suitable for a holographic illusion. Once Awareness spontaneously gets the idea of no-ness in its head (no Self and then not Self; see above), as distinct from the idea of yes-ness (cannot have the one without the other), there is no stopping the cascade of infinite regress of symmetry breaks in the dance of chaos and Cosmos, creation and destruction, free will and determinism, infinity and finity, potentiality and actuality.

Could you tell me how the individualized portion of intelligent infinity created our galaxy [inaudible] that the same portion created our planetary system and, if so, how this came about?

We may have misperceived your query. We were under the distortion/impression that we had responded to this particular query. Would you restate the query? [13.14]

Primarily, then, how the, shall we say, the planetary system that we are in now evolved— was it all created at once or was there first our sun created and this [inaudible] was created.

The process is from the [so-called] larger, in your illusion, to the [so-called] smaller. Thus the co-Creator, individualizing the galaxy, created energy patterns which then focused in multitudinous focuses of further conscious awareness of intelligent infinity. Thus, the solar system of which you experience inhabitation is of its own patterns, rhythms, and so-called natural laws which are unique to itself. However, the progression is from the galaxy spiraling energy to the solar spiraling energy, to the planetary spiraling energy, to the experiential circumstances of spiraling energy which begin the first density of awareness or consciousness of planetary entities. [13.15]

That answer is a summary of the cascade of what seems like the fragmentation of All That Is down to the level of living beings as co-Creators, as pieces of the Divine, with scaled-down properties of All That Is.

Well, in yesterday’s material you stated “we offer the Law of One, the solving of paradoxes.” You also mentioned earlier that the first paradox, or the first distortion I meant, was the distortion of free will. Could you tell me if there’s a sequence? Is there a first, second, third, fourth distortion of the Law of One?

Only up to a very short point. After this point, the many-ness of distortions are equal one to another. The first distortion, free will, finds focus. This is the second distortion known to you as Logos, the Creative Principle or Love. This intelligent energy thus creates a distortion known as Light. From these three distortions come many, many hierarchies of distortions, each having its own paradoxes to be synthesized, no one being more important than another. [15.21]

This is another answer that provides a synthesis of Ra’s cosmogony. The three co-equal distortions are a trinity of characteristics within All That Is, namely [1] Chaos, [2] Logos/Love, and [3] Light. I correlate the concept of Light with Threeness, and the new idea embodied therein is the production of a holarchy, which is a different idea from Oneness and Twoness. This co-equal trinity of concepts (Oneness, Twoness, Threeness)

generates a spectrum of holarchies, which I correlate with Sevenness. Thus, I see this trinity as a way of Oneness, Twoness, and Threeness embodying Sevenness; this is the Natural Sequence.

You also said that you offered the Law of One, which is the balancing of love/light and light/love. Is there any difference between love/light and light/love?

This will be the final question of this time/space. There is the same difference between love/light and light/love as there is between teach/learning and learn/teaching. Love/light is the enabler, the power, the energy giver. Light/love is the manifestation which occurs when light has been impressed with love. [15.22]

One point to be emphasized here is what I refer to as the Taijitu Tango Principle, discussed at length in Part One: at the foundation of existence is found paired opposites (“conjugate variables” in physics), where Two joined phenomena must add up to One. (Refer to >https://en.wikipedia.org/wiki/Conjugate_variables<.)

Thank you very much. In previous material, before we communicated with you, it was stated by the Confederation that there is actually no past or future... all is present. Would this be a good analogy?

There is past, present, and future in third density. In an overview such as an entity [human] may have, removed from the space/time continuum, it may be seen that in the cycle of completion there exists only the present. We, ourselves, seek to learn this understanding. At the seventh level or dimension, we shall, if our humble efforts are sufficient, become one with all, thus having no memory, no identity, no past or future, but existing in the all. [16.22]

Space/Time and Time/space are conjugate variables, and it is difficult for us, and even for Ra, to conceive of existence outside of that framework. However, these contraries are a product of the primordial trinity of concepts.

Does this mean that you would have awareness of all that is?

This is partially correct. It is our understanding that it would not be our awareness, but simply awareness of the Creator. In the Creator is all that there is [potentially and actually]. Therefore, this knowledge would be available. [16.23]

This statement hearkens back to the previous discussion of primordial Awareness which is pure Awareness, which is not differentiated into Self-awareness and Other-awareness.

All right. Continuing with what we were just talking about, namely densities: I understand then that each density has seven sub-densities which again have seven sub-densities which again have seven sub-densities. This expands at an extremely large rate as things are increased in powers of seven. Does this mean that in any density level anything that you can think of is happening? And many things that you never thought of are happening... are there... everything is happening... this is confusing...

From your confusion we select the concept with which you struggle, that being infinite opportunity. You may consider any possibility/probability complex as having an existence [albeit latent or potential]. [16.53]

Few people even know about the abstract principles underlying the Cosmos, let alone understand them, so when presented with them, there is confusion. One really must think deeply about what is said here if one is to understand how one logically and mathematically and algorithmically gets from Oneness-Twoness-Threeness to Sevenness. That is what I have done in Part One, and recapitulated here in this chapter. Quantum theory would seem to agree with the idea of coming into actuality out of an infinite sea of potentiality via the co-Creative interaction called “observation”.

This seems to be a carefully planned or engineered stage of development. Can you tell me anything of the origin of this plan for the development?

We go back to previous information. Consider and remember the discussion of the Logos. With the primal distortion of free will, each galaxy developed its own Logos. This Logos has complete free will in determining the paths of intelligent energy which promote the lessons of each of the densities given the conditions of the planetary spheres and the sun bodies. [19.12]

Refer to the section “Logos” in this chapter. Basically and briefly, Logos is a word from Greek philosophy referring to the orderly aspect of the existence and function of the universe. Perhaps it could be called the ‘mind’ of the ‘body’ of the universe. Some scientists speculate about the existence of multiple universes (the “multiverse”). One of their claims is that each universe would have its own laws of physics. The reader may pursue the ramifications of that notion here: ><https://en.wikipedia.org/wiki/Multiverse><. Be that as it may, so far as we can tell from instruments that measure emanations from the Milky Way and other galaxies in the Cosmos, the basic laws of physics appear to be the same in all of them. Therefore, if what Ra says is true, then “free will” does not extend down to the laws of physics, which appear to be universal. Rather, free will must

come into effect late in the development of the Logos of each galaxy, perhaps with the emergence of life, or with the emergence of self-awareness in the living organism.

Well, this would seem then that there is a relationship then between what we perceive as physical phenomena, say the electrical phenomena, and the phenomena of consciousness, and that they, having stemmed from the One Creator, are practically identical but have slightly different actions as we [tape ends.] [Is this correct?]

Again we oversimplify to answer your query. The physical complex alone is created of many, many energy or electromagnetic fields interacting due to intelligent energy; the mental configurations or distortions of each complex further adding fields of electromagnetic energy and distorting the physical complex patterns of energy; the spiritual aspect serving as a further complexity of fields which is of itself perfect but which can be realized in many distorted and unintegrated ways by the mind and body complexes of energy fields. Thus, instead of one, shall we say, magnet with one polarity you have in the body/mind/spirit complex one basic polarity expressed in what you would call violet-ray energy, the sum of the energy fields, but which is affected by thoughts of all kinds generated by the mind complex, by distortions of the body complex, and by the numerous relationships between the microcosm which is the entity and the macrocosm in many forms which you may represent by viewing the stars, as you call them, each with a contributing energy ray which enters the electromagnetic web of the entity due to its individual distortions. [19.20]

According to that passage, everything in the Cosmos affects everything else in the Cosmos, from beginning to end, from top to bottom, from inside to outside, from smallest to largest, from slowest to fastest. In quantum physics, this is known as entanglement and superposition. In relativistic cosmology, it is the 'fabric' of the electromagnetic and gravitational fields that stretch and shrink, pulling and pushing everything around. What is not generally recognized in scientific beliefs is that there are 'mental' and 'spiritual' fields as well as 'physical' fields. What Ra refers to as "intelligent energy" is the monad that underlies the triad of physical and mental and spiritual realms.

Would you define the word intelligent in the concept of intelligent infinity?

We shall address the entire spectrum of this question before defining as requested. Your language, using vibrational sound complexes, can be at best an approximation of that which is closer to an understanding, if you will, of the nature of conscious thought. Perceptions are not the same as sound vibration complexes and the attempt to define will therefore be a frustrating one for you, although we are happy to aid you within the limits of your sound vibration complexes. To define intelligent apart from infinity is difficult, for these two vibration complexes equal one concept. It is much like attempting to divide your sound vibration concept, faith, into two parts. We shall attempt to aid you however. [27.4]

Could you please now define intelligent infinity?

There is unity. This unity is all that there is. This unity has a potential and kinetic. The potential is intelligent infinity. Tapping this potential will yield work. This work has been called by us, intelligent energy. The nature of this work is dependent upon the particular distortion of free will which in turn is the nature of a particular intelligent energy or kinetic focus of the potential of unity or that which is all. [27.5]

I'd like to expand a little on the concept of work. In Newtonian physics [the] concept of work is what we call a force which moves through space, it's the product of force and distance as we measure it. I'm assuming that the work of which you speak is a much broader term including possibly work in consciousness. Am I correct?

As we use this term it is universal in application. Intelligent infinity has a rhythm or flow as of a giant heart beginning with the central sun as you would think or conceive of this, the presence of the flow inevitable as a tide of beingness without polarity, without finity; the vast and silent all beating outward, outward, focusing outward and inward until the focuses are complete. The intelligence or consciousness of foci have reached a state where their, shall we say, spiritual nature or mass calls them inward, inward, inward until all is coalesced. This is the rhythm of reality as you spoke. [27.6]

Now I think I have extracted an important point from this in that in intelligent infinity we have work without polarity, or a potential difference does not have to exist. Is this correct?

There is no difference, potential or kinetic, in unity. The basic rhythms of intelligent infinity are totally without distortion of any kind. The rhythms are clothed in mystery, for they are being itself. From this undistorted unity, however, appears a potential in relation to intelligent energy. In this way you may observe the term to be

somewhat two-sided, one use of the term, that being as the undistorted unity, being without any kinetic or potential side. The other application of this term, which we use undifferentiatedly for lack of other term in the sense of the vast potential tapped into by foci or focuses of energy, we call intelligent energy. [27.7]

Now, I understand that the first distortion of intelligent infinity is the distortion of what we call free will. Can you give me a definition of this distortion?

In this [free will] distortion of the Law of One it is recognized that the Creator will know Itself. [27.8]

What was purely Awareness only as Beingness *per se* became Self-aware.

Then am I correct then in assuming that the Creator will know Itself the Creator, then grants for this knowing the concept of freedom — total freedom of choice in the ways of knowing? Am I correct?

This is quite correct. [27.9]

This then being the first distortion of the Law of One, which I [am] assuming is the Law of Intelligent Infinity, from all other — correction, all other distortions which are the total experience of the creation spring from this. Is this correct?

This is both correct and incorrect. In your illusion all experience springs from the Law of Free Will or the Way of Confusion. In another sense, which we are learning, the experiences are this distortion. [27.10]

I will have to think about that and ask questions on it in the next session, so I will go on to what you have given me as the second distortion which is the distortion of love. Is this correct?

This is correct. [27.11]

I would like for you to define love in the sense — in its sense as the second distortion.

This must be defined against the background of intelligent infinity or unity or the One Creator with the primal distortion of free will. The term Love then may be seen as the focus, the choice of attack, the type of energy of an extremely, shall we say, high order which causes intelligent energy to be formed from the potential of intelligent infinity in just such and such a way. This then may be seen to be an object [teleological goal?] rather than an activity by some of your peoples, and the principle of this extremely strong energy focus being worshiped as the Creator instead of unity or oneness from which all Loves emanate. [27.12]

Is Love — is there a manifestation of love that we could call vibration?

Again we reach semantic difficulties. The vibration or density of love or understanding is not a term used in the same sense as the second distortion, Love; the distortion Love being the great activator and primal co-Creator of various creations using intelligent infinity; the vibration love being that density in which those who have learned to do an activity called “loving” without significant distortion, then seek the ways of light or wisdom. Thus in vibratory sense love comes into light in the sense of the activity of unity in its free will. Love uses light and has the power to direct light in its distortions. Thus vibratory complexes recapitulate in reverse the creation in its unity, thus showing the rhythm or flow of the great heartbeat, if you will use this analogy. [27.13]

Then I will expand a bit more on this concept. We have the infinite vibration of Love which can occur, I am assuming, at varying frequencies, if this has a meaning in this; I would assume that it begins at one basic frequency. Does this have any meaning? Am I making sense? Is this correct?

Each Love, as you term the prime movers, comes from one frequency, if you wish to use this term. This frequency is unity. We would perhaps liken it rather to a strength than a frequency, this strength being infinite, the finite qualities being chosen by the particular nature of this primal movement. [27.15]

This light that occurred as a consequence of vibration which is a consequence of Love. I am going to ask if that statement is right. Is that correct?

This statement is correct. [28.3]

I am wondering, what is the catalyst or the activator of the rotation? What causes the rotation so that the light condenses into our physical or chemical elements?

It is necessary to consider the enabling function of the focus known as Love. This energy is of an ordering nature. It orders in a cumulative way from greater to lesser so that when its universe, as you may call it, is complete, the manner of development of each detail is inherent in the living light and thus will develop in such and such a way; your own universe having been well-studied in an empirical fashion by those you call your scientists and having been understood or visualized, shall we say, with greater accuracy by the understandings or visualizations of the one known as Dewey. [28.5]

When does individualization or the individualized portion of consciousness come into play? How does this individualization occur and at what point does individualized consciousness take over in working on the basic light?

You remain carefully in the area of creation itself. In this process we must further confuse you by stating that the process by which free will acts upon potential intelligent infinity to become focused intelligent energy takes place without the space/time of which you are so aware as it is your continuum experience. The experience or existence of space/time comes into being after the individuation process of Logos or Love has been completed and the physical universe, as you would call it, has coalesced or begun to draw inward while moving outward to the extent that that which you call your sun bodies have in their turn created timeless chaos coalescing into what you call planets, these vortices of intelligent energy spending a large amount of what you would call first density in a timeless state, the space/time realization being one of the learn/teachings of this density of beingness. Thus we have difficulty answering your questions with regard to time and space and their relationship to the, what you would call, original creation which is not a part of space/time as you can understand it. [28.6]

Thank you. Does a unit of consciousness, an individualized unit of consciousness, create, say, a unit of the creation? I will give an example. Would one individualized consciousness create one galaxy of stars, the type that has many millions of stars in it. Does this happen?

This can happen. The possibilities are infinite. Thus a Logos may create what you call a star system or it may be the Logos creating billions of star systems. This is the cause of the confusion in the term galaxy, for there are many different Logos entities or creations and we would call each, using your sound vibration complexes, a galaxy. [28.7]

Are you saying then there are an infinite number of octaves of densities one through eight?

We wish to establish that we are truly humble messengers of the Law of One. We can speak to you of our experiences and our understandings and teach/learn in limited ways. However, we cannot speak in firm knowledge of all the creations. We know only that they are infinite. We assume an infinite number of octaves. However, it has been impressed upon us by our own teachers that there is a mystery-clad unity of creation in which all consciousness periodically coalesces and again begins. Thus we can only say we assume an infinite progression though we understand it to be cyclical in nature and, as we have said, clad in mystery. [28.16]

When this major galaxy is formed by the Logos, polarity then exists in a sense that we have electrical polarity, a gravitational effect that probably isn't polarity, I'm... I'll have to ask that question... We do have electrical polarity existing at that time. Is this correct?

I accept this as correct with the stipulation that what you term electrical be understood as not only the one, Larson, stipulated its meaning but also in what you would call the metaphysical sense. [28.18]

Are you saying then that we not only have a polarity of electrical charge but also a polarity in consciousness at that time?

This is correct. All is potentially available from the beginning of your physical space/time; it then being the function of consciousness complexes to begin to use the physical materials to gain experience to then polarize in a metaphysical sense. The potentials for this are not created by the experienter but by intelligent energy. [28.19]

I am assuming that the process of creation, then, after the original creation of the major galaxy, is continued by the further individualization of consciousness of the Logos so that there are many, many portions of individualized consciousness then creating further items, you might say, for experience all over the galaxy. Is this correct?

This is correct, for within the, shall we say, guidelines or ways of the Logos, the sub-Logos may find various means of differentiating experiences without removing or adding to these ways. [28.20]

Are there any sub-sub-Logos that are found in our planetary system that are Logos that are “sub” to our sun?

This is correct. [29.6]

Would you tell me what one of those — Would you give me an example of one of those... I'll call sub-sub-Logos?

One example is your mind/body/spirit complex. [29.7]

Then every entity that exists would be some type of sub- or sub-sub-Logos. Is this correct?

This is correct down to the limits of any observation, for the entire creation is alive. [29.8]

As the Love creates the vibration — I will make this statement, first. Let me say, I believe that Love creates the vibration in space/time in order to form the photon. Is this correct?

This is essentially correct. [29.12]

I am going to make a statement and then let you correct it if I have made any errors. This is the statement: Creation is a single entity or unity. If only a single entity exists, then the only concept of service is service to self. If this single entity subdivides, then the concept of service of one of its parts to the other part is born. From this concept springs the equality of service to self or to others. It would seem that as the Logos subdivided, parts would select each orientation. As individualized entities emerge in space/time then I would assume that they have polarity. Is this statement correct?

This statement is quite perceptive and correct until the final phrase in which we note that the polarities begin to be explored only at the point when a third-density entity becomes aware of the possibility of choice between the concept or distortion of service to self or service to others. This marks the end of what you may call the unselfconscious or innocent phase of conscious awareness. [30.1]

Does each entity have an individual mind/body/spirit complex totality or do a number of entities share the same mind/body/spirit complex totality?

Both of these statements are correct given the appropriate time/space conditions. Each entity has its totality and at the point at which a planetary entity becomes a social memory complex the totality of this union of entities also has its Oversoul and its social memory complex totality as resource. As always, the sum, spiritually speaking, is greater than the sum of its parts so that the Oversoul of a social memory complex is not the sum of the Oversouls of its member entities but operates upon the way of what we have called squares and what we grasp you prefer to call doubling. [37.7]

Thank you. Can you tell me — can you interpret a transmission from “The Nine,” where they say “CH is a principle which is the revealing principle of knowledge and law?” Can you tell me what that principle is?

The principle so veiled in that statement is but the simple principle of the constant or Creator and the transient or the incarnate being and the yearning existing between the two, one for the other, in love and light amidst the distortions of free will acting upon the illusion-bound entity. [39.6]

I thought that I would make a statement and let you correct it. I'm trying to make a simple model of the portion of the universe that we find ourselves in. Starting with the Logos, or sub-Logos, our sun, we have white light emanating from this. This is made up of frequencies ranging from the red to the violet. I am assuming that this white light then contains the experiences through all of the densities and as we go into the eighth density we go into a black hole which emerges on the other side as another Logos or sun and starts another octave of experience. Can you comment on this part of my statement?

We can comment upon this statement to an extent. The concept of the white light of the sub-Logos being prismatically separated and later, at the final chapter, being absorbed again is basically correct. However, there are subtleties involved which are more than semantic. The white light which emanates and forms the articulated sub-Logos has its beginning in what may be metaphysically seen as darkness. The light comes into that darkness and transfigures it, causing the chaos to organize and become reflective or radiant. Thus the dimensions come into being. Conversely, the blackness of the black hole, metaphysically speaking, is a concentration of white light being systematically absorbed once again into the One Creator. Finally, this absorption into the One Creator continues until all the infinity of creations have attained sufficient spiritual mass in order that all form once again the great central sun, if you would so imagine it, of the intelligent infinity

awaiting potentiation by free will. Thus the transition of the octave is a process which may be seen to enter into timelessness of unimaginable nature. To attempt to measure it by your time measures would be useless. Therefore, the concept of moving through the black hole of the ultimate spiritual gravity well and coming immediately into the next octave misses the subconcept or corollary of the portion of this process which is timeless. [40.1]

Then what is the simplest being that is manifested? I am supposing it might be a single cell or something like that. And how does it function with respect to energy centers?

The simplest manifest being is light or what you have called the photon. In relationship to energy centers it may be seen to be the center or foundation of all articulated energy fields. [41.9]

Immediately after the death of the physical body, you have stated that the, I believe I'm correct in saying that, primary activated body is the indigo, and you stated that it is the form-maker. Why is this so? Can you answer that?

The indigo body may be seen to be an analog for intelligent energy. It is, in microcosm, the Logos. The intelligent energy of the mind/body/spirit complex totality draws its existence from intelligent infinity or the Creator. This Creator is to be understood, both in macrocosm and microcosm, to have, as we have said, two natures: the unpotentiated infinity which is intelligent; this is all that there is. Free will has potentiated, both the Creator of us all and our selves as co-Creators with intelligent infinity which has will. This will may be drawn upon by the indigo or form-making body and its wisdom used to then choose the appropriate locus and type of experience which this co-Creator or sub-sub-Logos you call so carelessly a person will take. [51.10]

Thank you. I would like to trace the energy that I assume comes from the Logos. I'm going to make a statement and let you correct me on the statement and expand on my concept. From the Logos comes all frequencies of radiation of light. These frequencies of radiation make up all of the densities of experience that are created by that Logos. I am assuming that the planetary system of our sun, in all of its densities, is the total of the experience created by our sun as a Logos. Is this correct?

This is correct. [54.4]

Now, I have made these statements just to get to the basic question I wish to ask. It is a difficult question to ask. We have, coming from the sub-Logos we call our sun, intelligent energy, which then forms, and we'll take as an example a single sub-sub-logos which is a mind/body/spirit complex. This intelligent energy is somehow modulated or distorted, so that it ends up as a mind/body/spirit complex with certain distortions of personality that it is necessary for the mind/body/spirit complex or the mental portion of that complex to undistort in order to conform once more precisely with the original intelligent energy. First, I want to know if my statement on that is correct, and, secondly, I want to know why this is the way that it is; if there is any answer other than the first distortion of the Law of One for this?

This statement is substantially correct. If you will penetrate the nature of the first distortion in its application of self knowing self, you may begin to distinguish the hallmark of an Infinite Creator, variety. Were there no potentials for misunderstanding and, therefore, understanding, there would be no experience. [54.7]

Then I will assume that the Creator in Its intelligent appraisal of a way of knowing Itself, created the concept of the seven areas of knowing. Is this correct?

This is partially incorrect. The Logos creates light. The nature of this light thus creates the nature of the catalytic and energetic levels of experience in the creation. Thus it is that the highest of all honor/duties, that given to those of the next octave, is the supervision of light in its manifestations during the experiential times, if you will, of your cycles. [54.10]

Then we deal with an entity that has not yet formed a social memory but is yet an entity just as one of us can be called a single entity. Can we continue this observation of the, shall I say, conglomerate entity through the galactic entity, or shall I say, small planetary system type of — Let me try to phrase it this way. Could I look at a single sun in its planetary system as an entity and then look at a major galaxy with its billions of stars as an entity? Can I continue this extrapolation in this way?

You can but not within the framework of third-density space/time. Let us attempt to speak upon this interesting subject. In your space/time you and your peoples are the parents of that which is in the womb. The Earth, as you call it, is ready to be born and the delivery is not going smoothly. When this entity has become born it will be instinct with the social memory complex of its parents which have become fourth-density positive. In this density there is a broader view. You may begin to see your relationship to the Logos or sun with which you are

most intimately associated. This is not the relationship of parent to child but of Creator, that is Logos, to Creator that is the mind/body/spirit complex, as Logos. When this realization occurs you may then widen the field of “eyeshot,” if you will, infinitely recognizing parts of the Logos throughout the one infinite creation and feeling, with the roots of Mind informing the intuition, the parents aiding their planets in evolution in reaches vast and unknown in the creation, for this process occurs many, many times in the evolution of the creation as a whole. [65.17]

Well, this would tell me that roughly 3% of all stars have inhabited planets, which would just give a, shall I say, mind-boggling idea of the number of entities which... I assume then this process of evolution is in use throughout the known universe. Is this correct?

This octave of infinite knowledge of the One Creator is as it is throughout the One Infinite Creation, with variations programmed by sub-Logoi of what you call major galaxies and minor galaxies. These variations are not significant but may be compared to various regions of geographical location sporting various ways of pronouncing the same sound vibration complex or concept. [71.11]

Then it seems to me from this that the sub-Logos such as our sun uses free will to modify only slightly a much more general idea of created evolution so that the general plan of created evolution, which seems then to be uniform throughout the One Infinite Creation, is for this process of the sub-Logoi to grow through the densities and, under the first distortion, find their way back to the original thought. Is this correct?

This is correct. [71.12]

Then each entity is on a path that leads to the one destination. This is like many, many roads which travel through many, many places but eventually merge into one large center. Is this correct?

This is correct but somewhat wanting in depth of description. More applicable would be the thought that each entity contains within it all of the densities and sub-densities of the octave so that in each entity, no matter whither its choices lead it, its great internal blueprint is one with all others. Thusly its experiences will fall into the patterns of the journey back to the original Logos. This is done through free will but the materials from which choices can be made are one blueprint. [71.13]

Then the first experiences, as you say, were in monochrome. Now, was the concept of the seven densities of vibration with the evolutionary process taking place in the discrete densities— was that carried through from the previous octave?

To the limits of our knowledge, which are narrow, the ways of the octave are without time; that is, there are seven densities in each creation infinitely. [78.15]

You stated previously that The Choice that is made in this density, third density, is the axis upon which the creation turns. Could you expand on your reason for making that statement?

This is a statement of the nature of creation as we speak to you. [78.21]

I did not understand that. Could you say that in a different way?

As you have noted, the creation of which your Logos is a part is a protean entity which grows and learns upon a macrocosmic scale. The Logos is not a part of time. All that is learned from experience in an octave is, therefore, the harvest of that Logos and is further the nature of that Logos. The original Logos’s experience was, viewed in space/time, small; Its experience now, more. Therefore we say, as we now speak to you at this space/time, the nature of creation is as we have described. This does not deny the process by which this nature has been achieved but merely ratifies the product. [78.22]

This is a hard question just to ask, but what is the function or what is the value experientially of the formation of positive and negative social memory complexes, of the separation of the polarities at that point rather than the allowing for the mixing of mind/body/spirit complexes of opposite polarity at the higher densities?

The purpose of polarity is to develop the potential to do work. This is the great characteristic of those, shall we say, experiments which have evolved since the concept of The Choice was appreciated. Work is done far more efficiently and with greater purity, intensity, and variety by the voluntary searching of mind/body/spirit complexes for the lessons of third and fourth densities. The action of fifth density is, viewed in space/time, the

same with or without polarity. However, viewed in time/space, the experiences of wisdom are greatly enlarged and deepened due, again, to the voluntary nature of polarized mind/body/spirit action. [78.24]

OK. Now, was then this simple experiment carried out and the product of this experiment observed before greater complexity was attempted?

As we have said there have been a great number of successive experiments. [79.26]

I was just wondering since this seems to be the crux of the experiment — this seems to be the large breaking point between no extension of the first distortion and the extension of the first distortion— what the result of this original experiment was with respect to that which was created from it. What was the result of that?

This is previously covered material. The result of these experiments has been a more vivid, varied, and intense experience of Creator by Creator. [29.27]

Well, I was aware of that. I probably didn't state the question correctly. It's a very difficult question to state. I don't know if it's worth attempting to continue with but what I meant was when this very first experiment with the veiling process occurred, did it result in service-to-self polarization with the first experiment?

The early, if we may use this term, Logoi produced service-to-self and service-to-others mind/body/spirit complexes immediately. The harvestability of these entities was not so immediate and thus refinements of the archetypes began apace. [79.28]

Well, we presently find ourselves in the Milky Way Galaxy of some 200 or so million— correction, 200 or so billion— stars and there are millions and millions of these large galaxies spread out through what we call space. To Ra's knowledge, I assume, the number of these galaxies is infinite? Is this correct?

This is precisely correct and is a significant point. [81.19]

The point being that we have unity. Is that correct?

You are perceptive. [81.20]

From this I will assume that at the beginning of the octave we had the core, with many galactic spirals forming, and I know this is incorrect in the sense of timelessness, but as the spiral formed then I am assuming that in this particular octave the experiment then must have started somewhat, roughly, simultaneously in many, many of the budding or building galactic systems by the experiment of the veiling in extending the free will. Am I in any way correct with this assumption?

You are precisely correct. [81.32]

Actually, [I] don't have much more on this except to make the assumption that there must have been some type of communication throughout the octave so that, when the first experiment became effective, the knowledge of this then spread rapidly through the octave and was picked up by other budding galactic spirals, you might say. Is this correct?

This is correct. To be aware of the nature of this communication is to be aware of the nature of the Logos. Much of what you call creation has never separated from the one Logos of this octave and resides within the One Infinite Creator. Communication in such an environment is the communication of cells of the body. That which is learned by one is known to all. The sub-Logoi, then, have been in the position of refining the discoveries of what might be called the earlier sub-Logoi. [81.33]

I would like to consider the condition at a time or position you might say, if time is a bad word, just prior to the beginning of this octave of experience. I am assuming that, just prior to the beginning of this octave, intelligent infinity had created and already experienced one or more previous octaves. Is this correct?

You assume correctly. However, the phrase would more informatively read, infinite intelligence had experienced previous octaves. [82.4]

Does Ra have any knowledge of the number of previous octaves; and if so, how many?

As far as we are aware we are in an infinite creation. There is no counting. [82.5]

Why does this partaking in the original thought have a gradient radially outward? That's the way I understand your statement.

This is the plan of the One Infinite Creator. The One Original Thought is the harvest of all previous, if you would use this term, experience of the Creator by the Creator. As It decides to know Itself It generates Itself into that plenum, full of the glory and the power of the One Infinite Creator which is manifested to your perceptions as space or outer space. Each generation of this knowing begets a knowing which has the capacity, through free will, to choose methods of knowing Itself. Therefore, gradually, step by step, the Creator becomes that which may know Itself, and the portions of the Creator partake less purely in the power of the original word or thought. This is for the purpose of refinement of the one original thought. The Creator does not properly create as much as It experiences Itself. [82.10]

What was the form, condition, or experience of the first division of consciousness that occurred at the beginning of this octave at the beginning of this galactic experience?

We touch upon previous material. The harvest of the previous octave was the Creator of Love manifested in mind, body, and spirit. This form of the Creator experiencing Itself may perhaps be seen to be the first division. [82.11]

I was interested in specifically how this very first division showed up in this octave. I was interested to know if it made the transition through first, second, third, fourth, fifth, etc., densities? I would like to take the first mind/body/spirit complexes and trace their experience from the very start to the present so that I would better understand the condition that we are in now by comparing it with this original growth. Could you please tell me precisely how this came about as to the formation, possibly, of the planets and the growth through the densities, if that is the way it happened, please?

Your queries seem more confused than your basic mental distortions in this area. Let us speak in general and perhaps you may find a less confused and more simple method of eliciting information in this area. A very great deal of creation was manifested without the use of the concepts involved in consciousness, as you know it. The creation itself is a form of consciousness which is unified, the Logos being the one great heart of creation. The process of evolution through this period, which may be seen to be timeless, is most valuable to take into consideration, for it is against the background of this essential unity of the fabric of creation that we find the ultimate development of the Logoi which chose to use that portion of the harvested consciousness of the Creator to move forward with the process of knowledge of self. As it had been found to be efficient to use the various densities, which are fixed in each octave, in order to create conditions in which self-conscious sub-Logoi could exist, this was carried out throughout the growing flower-strewn field, as your simile suggests, of the one infinite creation. The first beings of mind, body, and spirit were not complex. The experience of mind/body/spirits at the beginning of this octave of experience was singular. There was no third-density forgetting. There was no veil. The lessons of third density are predestined by the very nature of the vibratory rates experienced during this particular density and by the nature of the quantum jump to the vibratory experiences of fourth density. [82.12]

Now my line of questioning I am trying to link to the creation of various Logos and their original use of a system of archetypes in their creation and I apologize for possibly a lack of efficiency in doing this, but I find this somewhat difficult. Now, for this particular Logos in the beginning, prior to its creation of first density, did the archetypical system which it had chosen for its creations include the forms that would evolve, and in particular third density human form, or was this related to the archetypical concept at all?

The choice of form is prior to the formation of the archetypical mind. As the Logos creates Its plan for evolution, then the chosen form is invested. [90.11]

Then did our Logos hope to see generated a positive and negative harvest from each density up to the sixth, starting with the third, as being the most efficient form of generating experience known to It at the time of Its construction of this system of evolution?

Yes. [90.19]

I have listed the different minds and would like to know if they are applied in this particular aspect: first, we have the cosmic mind which is, I would think, the same for all sub-Logos[i] like our sun. Is this correct?

This is correct. [91.2]

The sub-Logos such as our sun, then, in creating its own particular evolution of experience, refines the cosmic mind or, shall we say, articulates it by its own additional bias or biases. Is this a correct observation?

It is a correct observation with the one exception that concerns the use of the term “addition,” which suggests the concept of that which is more than the all-mind. Instead, the archetypical mind is a refinement of the all-mind in a pattern peculiar to the sub-Logos choosing. [91.3]

Then the very next refinement that occurs as the cosmic mind is refined is what we call the archetypical mind. Is this correct?

Yes. [91.4]

Seven, Octave

Mathematics and Physics

The following series of quotations have been extracted from a compilation found at this [website address](#):

Now, if a positive entity is displaced to negative time/space I understand that the higher self is reluctant to enter the negative time/space. And for some reason this makes it necessary for the mind/body/spirit complex to incarnate in negative space/time. Why is it necessary for this incarnation in negative space/time?

Firstly, let us remove the concept of reluctance from the equation and then secondly, address your query more to the point. Each time/space is an analog of a particular sort or vibration of space/time. When a negative time/space is entered by an entity the next experience will be that of the appropriate space/time. This is normally done by the form-making body of a mind/body/spirit complex which places the entity in the proper time/space for incarnation. [70.14]

I think to try and clear up this point I'm going to ask a few questions that are related that will possibly enable me to understand this better because I am really confused about this and I think it is a very important point in understanding the creation and the Creator in general, you might say. If a Wanderer of fourth, fifth, or sixth density dies from this third-density state in which we presently find ourselves, does he then find himself in third-density time/space after death?

This will depend upon the plan which has been approved by the Council of Nine. Some Wanderers offer themselves for but one incarnation while others offer themselves for varying lengths of your time up to and including the last two cycles of 25,000 years. If the agreed-upon mission is complete the Wanderer's mind/body/spirit complex will go to the home vibration. [70.15]

Now here is the point of my confusion. If, after physical death, a Wanderer would return to his home planet, shall I say, why cannot the same entity be extracted from negative time/space to the home planet rather than incarnating in negative space/time?

As we stated, the position in negative time/space, of which we previously were speaking, is that position which is pre-incarnative. After the death of the physical complex in yellow-ray activation the mind/body/spirit complex moves to a far different portion of time/space in which the indigo body will allow much healing and review to take place before any movement is made towards another incarnative experience. I perceive a basic miscalculation upon your part in that time/space is no more homogenous than space/time. It is as complex and complete a system of illusions, dances, and pattern as is space/time and has as structured a system of what you may call natural laws. [70.17]

I am sorry to ask such stupid questions, but I am trying to determine something about space/time, time/space, and you might say this very difficult area of the mechanism of evolution. I think it is central to the understanding of our evolution. However, I am not sure of this and I may be wasting my time. Could Ra comment on whether I am wasting my time in this particular [chuckles] investigation or whether it would be fruitful?

Since the concepts of space/time, or physics, and time/space, or metaphysics, are mechanical they are not central to the spiritual evolution of the mind/body/spirit complex. The study of love and light is far more productive in its motion towards unity in those entities pondering such concepts. However, this material is, shall we say, of some small interest and is harmless. [70.22]

I was asking these questions primarily to understand or to build a base for an attempt to get a little bit of enlightenment on the way that time/space and space/time is related to the evolution of the mind/body/spirit complex so that I could better understand the techniques, you might say, of that evolution. For instance, you stated that "the potential difference may be released and polarities changed after an entity has learned/taught the lessons of love of self" if the entity is [a] positive entity that has found itself in negative time/space and then had to incarnate in negative space/time. And what I was trying to do was build a base for attempting to understand or at least get a slight understanding of what you meant by this statement that potential difference may be released and polarities changed after the above step. I am very interested in knowing, if placed in a negative time/space, why it is necessary to incarnate in negative space/time and learn/teach love of self and develop, I guess, a sixth-density level of polarity before you can release that potential difference. I was trying to build a little foothold or platform from which to make that more apparent. Could you speak on that subject, please?

The entity which incarnates into negative space/time will not find it possible to maintain any significant positive polarity as negativity, when pure, is a type of gravity well, shall we say, pulling all into it. Thus the entity, while remembering its learned and preferred polarity, must needs make use of the catalyst given and recapitulate the lessons of service to self in order to build up enough polarity in order to cause the potential to occur for reversal. There is much in this line of questioning which is somewhat muddled. May we, at this point allow the questioner to rephrase the question or to turn the direction of query more towards that which is the heart of its concern. [70.23]

As an entity goes through the death process in third density and finds itself in time/space, it finds itself in a different set of circumstances. Would you please describe the properties or circumstances of time/space and then the process of healing of incarnative experiences that some entities encounter?

The hallmark of time/space is the inequity between time and space. In your space/time the spatial orientation of material causes a tangible framework for illusion. In time/space the inequity is upon the shoulders of that property known to you as time. This property renders entities and experiences intangible in a relative sense. In your framework each particle or core vibration moves at a velocity which approaches what you call the speed of light from the direction of supraluminal velocities. Thus the time/space or metaphysical experience is that which is very finely tuned and, although an analog of space/time, lacking in its tangible characteristics. In these metaphysical planes there is a great deal of what you call time which is used to review and re-review the biases and learn/teachings of a prior, as you would call it, space/time incarnation. The extreme fluidity of these regions makes it possible for much to be penetrated which must needs be absorbed before the process of healing of an entity may be accomplished. Each entity is located in a somewhat immobile state much as you are located in space/time in a somewhat immobile state in time. In this immobile space the entity has been placed by the form-maker and higher self so that it may be in the proper configuration for learn/teaching that which it has received in the space/time incarnation. Depending upon this time/space locus there will be certain helpers which assist in this healing process. The process involves seeing in full the experience, seeing it against the backdrop of the mind/body/spirit complex total experience, forgiving the self for all missteps as regards the missed guideposts during the incarnation and, finally, the careful assessment of the next necessities for learning. This is done entirely by the higher self until an entity has become conscious in space/time of the process and means of spiritual evolution at which time the entity will consciously take part in all decisions. [71.6]

Is the process in positive time/space identical with the process in negative time/space for this healing?

The process in space/time of the forgiveness and acceptance is much like that in time/space in that the qualities of the process are analogous. However, while in space/time it is not possible to determine the course of events beyond the incarnation but only to correct present imbalances. In time/space, upon the other hand, it is not possible to correct any unbalanced actions but rather to perceive the imbalances and thusly forgive the self for that which is. The decisions then are made to set up the possibility/probabilities of correcting these imbalances in what you call future space/time experiences. The advantage of time/space is that of the fluidity of the grand overview. The advantage of space/time is that, working in darkness with a tiny candle, one may correct imbalances. [71.7]

If an entity has chosen the negative polarization are the processes of healing and review similar for the negative path?

This is correct. [71.8]

One thing I don't understand is why, if there was no veil, that the review of incarnation after the incarnation would help the process since it seems to me that the entity should already be aware of what was happening. Possibly this has to do with the nature of space/time and time/space. Could you clear that up, please?

It is true that the nature of time/space is such that a lifetime may be seen whole as a book or record, the pages studied, riffled through, and re-read. However, the value of review is that of the testing as opposed to the studying. At the testing, when the test is true, the distillations of all study are made clear. During the process of study, which you may call the incarnation, regardless of an entity's awareness of the process taking place, the material is diffused and over-attention is almost inevitably placed upon detail. The testing upon the cessation of the incarnative state is not that testing which involves the correct memorization of many details. This testing is, rather, the observing of self by self, often with aid as we have said. In this observation one sees the sum of all the detailed study; that being an attitude or complex of attitudes which bias the consciousness of the mind/body/spirit. [83.7]

I see. Before the veil, can you describe any other physical difference that we haven't talked about yet with respect to the sexual energy transfers or relationships or anything prior to veiling?

Perhaps the most critical difference of the veiling, before and after, was that before the mind, body, and spirit were veiled, entities were aware that each energy transfer and, indeed, very nearly all that proceeds from any intercourse, social or sexual, between two entities has its character and substance in time/space rather than space/time. The energies transferred during the sexual activity are not, properly speaking, of space/time. There is a great component of what you may call metaphysical energy transferred. Indeed, the body complex as a whole is greatly misunderstood due to the post-veiling assumption that the physical manifestation called the body is subject only to physical stimuli. This is emphatically not so. [84.17]

The Seven Densities

Unlike most other sources of metaphysical information reviewed in this *Cosmogony* book, Ra used the word "Densities" instead of using the word "planes" or "sub-planes" or "Levels of Being" to describe seven levels or focuses of consciousness in the grand cosmic scheme of things. Refer to Chapter II-6, "The Seven Planes" for a thorough discussion of that topic. Because of Ra's special meaning applied to the term, I capitalize it.

In the material quoted below, I see that Ra uses three metaphors.

1. First of all, "Density" is itself a metaphor, namely that Intelligent Infinity, aka the One Infinite Creator, has grades of 'density' similar to the way that matter has grades of 'density', such as is found in various kinds of solid, liquid, gas, and plasma. The metaphor should not be taken literally, of course.
2. The second metaphor used throughout this exposition is that of 'lower' and 'higher' Densities, as if they were stratified vertically, similar to sedimentary rocks in the Earth's crust. This is a space-like metaphor. The metaphor should not be taken literally, of course.
3. However, the metaphor is not just about space; it is also about time in that, in terms of geology, *higher* strata in space are also *later* strata in time. Ra uses the metaphor of "vibration" for this, the third metaphor, in that 'higher' vibrations are 'faster' than 'lower', 'slower' vibrations. The metaphor should not be taken literally, of course. Using this particular metaphor, we understand that the differences between Densities are somewhat like the differences between, for instance, radio waves and light waves in the electromagnetic spectrum: it takes different instruments to detect the different vibrations of the one substance. The point of these metaphors is that, when we grow spiritually we understand things from a 'higher' viewpoint that gives us a wider perspective, and we understand things from a 'later' viewpoint that gives us a more mature perspective.

The purpose of a metaphor or analogy is to explain something unfamiliar in terms of something that is familiar. These three metaphors leave somewhat to be desired in that the natures of the Densities as described by Ra do not seem to correlate with the septenaries as described in other teachings, but the Densities do follow the Natural Sequence schema. This will be noted in my commentary on the quotations that follow.

The following Ra Material covers not only the septenarian portion of the Natural Sequence schema, but also some of the Attributes of the Natural Sequence schema.

In the quotations that follow, italicized sentences are the questions, and non-italicized sentences are the answers.

Introduction to Densities

The word Density was defined as follows:

Could you define the word density as we have been using it to give us a little greater idea of the concept of this term when used by you?

The term density is a, what you would call, mathematical one. The closest analogy is that of music, whereby after seven notes on your western type of scale, if you will, the eighth note begins a new octave. Within your great octave of existence which we share with you, there are seven octaves or densities. Within each density there are seven sub-densities. Within each sub-density, seven sub-sub-densities, and so on infinitely. [16.51]

As with so many other metaphysical sources, Ra regards the number seven as an important element of the structure of the Cosmos. We have seen this before, and we will see it again: Ra says that septenaries are nested within septenaries within septenaries, and so on *ad infinitum* (in space) and *ad eternum* (in time). Refer to the section on “The Fractalicity Principle” in **Chapter I-x** for an overview of that subject. Each size septenary is a space/time and time/space cycle that has a different name. For instance, there are planes and subplanes (refer to **Chapter II-6**, “The Seven Planes”). In regard to the soul’s journey, there are size scales there also: Ra mentions the spiritual journey within a lifetime that encompasses seven stages that I call Enlightenment (refer to **Part Six**); developmental psychology has its seven “Life-Stages” (refer to **Part Five**); other teachings mention seven ages of the soul that span many lifetimes that I call Worldviews (refer to Chapter II-8); the story arc of the development of humanity goes through stages of “Culture” (refer to Chapter IV-x in Part Four).

Is there any physical difference between first and second density? For instance, if I could see a second-density planet and a first-density planet side by side, in my present condition, could I see both of them? Would they be both visible?

This is correct. All of the octave of your densities would be clearly visible were not the fourth through the seventh freely choosing not to be visible. [13.20]

What Ra refers to as an “octave” is just another name for what I call the Septenarian Principle. Basically and briefly, the orderly Cosmos has a septenarian structure — in space and time and physical space/time and metaphysical time/space — per the Tao’s Template ontology, per the Natural Sequence schema, and per the Process/Aspect System matrix. This Principle applies from beginning to end, from bottom to top, and from outside to inside.

Per Theosophy and the Michaelian teachings, each of the seven planes of the Cosmos has seven levels. We humans on the Physical Plane are not aware of the higher levels of this plane, generally called the “etheric” levels, except to the extent that there is some bleed-through of so-called “paranormal” phenomena. The etheric body, sometimes referred to as the “soul” is aware of these higher levels. When a person achieves a ‘higher’ state of consciousness, it becomes aware of those ‘higher’ levels.

Now, as the major galaxy is created, and I am assuming all of its densities — I am assuming all — there are eight densities created when this major galaxy is created. Is this correct?

This is basically correct. However, it is well to perceive that the eighth density functions also as the beginning density or first density, in its latter stages, of the next octave of densities. [28.15]

An octave in the musical scale is the same as an octave in the cosmic scale. That is to say, counting from low to high, the eighth note is the same as the first note of the next higher octave but at twice the vibration.

Can you give me an idea how the different colors ... originate as these functions, or the essence, you might say, of the origin of these colors as functions for these different expressions in consciousness. I don’t know if this question is sufficient.

This question is sufficiently clear for us to attempt explanation of what, as you have observed, is not easily grasped material for the intellectual mind. The nature of vibration is such that it may be seen as having mathematically strait or narrow steps. These steps may be seen as having boundaries. Within each boundary there are infinite gradations of vibration or color. However, as one approaches a boundary, an effort must be made to cross that boundary. These colors are a simplistic way of expressing the boundary divisions of your density. There is also the time/space analogy which may be seen as the color itself in a modified aspect. [32.12]

The effort required to cross a boundary is reminiscent of the Transition Principle. Basically and briefly, it can take intentional effort to push through the turbulence of a transitional boundary between levels in a system undergoing evolutionary development.

And then what entity would be the simplest that would have red, orange, yellow, and green activation?

This information has been covered in a previous session. To perhaps simplify your asking, each center [chakra] may be seen to be activated potentially in third density, the late second-density entities [animals] having the capability, if efficient use is made of experience, of vibrating and activating the green-ray energy center.

The third-density being [humans], having the potential for complete self-awareness, thus has the potential for the minimal activation of all energy centers. The fourth, fifth, and sixth densities are those refining the higher energy centers. The seventh density is a density of completion and the turning towards timelessness or foreverness. [41.16]

The so-called “green-ray” chakra can be characterized as promoting mutually-beneficial interactions. Among animals that operate in second Density, fish and reptiles and amphibians — “cold-blooded” animals — are not very good at this. However, further along the evolutionary path, the “warm-blooded” mammals have gotten pretty good at this. Humans, said to exist and function in “third Density”, are even better at cooperative behavior. In fact, anthropologists, propose that the human ability to cooperate collectively is what allows humans to dominate so many ecological and geographical niches on the planet.

Can you tell me the purpose or philosophy behind the fourth-, fifth-, and sixth-density positive and negative social memory complexes?

The basic purpose of a social memory complex is that of evolution. Beyond a certain point the evolution of spirit is quite dependent upon the understanding of self and other-self as Creator. This constitutes the basis for social complexes. When brought to maturity, they become social memory complexes. The fourth density and sixth density find these quite necessary. The fifth positive [service-to-other] uses social memory in attaining wisdom, though this is done individually. In fifth negative [service-to-self] much is done without aid of others. [45.11]

I have a question that I couldn't properly answer last night. It was asked by Morris. It has to do with the vibrations of the densities. I understand that first density is composed of core atomic vibrations that are in the red spectrum, second in the orange, etc. Am I to understand that the core vibrations of our planet are still in the red and that second-density beings are still in the orange at this time/space or space/time right now and that each density as it exists on our planet at this time has a different core vibration, or is this incorrect?

This is precisely correct. [62.27]

The specific question that I had was that it seems to me that the choice was planned to create intense polarization past third density so that experience would be intense past third density. Is this correct?

Given that our interpretation of your sound vibration complexes is appropriate, this is incorrect. The intensity of fourth density is that of the refining of the rough-hewn sculpture. This is, indeed, in its own way, quite intense causing the mind/body/spirit complex to move ever inward and onward in its quest for fuller expression. However, in third density the statue is forged in the fire. This is a type of intensity which is not the property of fourth, fifth, sixth, or seventh densities. [77.15]

Why do the densities have the qualities that they have? You have named the densities with respect to their qualities, this [third] density being that of _____ the next, the fourth density being that of love, etc. Can you tell me why these qualities exist in that form? Is it possible to answer this question at all?

It is possible. [78.17]

Would you please answer that?

The nature of the vibratory range peculiar to each quantum [level, stage] of the octave is such that the characteristics of it may be described with the same certainty with which you perceive a color with your optical apparatus if it is functioning properly. [78.18]

To explain this statement I would refer back to Ra's original statement that the Densities can be defined in mathematical terms, which are about as “certain” in describing the Cosmos as it is possible to do. The particular branch of mathematics that I prefer for this purpose is geometry, with its three Dimensions in the Cartesian Coordinate System, each of which has two poles, and each of which is perpendicular to the other two Dimensions. This is all explained in Part One.

✓ **First Density = Mineral Realm**

Ra's description of First Density is a decent introduction to the Dialectic Attributes (Ordinal, Cardinal, Neutral) of the Tao's Template ontology and the Natural Sequence schema, where the “Tao produced the One, the One

produced the Two". Thus, my comments in this subsection are elaborated in numerous other locations in this *Cosmogony* book. This subsection gives me the opportunity to repeat in yet another way some foundational information found elsewhere.

The original, the first entities on this planet— what was their origin? Where were they before they were on this planet?

The first entities upon this planet were water, fire, air, and earth. [9.5]

Ra's first Density is elsewhere referred to as the mineral kingdom. Although it is inanimate, after the creation of self and environment (see next quotation), it evolves via the interaction of self and environment. According to the Big Bang theory, the mineral kingdom starts out as random fluctuations of universal fields that condense into fundamental particles, then there are combinations and agglomerations of every larger and more complex entities according to the laws of nature. This evolution has been traced by scientists such as cosmologists, physicists, chemists, and geologists. My attempt to document this evolution is found in Part One.

Could you tell me about this first density of planetary entities?

Each step [in the evolution of the Densities] recapitulates Intelligent Infinity in its discovery of awareness. In a planetary environment [as well as in the entire chaos/logos] all begins in what you would call chaos, energy undirected and random in its infinity. Slowly, in your terms of understanding, there forms a focus of self-awareness. Thus the Logos moves. Light comes to form the darkness, according to the co-Creator's patterns [in space] and vibratory rhythms [in time], so constructing a certain type of experience. This begins with first density which is the density of consciousness, the mineral and water life upon the planet learning from fire and wind the awareness of being. This is the first density. [13.16]

There is much to unpack in that answer.

"Recapitulation" is another word for the Fractalicity Principles; it refers to the repetition of a pattern in space and time and space/time and time/space. The creation of the Cosmos is still in process; the Big Bang is always in progress, and each experience of a subset of Intelligent Infinity recapitulates the whole shebang.

Chaos and Logos are both ancient Greek language words, used in their philosophy and theology, so what Ra is saying here about their nature and their relationship is not new.

Ra seems to agree with the ontology called "pan-experientialism", which proposes that awareness or consciousness is almost as fundamental as chaos. The basic idea is that everything is based on the notion of an agent in an arena, a self immersed in a not-self and interacting with each other, both having a point of view with respect to each other.

The consensus of both exoteric physics and esoteric metaphysics is that chaos is the most fundamental ontological primitive. For no reason that is understandable in either realm of inquiry, order arises spontaneously from chaos (spontaneity is outside of reason and causality). The only logic that I can suppose is that chaos somehow negates itself, thus generating its opposite, order. Thus, chaos assumes a non-random pattern (otherwise known as "information": in-form-ation), and infinity generates finity, or self-hood, a point of view with an inside and an outside, subjective and objective realms. This is a very important point, so I want to emphasize it: the transcendent Tao does not evolve, but the immanent Tao does evolve ... into the One, which is the notion of finiteness or definiteness or self-hood; refer to **Chapter I-x** in Part One, "Theological Considerations", for the whole story.

It is notable to me that Ra used the word "moved" in regard to the Logos. This is reminiscent of the physics theory of Dewey Larson, with which the questioner was familiar. In Larsonian physics — as discussed in my *Cosmology* book — there is an "absolute" state of 'rest', which I correlate with Tao in the Tao's Template ontology, and then there is 'motion' "relative" to that state of absolute 'rest', which I correlate with One in the Tao's Template ontology, and then there is the bifurcation of 'motion' into 'space' and 'time', which I correlate with Two in the Tao's Template ontology. The notion of absolute rest versus absolute motion versus relative motion has been debated in physics and philosophy; one may read about that on the internet, of course, such as here: ><https://philarchive.org/archive/STAAAR-2><. In the transcriptions of the Ra material, both the questioner and Ra struggled to articulate these notions:

Does this first density then progress to greater awareness?

The spiraling [rotating] energy, which is the characteristic of what you call "light" [photons have 'spin'], moves in straight line spiral thus giving spirals an inevitable vector upwards to a more comprehensive beingness [self-hood] with regards to Intelligent Infinity. Thus, first dimensional beingness [translation motion] strives towards

the second-density [vibration motion] lessons of a type of awareness which includes growth rather than [entropic] dissolution [devolution] or [chaotic] random change. [13.17]

One of the prerequisites for evolution (as distinct from devolution or chaos) is the stability of a self-hood in space/time and time/space. Unlike other forms of motion such as one-dimensional translation and two-dimensional vibration that are “relative” to other selves, rotation is an absolute — “absolute” meaning that a rotating microcosmic self is distinct from the not-self, the not-self being the entire macrocosmic Self.

When the first density is formed, the — I am going to make a statement of my understanding and if you will correct me, I will... I intuitively see the first density being formed by an energy center that is a vortex. This vortex then causes these spinning motions that I have mentioned before of the light, vibration which is light, which then starts to condense into the materials of the first density. Is this correct?

Being himself a physicist, the questioner knew that light is dual in its manifestation: in its wave form it is vibratory and in its particle form it is a spiraling vortex (it spins). Furthermore, in quantum field theory, matter is also dual in nature: particles can be modeled as ‘vortexes’ in the gravitational ‘field’. The property of ‘spin’, being an absolute part as distinct from the whole field, provides an embodiment.

This is correct as far as your reasoning has taken you. However, it is well to point out that the Logos has the plan of all the densities of the octave in potential completion before entering the space/time continuum in first density. Thus the energy centers exist before they are manifest. [41.8]

The word “potential” is another word for the unstructured Chaos that ‘preceded’ the structured Cosmos. Wikipedia has an article on this: >https://en.wikipedia.org/wiki/Potentiality_and_actuality<.

Could you tell me how, in first density, wind and fire teach earth and water?

You may see the air and fire of that which is chaos as literally illuminating and forming the formless, for earth and water were, in the timeless state, unformed. As the active principles of fire and air blow and burn incandescently about that which nurtures that which is to come, the water learns to become sea, lake, and river offering the opportunity for viable life. The earth learns to be shaped, thus offering the opportunity for viable life. [78.29]

Apart from this channeled revelation, the evolution of “first density” chemistry toward “second density” biology according to modern science is traced in **Chapter IV-x in Part Four, “Evolution of the Mineral Realm”**.

✓ **Second Density = Plant and Animal Realms**

There is some ambiguity in the transitions between Densities, but the transitions between Densities usually happen much faster than the duration of the Densities.

Then there were second-density entities here prior to approximately 75,000 years ago. What type of entities were these?

The second density is the density of the higher plant life and animal life which exists without the upward drive towards the infinite. These second-density beings are of an octave of consciousness just as you find various orientations of consciousness among the conscious entities of your vibration. [9.14]

In the history of the evolution of life on earth, plants evolved before animals. Therefore, it makes sense to me to place plants in the Ordinal levels of the “second density” septenary, and place animals in the Cardinal levels. That fits with the next Q&A exchange:

Did any of these second-density entities have shapes like ours— two arms, two legs, head, and walk upright on two feet?

The two higher of the sub-vibrational levels of second-density beings had the configuration of the biped, as you mentioned. However, the erectile movement which you experience was not totally effected in these beings who were tending towards the leaning forward, barely leaving the quadrupedal position. [9.15]

The work of Arthur Young, reviewed in **Chapter IV-x in Part Four**, discerns an octave of living creatures based on form and function that follows the Natural Sequence schema.

Where did these beings come from? Were they a product of evolution as it is understood by our scientists? Were they evolved from the original [first density] material of the earth that you spoke of?

This is correct. [9.16]

The notion that the animate realm evolved from the inanimate realm is an ancient one as well as a modern one; refer to the discussion of the “Great Chain/Nest of Being” in **Chapter I-x, “Natural Sequence Principles”**, in Part One, in the section on the Fractalicity Principle.

Do these beings then evolve from second density to third density?

This is correct, although no guarantee can be made of the number of [reincarnation] cycles it will take an entity to learn the lessons of consciousness of self which are the prerequisite for transition to third density. [9.17]

Refer to the section on Meher Baba in **Chapter II-8** for documentation of that south Asian guru's notion that there is an essence or soul that evolves through inanimate and animate realms.

Could you define what you mean by growth?

Picture, if you will, the difference between first-vibrational [density] mineral or water life and the lower second-density beings [plants] which begin to move about within and upon its being. This movement is the characteristic of second density, the striving towards light and growth. [13.18]

By striving toward light, what do you mean?

A very simplistic example of second-density growth striving towards light is that of the leaf striving towards the source of light. [13.19]

In their own way, plants and animals seek their own version of 'enlightenment'. For the human version of the quest, refer to **Part Six**, "Stages of Enlightenment".

Then how does the second density progress to the third?

The second density strives towards the third density which is the density of self-consciousness or self-awareness.

The striving takes place through the higher second-density forms [animals] who are invested by third-density beings with an identity to the extent that they become self-aware mind/body complexes, thus becoming mind/body/spirit complexes and entering third density, the first density of consciousness of spirit. [13.21]

By "invested by third density beings" Ra is referring to the taming of wild animals by humans; see next Q&A exchange. Evidently, the domestication of animal species catalyzes their evolution to higher levels of awareness, eventuating in self-awareness. Psychologists who research animal behavior have tested 'higher' animals to determine which ones are self-aware, and found that some are:
>https://en.wikipedia.org/wiki/Mirror_test<.

The archaeological record indicates that when hominins started burying their dead, and included artifacts in the grave for use in the supposed afterlife, that was when hominins made a leap to what Ra referred to as "consciousness of spirit", a self that transcended body and mind and became a "body/mind/spirit complex". Refer to ><https://www.sapiens.org/culture/hominin-burial/><.

You said the second density strives towards the third density which is the density of self-consciousness or self-awareness. The striving takes place through higher second-density forms invested by third-density beings. Could you explain what you mean by this?

Much as you would put on a vestment, so do your third-density beings invest or clothe some second-density beings with self-awareness. This is often done through the opportunity of what you call pets. It has also been done by various other means of investiture. These include many so-called religious practice complexes which personify and send love to various natural second-density beings in their group form. [14.1]

Humans and animals (and plants; see below) have "coevolved". Of course, Wikipedia covers that topic nicely: ><https://en.wikipedia.org/wiki/Coevolution><. This is not unexpected if one is aware that every level and every stage of the Cosmos affects every other level and stage of the Cosmos. Collectively, the network of cooperative and competitive selves is referred to as an "ecosystem": ><https://en.wikipedia.org/wiki/Ecosystem><. In the Ra material, it is said that the selves in all of the "densities" work synergistically as they coevolve toward the 'light'. In the Natural Sequence schema, this notion of coevolutionary collectivism could be thought of as the Neutral Zone, the Fourth Level, of each stage, which is a separate level or stage, but its meaning is that it reconciles and encompasses the Ordinal and the Cardinal levels or stages in the septenary per the Dialectic Principle.

Let's take the point at which an individualized entity [self] of second density is ready for transition to third. Is this second-density being what we would call animal?

There are three types of second-density entities which become, shall we say, enspirited. The first is the animal. This is the most predominant. The second is the vegetable, most especially that which you call sound vibration complex "tree." These entities are capable of giving and receiving enough love to become individualized. The third category is mineral. Occasionally a certain location, place as you may call it, becomes energized to individuality through the love it receives and gives in relationship to a third-density entity which is in relationship to it. This is the least common transition. [19.2]

As humans domesticate animals, they also domesticate plants. Indeed, some non-human animals are known to also domesticate some plants. Thereby, many living beings participate in the co-evolution of the

ecosystem as a whole, for mutual benefit; this even has a formal name among biologists, “symbiosis”: ><https://en.wikipedia.org/wiki/Symbiosis><. I would say that this is an instantiation of the Dialectic Principle, which applies to the interactions of all individualized selves versus not-selves versus other-selves. I would also say that “love” is a word that applies to the Dialectic Principle.

When this transition from second to third density takes place, how does the entity, whether it be animal, tree, or mineral, become enspirited?

Entities do not become enspirited. They become aware of the intelligent energy within each portion, cell, or atom, as you may call it, of its beingness [self-hood]. This awareness is that which is awareness of that already given. From the infinite come all densities. The self-awareness comes from within given the catalyst of certain experiences understanding, as we may call this particular energy, the upward spiraling of the cell or atom or consciousness. You may then see that there is an inevitable pull towards the, what you may call, eventual realization of self. [19.3]

Selves exist and function having decreasingly lesser selves within themselves and being themselves part of increasingly greater selves — this answer is a restatement of what I refer to as the Fractalicity Principle and the Holarchy Principle. What they mean is that the entire grand evolutionary process is driven from the minimum One to the maximum One (the Ouroboros Principle) via numerous intermediary septenarian levels and stages in the Great Chain/Nest of Being.

Now, in second density the concept of bisexual reproduction first originates. Is this correct?

This is correct. [30.9]

Wikipedia, >https://en.wikipedia.org/wiki/Evolution_of_sexual_reproduction<, has somewhat to say about this phenomenon. Both plants and animals have gender and have sex. This duality is an instantiation of “Two produced the Three” in the Tao’s Template ontology, which is the same as the Dialectic Principle of the Natural Sequence schema. The interaction of ‘males’ and ‘females’ drives the evolutionary process in many ways, not only physically in terms of the reproduction of the species, but also in terms of emotional maturity and mental acuity and intuitive understanding and even spiritual enlightenment:

Can you tell me the philosophy behind this mechanism of propagation of the bodily complex?

The second density is one in which the groundwork is being laid for third-density work. In this way it may be seen that the basic mechanisms of reproduction capitulate into a vast potential in third density for service to other-self and to self; this being not only by the functions of energy transfer but also [by] the various services performed due to the close contact of those who are, shall we say, magnetically attracted, one to the other; these entities thus having the opportunities for many types of service which would be unavailable to the independent entity. [30.10]

A subsequent section in this chapter has somewhat more to say about the seven stages of development that are engendered by male–female interactions.

Does the process of bisexual reproduction or the philosophy of it play a part in the spiritual growth of second-density entities?

In isolated instances this is so due to efficient perceptions upon the part of entities or species. For the greater part, by far, this is not the case in second density, the spiritual potentials being those of third density [and ‘above’. [30.12]

Ra characterizes “second-density” selves as “body/mind complexes”, and they characterize “third density” selves as body/mind/spirit complexes”. With the Ra material as with other sources of information about the structure of the Cosmos, there is a qualitative leap from level or stage to level or stage in the holarchy of “densities” — or “dimensions” or whatever terminology is used.

When first density is formed, we have fire, air, earth, and water. There is at some time the first movement or individuation of life into a portion of consciousness that is self-mobile. Could you describe the process of the creation of this and what type of energy center that it has?

The first or red-ray density, though attracted towards growth, is not in the proper vibration for those conditions conducive to what you may call the spark of awareness. As the vibratory energies move from red to orange the vibratory environment is such as to stimulate those chemical substances which lately had been inert to combine in such a fashion that love and light begin the function of growth.... The mechanism is one of the attraction of upward spiraling light. There is nothing random about this or any portion of evolution. [41.10]

This statement is contrary to scientific evolutionary theory, which denies or ignores evidence for teleology in nature, “teleology” being the notion that the universe as a whole has a goal or a purpose or an agency. An

example of this ideology is the book by Richard Dawkins: *The Blind Watchmaker*. Evidence and argument for teleology is documented in Part One, in [Chapter I-x](#),

Could you tell me the simplest and first entity to have both orange- and yellow-ray energy centers?

Upon your planetary sphere those having the first yellow-ray experiences are those of animal and vegetable natures which find the necessity for reproduction by bisexual techniques or who find it necessary to depend in some way upon other-selves for survival and growth. [41.15]

During the evolution of first Density, the inanimate mineral realm, there is progress toward the light in terms of greater complexity. For instance, it takes millions and billions of years for all of the elements to be formed in stars, and it also takes billions of years for those elements to combine into unnumbered kinds of molecules. None of that groundwork happens with the help of sexual reproduction, but when life appears and develops sexual reproduction during the second Density stage aka yellow-ray stage of the septenary of Densities, that speeds up development considerably. There is a bias built into the Cosmos for survival and transformation of the self in the first Density, and in second Density another bias kicks in, namely that the self thrive with the help of other selves.

Third Density = Humanoid Realm

Does an individual in the fourth density normally appear—or are they normally invisible to us?

The use of the word “normal” is one which befuddles the meaning of the question. Let us rephrase for clarity. The fourth density is, by choice, not visible to third density. It is possible for fourth density to be visible. However, it is not the choice of the fourth-density entity to be visible due to the necessity for concentration upon a rather difficult vibrational complex which is the third density you experience. [12.17]

Then we have a third density that is, comparatively speaking, the twinkling of an eye, the snap of a finger in time compared to the others. Why does the third density cycle so extremely rapidly compared to first and second?

The third density is a choice. [76.15]

The first Density, the realm of chemistry, transforms but is not alive, so it has no agency, meaning that it does not make choices; it merely follows the laws of nature. Therefore the

Third density, then, it appears, is, compared to the rest of the densities, all of them, nothing but a uniquely short period of what we consider to be time and is then for the purpose of this choice. Is this correct?

This is precisely correct. The prelude to choice must encompass the laying of the foundation, the establishment of the illusion and the viability of that which can be made spiritually viable. The remainder of the densities is continuous refining of the choice. This also is greatly lengthened, as you would use the term. The choice is, as you put it, the work of a moment but is the axis upon which the creation turns. [76.16]

What I am really attempting to understand, since all of these twenty-one philosophical bases result in the twenty-second which is The Choice, is why this choice is so important, why the Logos, it seems, puts so much emphasis on this choice, and what function that choice of polarity is, precisely, in the evolution or the experience of that which is created by the Logos?

The polarization or choosing of each mind/body/spirit is necessary for harvestability from third density. The higher densities do their work due to the polarity gained in this choice. [77.16]

I am trying to grasp an understanding first of the process of experience in third density before the veil so that I can [have a] better understanding of the present process. Now, as I understand it, the mind/body/spirit complexes went through the process of what we call physical incarnation in this density but there was no forgetting. What was the benefit or purpose of the physical incarnation when there was no forgetting?

The purpose of incarnation in third density is to learn the ways of love. [82.15]

I guess I didn't state that exactly right. What I mean is, since there was no forgetting, since the mind/body/spirit complexes had the consciousness, in what we call physical incarnation... they knew the same thing that they would know not in the physical incarnation. What was the mechanism of teaching that taught this, the ways of love, in the third-density physical prior to the forgetting process?

We ask your permission to answer this query in an oblique fashion as we perceive an area in which we might be of aid. [82.16]

Certainly.

Your queries seem to be pursuing the possibility/probability that the mechanisms of experience in third density are different if a mind/body/spirit is attempting them rather than a mind/body/spirit complex. The nature of third density is constant. Its ways are to be learned the same now and ever. Thusly, no matter what form the entity facing these lessons, the lessons and mechanisms are the same. The Creator will learn from Itself. Each entity has unmanifest portions of learning and, most importantly, learning which is involved with other-selves. [82.17]

I don't grasp too well the condition of incarnation and time between incarnation prior to the veil in that I do not understand what was the difference other than the manifestation of the third-density, yellow-ray body. Was there any mental difference upon what we call death? Was there any—I don't see the necessity for what we call a review of the incarnation if the consciousness was uninterrupted. Could you clear that point for me?

No portion of the Creator audits the course, to use your experiential terms. Each incarnation is intended to be a course in the Creator knowing Itself. A review or, shall we say, to continue the metaphor, each test is an integral portion of the process of the Creator knowing Itself. Each incarnation will end with such a test. This is so that the portion of the Creator may assimilate the experiences in yellow-ray, physical third density, may evaluate the biases gained, and may then choose, either by means of automatically provided aid or by the self, the conditions of the next incarnation. [82.25]

I'll make this statement and you can correct me, then. As I see the nature of the action of disease, specifically before the veil, it seems to me that the Logos had decided upon a program where an individual mind/body/spirit would continue to grow in mind and the body would be the third-density analog of this mind, and the growth would be continual unless there was a lack of growth or an inability, for some reason, for the mind to continue along the growth patterns. If this growth decelerated or stopped, then what we call disease would then act in a way so as to eventually terminate this physical experience so that a new physical experience could be started to continue the growth process, after a review of the entire process had taken place between incarnations. Would you clear up my thinking on that, please?

Your thinking is sufficiently clear on this subject. [83.6]

Very roughly, if you were to move a third-density entity from some other planet to this planet, roughly what percentage of all of those within the knowledge of Ra would look enough like those entities of Earth so that they would go unnoticed in a crowd?

Perhaps five percent. [90.8]

Then there is an extreme variation in the form of the physical vehicle in third density in the universe. I assume this is also true of fourth density. Is this correct?

This is so. We remind you that it is a great theoretical distance between demanding that the creatures of an infinite creation be unnoticeably similar to oneself and observing those signs which may be called human which denote the third-density characteristics of self-consciousness; the grouping into pairs, societal groups, and races; and the further characteristic means of using self-consciousness to refine and search for the meaning of the milieu. [90.9]

Well, within Ra's knowledge of third-density physical forms, what percentage would be similar enough to this planet's physical form that we would assume the entity to be human even though they were a bit different? This would have to be very rough because of my definition being very rough.

This percentage is still small; perhaps thirteen to fifteen percent due to the capabilities of various second-density life forms to carry out each necessary function for third-density work. Thusly to be observed would be behavior indicating self-consciousness and purposeful interaction with a sentient ambience about the entity rather than those characteristics which familiarly connote to your peoples the humanity of your third-density form. [90.10]

Was there a reason for choosing the forms that have evolved upon this planet and, if so, what was it?

We are not entirely sure why our Logos and several neighboring Logoi of approximately the same space/time of flowering chose the bipedal, erect form of the second-density apes to invest. It has been our supposition, which we share with you as long as you are aware that this is mere opinion, that our Logos was interested in, shall we say, further intensifying the veiling process by offering to the third-density form the near complete probability for the development of speech taking complete precedence over concept communication or telepathy. We also have the supposition that the so-called opposable thumb was looked upon as an excellent means of intensifying

the veiling process so that rather than rediscovering the powers of the mind the third-density entity would, by the form of its physical manifestation, be drawn to the making, holding, and using of physical tools. [90.12]

There seems to have been created by this Logos, to me anyway, a large percentage of entities whose distortion was toward warfare, in that we had the Maldek and the Mars experience and now Earth. It seems that Venus was the exception to what we could almost call the rule of warfare. Is this correct and was this envisioned and planned into the construction of the archetypical mind, possibly not with respect particularly to warfare as we have experienced it but to the extreme action to polarization in consciousness?

It is correct that the Logos designed its experiment to attempt to achieve the greatest possible opportunities for polarization in third density. It is incorrect that warfare of the types specific to your experiences was planned by the Logos. This form of expression of hostility is an interesting result which is apparently concomitant with the tool-making ability. The choice of the Logos to use the life-form with the grasping thumb is the decision to which this type of warfare may be traced. [90.18]

Fourth Density

Is it possible for you to give a small description of the conditions [in] fourth density?

We ask you to consider as we speak that there are no words for positively describing fourth density. We can only explain what is not and approximate what is. Beyond fourth density our ability grows more limited still until we become without words. That which fourth density is not: it is not of words, unless chosen. It is not of heavy chemical vehicles for body complex activities. It is not of disharmony within self. It is not of disharmony within peoples. It is not within limits of possibility to cause disharmony in any way. Approximations of positive statements: it is a plane of a type of bipedal vehicle which is much denser and more full of life; it is a plane wherein one is aware of the thoughts of other-selves; it is a plane where one is aware of the vibrations of other-selves; it is a plane of compassion and understanding of the sorrows of third density; it is a plane striving towards wisdom or light; it is a plane wherein individual differences are pronounced although automatically harmonized by group consensus. [16.50]

You use the same nomenclature for fourth-density negative as for fourth-density positive. Both are called the dimension of love or understanding. Is this correct?

This is correct. Love and understanding, whether it be of self or of self towards other-self, is one. [20.36]

All right, I'll just ask this one. I have here that — could you give me some idea of what conditions are like on a fourth-density negative or self-service planet? Can you do this?

The graduation into fourth-density negative is achieved by those beings who have consciously contacted intelligent infinity through the use of red, orange, and yellow rays of energy. Therefore, the planetary conditions of fourth-density negative include the constant alignment and realignment of entities in efforts to form the dominant patterns of combined energy. The early fourth density is one of the most intensive struggle. When the order of authority has been established and all have fought until convinced that each is in the proper placement for power structure, the social memory complex begins. Always the fourth-density effects of telepathy and the transparency of thought are attempted to be used for the sake of those at the apex of the power structure. This, as you may see, is often quite damaging to the further polarization of fourth-density negative entities, for the further negative polarization can only come about through group effort. As the fourth-density entities manage to combine, they then polarize through such services to self as those offered by the crusaders of Orion. [38.14]

In the next density, the fourth density, is the catalyst of physical pain used as a mechanism for experiential balancing?

The use of physical pain is minimal, having only to do with the end of the fourth-density incarnation. This physical pain would not be considered severe enough to treat, shall we say, in third density. The catalysts of mental and spiritual pain are used in fourth density. [43.9]

Why is physical pain a part of the end of fourth density?

You would call this variety of pain weariness. [43.10]

Can you even state the average lifespan in the fourth density of space/time incarnation?

The space/time incarnation typical of harmonious fourth density is approximately 90,000 of your years as you measure time. [43.11]

Then, is there a time/space — Are there multiple incarnations in fourth density with time/space experiences between incarnations?

This is correct. [43.12]

How long is a cycle of experience in fourth density in our years?

The cycle of experience is approximately 30 million of your years if the entities are not capable of being harvested sooner. There is in this density a harvest which is completely the function of the readiness of the social memory complex. It is not structured as is your own, for it deals with a more transparent distortion of the One Infinite Creator. [43.13]

We know that the physical vehicle in fourth density that is used during space/time, I am assuming, is quite similar to the one that we now use in third density. Is this correct?

The chemical elements used are not the same. However, the appearance is similar. [43.16]

Is it necessary to eat food in fourth density?

This is correct. [43.17]

The mechanism of, shall we say, social catalyst due to a necessity for feeding the body then is active in fourth density. Is this correct?

This is incorrect. The fourth-density being desires to serve and the preparation of foodstuffs is extremely simple due to increased communion between entity and living foodstuff. Therefore, this is not a significant catalyst but rather a simple precondition of the space/time experience. The catalyst involved is the necessity for the ingestion of foodstuffs. This is not considered to be of importance by fourth-density entities and it, therefore, aids in the teach/learning of patience. [43.18]

Could you expand a little bit on how that aids in the teach/learning of patience?

To stop the functioning of service to others long enough to ingest foodstuffs is to invoke patience. [43.19]

I was wondering, then, if the mechanism of teach/learning was the same, relatively, then in fourth density. From what you say, it seems that is necessary for first the call to exist for the teach/learning of fifth density to be given to fourth just as a call must exist here before fourth-density lessons are given to third. Is this correct?

This query is misguided, for experience in fourth density is emphatically not the same as third-density experience. However, it is correct that the same mechanism of calling predisposes the information received in a way consonant with free will. [43.29]

The question that I was trying to ask at the end of the last session was: Of what value to evolution or experience in the Creator knowing himself are the positive and negative social memory complexes that form starting in fourth density, and why was this planned by the Logos?

There are inherent incorrectnesses in your query. However, we may answer the main point of it. The incorrectness lies in the consideration that social memory complexes were planned by the Logos or sub-Logos. This is incorrect, as the unity of the Creator exists within the smallest portion of any material created by Love, much less in a self-aware being. However, the distortion of free will causes the social memory complex to appear as a possibility at a certain stage of evolution of mind. The purpose, or consideration which causes entities to form such complexes, of these social memory complexes, is a very simple extension of the basic distortion towards the Creator's knowing of Itself, for when a group of mind/body/spirits become able to form a social memory complex, all experience of each entity is available to the whole of the complex. Thus the Creator knows more of Its creation in each entity partaking of this communion of entities. [47.2]

Then at fourth-density graduation into fifth is there anything like the percentages you gave for third-density graduation into fourth for polarization?

There are, in your modes of thinking, responses we can make, which we shall make. However, the important point is that the graduations from density to density do occur. The positive/negative polarity is a thing which will, at the sixth level, simply become history. Therefore, we speak in an illusory time continuum when we discuss statistics of positive versus negative harvest into fifth. A large percentage of fourth-density negative entities continue the negative path from fourth- to fifth-density experience, for without wisdom the compassion and desire to aid other-self is not extremely well-informed. Thus though one loses approximately two percent moving from negative to positive during the fourth-density experience we find approximately eight percent of graduations into fifth density those of the negative. [47.5]

Well, what I was actually asking was if 50% is required for graduation from third to fourth in the positive sense, 95% is required for graduation in the negative sense, does this have to more closely approach 100% in both cases for graduation from fourth to fifth? Does an entity have to be 99% polarized for negative and maybe 80% polarized for positive graduation from fourth to fifth?

We perceive the query now. To give this in your terms is misleading for there are, shall we say, visual aids or training aids available in fourth density which automatically aid the entity in polarization while cutting down extremely upon the quick effect of catalyst. Thus the density above yours must take up more space/time. The percentage of service to others of positively oriented entities will harmoniously approach 98% in intention. The qualifications for fifth density, however, involve understanding. This then, becomes the primary qualification for graduation from fourth to fifth density. To achieve this graduation the entity must be able to understand the actions, the movements, and the dance. There is no percentage describable which measures this understanding. It is a measure of efficiency of perception. It may be measured by light. The ability to love, accept, and use a certain intensity of light thus creates the requirement for both positive and negative fourth to fifth harvesting. [47.6]

Can you tell me how positive and negative polarizations in fourth and fifth density are used to cause work in consciousness?

There is very little work in consciousness in fourth and in fifth densities compared to the work done in third density. The work that is accomplished in positive fourth is that work whereby the positive social memory complex, having, through slow stages, harmoniously integrated itself, goes forth to aid those of less positive orientation which seek their aid. Thus their service is their work and through this dynamic between the societal self and the other-self which is the object of love, greater and greater intensities of understanding or compassion are attained. This intensity continues until the appropriate intensity of the light may be welcomed. This is fourth-density harvest. Within fourth-density positive there are minor amounts of catalyst of a spiritual and mental complex distortion. This occurs during the process of harmonizing to the extent of forming the social memory complex. This causes some small catalyst and work to occur, but the great work of fourth density lies in the contact betwixt the societal self and less polarized other-self. In fourth-density negative much work is accomplished during the fighting for position which precedes the period of the social memory complex. There are opportunities to polarize negatively by control of other-selves. During the social memory complex period of fourth-density negative the situation is the same. The work takes place through the societal reaching out to less polarized other-self in order to aid in negative polarization. In fifth-density positive and negative the concept of work done through a potential difference is not particularly helpful as fifth-density entities are, again, intensifying rather than potentiating. In positive, the fifth-density complex uses sixth-density teach/learners to study the more illuminated understandings of unity thus becoming more and more wise. Fifth-density positive social memory complexes often will choose to divide their service to others in two ways: first, the beaming of light to creation; second, the sending of groups to be of aid as instruments of light such as those whom you're familiar with through channels. In fifth-density negative, service to self has become extremely intense and the self has shrunk or compacted so that the dialogues with the teach/learners are used exclusively in order to intensify wisdom. There are very, very few fifth-density negative Wanderers for they fear the forgetting. There are very, very few fifth-density Orion members for they do not any longer perceive any virtue in other-selves. [48.6]

I would ask this question in order to understand the mental disciplines and how they evolve. Do fourth-, fifth-, and sixth-density positive or service-to-others orientation social memory complexes use both the slingshot and the personality discipline type of effect for travel or do they use only one?

The positively oriented social memory complex will be attempting to learn the disciplines of mind, body, and spirit. However, there are some which, having the technology available to use intelligent energy forces to accomplish travel, do so while learning the more appropriate disciplines. [52.3]

Could you give me the same information on the negatively oriented social memory complexes as to the ratios, how they use the slingshot or other effect (personality [disciplines])?

The fourth-density negative uses the slingshot gravitic light effect, perhaps 80% of its membership being unable to master the disciplines necessary for alternate methods of travel. In fifth-density negative approximately 50% at some point gain the necessary discipline to use thought to accomplish travel. As the sixth density approaches, the negative orientation is thrown into confusion and little travel is attempted. What travel is done is perhaps 73% of light/thought. [52.5]

... I would like to ask, however, if you could tell me what, for the most part, or the major portion of Confederation entities, what they look like?

The fourth-density Confederation entity looks variously depending upon the, shall we say, derivation of its physical vehicle. [53.18]

Then as the fourth-density vibrations come in this means that the planet can support entities of fourth-density core vibration. Will the planet then still be first-density core vibration and will there be second-density entities on it with second-density vibrations, and will there be third-density entities with third-density vibrations?

You must see the Earth, as you call it, as being seven Earths. There is red, orange, yellow, and there will soon be a completed green color vibratory locus for fourth-density entities which they will call Earth. During the fourth-density experience, due to the lack of development of fourth-density entities, the third-density planetary sphere is not useful for habitation since the early fourth-density entity will not know precisely how to maintain the illusion that fourth density cannot be seen or determined from any instrumentation available to any third density. Thus in fourth density the red, orange, and green energy nexi of your planet will be activated while the yellow is in potentiation along with the blue and the indigo. [62.28-29]

What about the ones with the dual, not the Wanderers but the harvested and dual-activated third- and fourth-density bodies entities? Are they able to heal using the techniques that we have discussed?

In many cases this is so, but as beginners of fourth density, the desire may not be present. [66.7]

After third density, in our experience, social memory complexes are polarized positively and negatively. Is the interaction between social memory complexes of opposite polarity equivalent, but on a magnified scale, to the interaction between mind/body/spirit complexes of opposite polarity? Is this how experience is gained as a function of polarity difference at the fourth and fifth densities?

No. [78.23]

Then you are saying as a result of the polarization in consciousness that has occurred later in the galactic evolution, that the experiences are much more, shall I say, profound or deeper along the two paths. Are these experiences independent of the other path or must there be action across the potentiated difference between the positive and negative polarity, or is it possible to have this experience simply because of the single polarity? This is difficult to ask.

We would agree. We shall attempt to pluck the gist of your query from the surrounding verbiage. The fourth and fifth densities are quite independent, the positive polarity functioning with no need of negative and vice-versa. It is to be noted that in attempting to sway third-density mind/body/spirit complexes in choosing polarity there evolves a good bit of interaction between the two polarities. In sixth density, the density of unity, the positive and negative paths must needs take in each other for all now must be seen as love/light and light/love. This is not difficult for the positive polarity, which sends love and light to all other-selves. It is difficult enough for service-to-self polarized entities that at some point the negative polarity is abandoned. [78.25]

You stated previously that fifth-density entities bear a resemblance to those of us in third density on planet Earth but fourth density does not. Could you describe the fourth-density entities and tell me why they do not resemble us?

The description must be bated under the Law of Confusion. The cause for a variety of so-called physical vehicles is the remaining variety of heritages from second-density physical vehicular forms. The process of what you call

physical evolution continues to hold sway into fourth density. Only when the ways of wisdom have begun to refine the power of what you may loosely call thought is the form of the physical complex manifestation more nearly under the direction of the consciousness. [90.5]

Fifth Density

At what point in densities is it necessary for an entity to be consciously aware of the Law of One to progress?

The fifth-density harvest is of those whose vibratory distortions consciously accept the honor/duty of the Law of One. This responsibility/honor is the foundation of this vibration. [16.41]

Well, I will first ask the answer at the end if there's anything we can do to make the instrument really comfortable. I'll only ask the questions that the instrument has—or answer the questions that the instrument has energy left to give, but I really would like to know of the orientation of fifth-density negative for not participating in this battle.

The fifth density is the density of light or wisdom. The so-called negative service-to-self entity in this density is at a high level of awareness and wisdom and has ceased activity except by thought. The fifth-density negative is extraordinarily compacted and separated from all else. [25.11]

I see. Then if you are able to read the violet ray of an entity, to see that ray, is it possible then to immediately determine whether the entity could use crystals to tap intelligent energy?

It is possible for one of fifth density or above to do this. [29.28]

Just as a slight appendage to that question, what would the rays of fifth and sixth density look like?

We may speak only approximately. However, we hope you understand, shall we say, that there is a distinctive difference in the color structure of each density. Fifth density is perhaps best described as extremely white in vibration. The sixth density of a whiteness which contains a golden quality as you would perceive it; these colors having to do with the blending into wisdom of the compassion learned in fourth density, then in sixth the blending of wisdom back into a unified understanding of compassion viewed with wisdom. This golden color is not of your spectrum but is what you would call alive. [33.20]

I'm guessing that it is not necessary to ingest food in fifth density. Is this correct?

This is incorrect. However, the vehicle needs food which may be prepared by thought. [43.20]

What type of food would this be?

You would call this type of food nectar, or ambrosia, or a light broth of golden white hue. [43.21]

What is the purpose of ingesting food in fifth density?

This is a somewhat central point. The purpose of space/time is the increase in catalytic action appropriate to the density. One of the preconditions for space/time existence is some form of body complex. Such a body complex must be fueled in some way. [43.22]

Then, there is a— In third density the fueling of our bodily complex is not only simply fuels the complex but but gives us opportunities to learn service. In fourth density it not only fuels the complex but gives us opportunities to learn patience. In fifth density it fuels the complex but does it teach?

In fifth density it is comfort, for those of like mind gather together to share in this broth, thus becoming one in light and wisdom while joining hearts and hands in physical activity. Thus in this density it becomes a solace rather than a catalyst for learning. [43.23]

Then I am assuming in the positively oriented social memory complexes that a much higher percentage of them use the personality disciplines for this travel. Is this correct?

This is correct. As positive fifth density moves into sixth there are virtually no entities which any longer use outer technology for travel or communication. [52.4]

Is there any difference then, at, say, close to the end of fifth density in the disciplines of personality required for this travel between positive and negative orientation, higher fifth density?

There are patent differences between the polarities but no difference whatsoever in the completion of the knowledge of the self necessary to accomplish this discipline. [52.6]

Do some of them look just like us? Could they pass for Earth people?

Those of this nature are most often fifth-density. [53.19]

I assume that the same answer would apply to the Orion group. Is this correct? As far as fourth and fifth density goes?

This is correct. [53.20]

This would probably be possible in the higher densities such as the fifth density. Is this correct?

In fifth-density harvest, polarization has very little to do with harvestability. [71.3]

Then you are saying as a result of the polarization in consciousness that has occurred later in the galactic evolution, that the experiences are much more, shall I say, profound or deeper along the two paths. Are these experiences independent of the other path or must there be action across the potentiated difference between the positive and negative polarity, or is it possible to have this experience simply because of the single polarity? This is difficult to ask.

We would agree. We shall attempt to pluck the gist of your query from the surrounding verbiage. The fourth and fifth densities are quite independent, the positive polarity functioning with no need of negative and vice-versa. It is to be noted that in attempting to sway third-density mind/body/spirit complexes in choosing polarity there evolves a good bit of interaction between the two polarities. In sixth density, the density of unity, the positive and negative paths must needs take in each other for all now must be seen as love/light and light/love. This is not difficult for the positive polarity, which sends love and light to all other-selves. It is difficult enough for service-to-self polarized entities that at some point the negative polarity is abandoned. [78.25]

Well, if the population of this planet presently looks similar to the fifth-density entities I was wondering why this is? If I understand you correctly the process of evolution would normally be the third density resembling that from which it evolved in second density and then refining in fourth and then again in fifth, becoming what the population of this planet looks like on third. Why is this planet— It seems to me that this planet is ahead of itself in the way the mind/body/spirit complex, or body complex of that, looks. What is the reason for this?

Your query is based upon a misconception. Do you wish us to comment or do you wish to re-question? [90.6]

Please comment on my misconception if that is possible.

In fifth density the manifestation of the physical complex is more and more under the control of the conscious mind complex. Therefore, the fifth-density entity may dissolve one manifestation and create another.

Consequently, the choice of a fifth-density entity or complex of entities wishing to communicate with your peoples would choose to resemble your peoples' physical-complex, chemical, yellow-ray vehicles. [90.7]

Sixth Density

Just as a slight appendage to that question, what would the rays of fifth and sixth density look like?

We may speak only approximately. However, we hope you understand, shall we say, that there is a distinctive difference in the color structure of each density. Fifth density is perhaps best described as extremely white in vibration. The sixth density of a whiteness which contains a golden quality as you would perceive it; these colors having to do with the blending into wisdom of the compassion learned in fourth density, then in sixth the blending of wisdom back into a unified understanding of compassion viewed with wisdom. This golden color is not of your spectrum but is what you would call alive. [32.20]

In your last statement did you mean that the sixth-density entities are actually creating the manifestation of the sun in their density? Could you explain what you meant by that?

In this density some entities whose means of reproduction is fusion may choose to perform this portion of experience as part of the beingness of the sun body. Thus you may think of portions of the light that you receive as offspring of the generative expression of sixth-density love. [41.5]

Then could you say that sixth-density entities are using that mechanism to be more closely co-Creators with the Infinite Creator?

This is precisely correct as seen in the latter portions of sixth density seeking the experiences of the gateway density. [41.6]

Then is sixth-density harvest strictly of social memory complex because again we have compassion blended back using wisdom?

This is quite correct. [43.15]

I am simply trying to trace the, you might say, the evolution of this catalyst that then, as you say, changes in fifth density. I might as well complete this and ask if there is any ingestion of food in sixth density?

This is correct. However, the nature of this food is that of light and is impossible to describe to you in any meaningful way as regards the thrust of your query. [43.24]

I have a question from Jim that states: "I think I have penetrated the mystery of my lifelong anger at making mistakes. I think I have always been aware subconsciously of my abilities to master new learnings, but my desire to successfully complete my mission on Earth has been energized by the Orion group into irrational and destructive anger when I fail. Could you comment on this observation?"

We would suggest that as this entity is aware of its position as a Wanderer, it may also consider what pre-incarnative decisions it undertook to make regarding the personal or self-oriented portion of the choosing to be here at this particular time/space. This entity is aware, as stated, that it has great potential, but potential for what? This is the pre-incarnative question. The work of sixth density is to unify wisdom and compassion. This entity abounds in wisdom. The compassion it is desirous of balancing has, as its antithesis, lack of compassion. In the more conscious being this expresses or manifests itself as lack of compassion for self. We feel this is the sum of suggested concepts for thought which we may offer at this time without infringement. [59.3]

Could you describe or tell me of rituals or technique used by Ra in seeking in the direction of service?

To speak of that which sixth-density social memory complexes labor within in order to advance is at best misprision of plain communication for much is lost in transmission of concept from density to density, and the discussion of sixth density is inevitably distorted greatly. However, we shall attempt to speak to your query for it is a helpful one in that it allows us to express once again the total unity of creation. We seek the Creator upon a level of shared experience to which you are not privy and rather than surrounding ourselves in light we have become light. Our understanding is that there is no other material except light. Our rituals, as you may call them, are an infinitely subtle continuation of the balancing processes which you are now beginning to experience. We seek now without polarity. Thus we do not invoke any power from without, for our search has become internalized as we become light/love and love/light. These are the balances we seek, the balances between compassion and wisdom which more and more allow our understanding of experience to be informed that we may come closer to the unity with the One Creator which we so joyfully seek. Your rituals at your level of progress contain the concept of polarization and this is most central at your particular space/time. [64.6]

Then you are saying as a result of the polarization in consciousness that has occurred later in the galactic evolution, that the experiences are much more, shall I say, profound or deeper along the two paths. Are these experiences independent of the other path or must there be action across the potentiated difference between the positive and negative polarity, or is it possible to have this experience simply because of the single polarity? This is difficult to ask.

We would agree. We shall attempt to pluck the gist of your query from the surrounding verbiage. The fourth and fifth densities are quite independent, the positive polarity functioning with no need of negative and vice-versa. It is to be noted that in attempting to sway third-density mind/body/spirit complexes in choosing polarity there evolves a good bit of interaction between the two polarities. In sixth density, the density of unity, the positive and negative paths must needs take in each other for all now must be seen as love/light and light/love. This is not difficult for the positive polarity, which sends love and light to all other-selves. It is difficult enough for service-to-self polarized entities that at some point the negative polarity is abandoned. [78.25]

Seventh Density

Thank you very much. In previous material, before we communicated with you, it was stated by the Confederation that there is actually no past or future... all is present. Would this be a good analogy?

There is past, present, and future in third density. In an overview such as an entity may have, removed from the space/time continuum, it may be seen that in the cycle of completion there exists only the present. We, ourselves, seek to learn this understanding. At the seventh level or dimension, we shall, if our humble efforts are sufficient, become one with all, thus having no memory, no identity, no past or future, but existing in the all. [16.22]

Does this mean that you would have awareness of all that is?

This is partially correct. It is our understanding that it would not be our awareness, but simply awareness of the Creator. In the Creator is all that there is. Therefore, this knowledge would be available. [16.23]

Eighth Density

In mentioning, in the previous session, the harvest, you mentioned the light-bringers from the octave. Am I to understand that those who provide the light for the gradation of graduation are of an octave above the one we experience? Could you tell me more about these light-bringers, who they are, etc.?

This octave density of which we have spoken is both omega and alpha, the spiritual mass of the infinite universes becoming one central sun or Creator once again. Then is born a new universe, a new infinity, a new Logos which incorporates all that the Creator has experienced of Itself. In this new octave there are also those who wander. We know very little across the boundary of octave except that these beings come to aid our octave in its Logos completion. [52.12]

In this section, there was talk of the evolution of the Cosmos as a whole through seven so-called Densities. In the third Density, humanoid beings on planets throughout the Cosmos are said to evolve toward enlightenment. In the next section, we take a look at the process of psycho-social-spiritual development that takes seven steps and that can be accomplished during a single lifetime, and which involves the seven so-called “chakras”.

✓ The Seven Energy Centers

The following series of quotations have been extracted from a compilation found at this website address: ><https://www.lawofone.info/c/Energy%20Centers><. You will see that this phrase is exactly equivalent to what are called “chakras” in other esoteric teachings. As with the chakras, each of the seven energy centers has a location on the physical body; it has a color associated with it; it has specific characteristics associated with it.

So let's begin the investigation.

How does an individual go about balancing himself? What is the first step?

The steps are only one; that is, an understanding of the energy centers which make up the mind/body/spirit complex. This understanding may be briefly summarized as follows:

The phrase “mind/body/spirit complex” is Ra's name for humans as distinct from animals (that have a body and a mind but not a spirit) and plants (that have only a body).

[FIRST] The first balancing is of the Malkuth, or Earth, vibratory energy complex, called the **red-ray** complex. An understanding and acceptance of this energy is fundamental.

“Malkuth” is not the name of a chakra; it is the Hebrew name for the lowest *sefirot* on the so-called “Tree of Life”; refer to **Chapter III-x**, “Kabbalah”, for a discussion of the Tree of Life and proposed correlations of *sefirot* with chakras (and planes and Worldviews). There you will read that Malkuth has been associated with the lowest chakra by some syncretistic metaphysicians, and I agree, with the stipulation that the location of the lowest chakra is not agreed upon. So far as I have been able to determine, by looking at graphic images of the Tree of life on the internet, brown is the color that is associated with Malkuth. However, over the history of the development and standardization of the chakra system, red has become consistently associated with the lowest chakra. Ra may or may not have been confused, but in any case, the first chakra is about ‘earth’, the physical body.

[SECOND] The next energy complex which may be blocked is the emotional or personal complex, also known as the **orange-ray** complex. This blockage will often demonstrate itself as personal eccentricities or distortions with regard to self-conscious understanding or acceptance of self.

The location of the second chakra on the physical body has not become standardized over the history of the development of the chakra system, so one wonders if that is why Ra omitted its location. My personal preference that the navel is the location of the second chakra.

[THIRD] The third blockage resembles most closely that which you have called ego. It is the **yellow-ray** or solar plexus center. Blockages in this center will often manifest as distortions towards power, manipulation, and other social behaviors concerning those close and those associated with the mind/body/spirit complex.

The location of the third chakra on the physical body has not become standardized over the history of the development of the chakra system, but I prefer the solar plexus, as does Ra.

Those with blockages in these first three energy centers, or nexi, will have continuing difficulties in ability to further their seeking of the Law of One.

Not many people are on a spiritual path, so they function mostly within the three lower chakras.

[FOURTH] The center of heart, or **green ray**, is the center from which third-density beings may springboard, shall we say, towards infinite intelligence. Blockages in this area may manifest as difficulties in expressing what you may call universal love or compassion.

The colors and locations of the four so-called “higher” chakras has been standardized over the history of the development of the chakra system. Ra is in agreement with the standard with regard to the fourth chakra, the Heart Chakra.

[FIFTH] The **blue-ray** center of energy streaming is the center which, for the first time, is outgoing as well as inpouring. Those blocked in this area may have difficulty in grasping the spirit/mind complexes of its own entity and further difficulty in expressing such understandings of self. Entities blocked in this area may have difficulties in accepting communication from other mind/body/spirit complexes.

Even though it does not say so in this quotation, the fifth chakra is the Throat Chakra, so that explains the reference to communication.

[SIXTH] The next center is the pineal [endocrine gland] or **indigo-ray** center. Those blocked in this center may experience a lessening of the influx of intelligent energy due to manifestations which appear as unworthiness. This is that of which you spoke. As you can see, this is but one of many distortions due to the several points of energy influx into the mind/body/spirit complex. The indigo-ray balancing is quite central to the type of work which revolves about the spirit complex, which has its influx then into the transformation or transmutation of third density to fourth density, it being the energy center receiving the least-distorted outpourings of love/light from intelligent energy and having also the potential for the key to the gateway of intelligent infinity.

The sixth chakra is generally called the Brow Chakra.

[SEVENTH] The remaining [**violet-ray**] center of energy influx is simply the total expression of the entity's vibratory complex of mind, body, and spirit. It is as it will be, “balanced” or “imbalanced” has no meaning at this energy level, for it gives and takes in its own balance. Whatever the distortion may be, it cannot be manipulated as can the others and, therefore, has no particular importance in viewing the balancing of an entity. [15.12]

Further on we see that the seventh energy center is associated with the color violet. This seventh level completes the rainbow spectrum of colors from red at the bottom of the chakra system to violet at the top, at the so-called Crown Chakra. These color associations has become the standard association over the history of the development of the chakra system.

Refer to **Chapter II-9**, “The Seven Chakras”, for more about this subject. The chakras of the physical body have correlates in the mental body, which also go by the name “centers”; refer to **Chapter II-3**, “The Seven Centers”, for more information about that.

✓ Levels of Psycho-Socio-Spiritual Development

Note that in Ra's descriptions quoted in the previous section, the chakra system has something to do with psycho-socio-spiritual development of the personality self in the lower three chakras, and of the soul self in the higher three chakras, with the turning point being the Heart Chakra, in the middle of the lower and higher

triads of chakras. This is consistent with the Natural Sequence schema and the Dialectic Attributes of Ordinal, Neutral, and Cardinal.

There is more information to be gleaned on this subject from other sessions with Ra:

I sense that there is fruitful ground for investigation of our development in tracing the evolution of the bodily energy centers because these seven centers seem to be linked with all of the sevens that I spoke of previously and be central to our own development. Could you describe the process of evolution of these bodily energy centers starting with the most primitive form of life to have them?

The basic pivotal points of each level of development; that is, each density beyond second, may be seen to be as follows: Firstly, the basic energy of so-called **red ray**. This ray may be understood to be the basic strengthening ray for each density. It shall never be condescended to as less important or productive of spiritual evolution, for it is the foundation ray.

Here the so-called “rays” are not associated with the chakras; they are associated with levels of development of what Ra refers to as the “mind/body/spirit complex”. Refer to **Chapter II-7**, “The Seven Rays” for a thorough discussion of that topic.

The next foundation ray is **yellow**. This is the great stepping stone ray. At this ray the mind/body potentiates to its fullest balance. The strong red/orange/yellow triad springboards the entity into the center ray of green. This is again a basic ray but not a primary ray.

The Ordinal triad of rays are “foundation” rays.

This is the resource for spiritual work. When **green ray** has been activated we find the third primary ray [yellow] being able to begin potentiation [for spiritual growth]. This [green] is the first true spiritual ray in that all transfers are of an integrated mind/body/spirit nature. The **blue ray** seats the learning/teachings of the spirit in each density within the mind/body complex, animating the whole, communicating to others this entirety of beingness.

The lower rays are not of an integrated and integrating nature because they are Ordinal, and the nature of Ordinality is fragmentation and competition. Starting with green ray and going into the higher rays, they are Neutral and Cardinal, and their nature is integrated and cooperative.

The **indigo ray**, though precious, is that ray worked upon only by the adept, as you would call it. It is the gateway to intelligent infinity [**violet ray**] bringing intelligent energy through. This is the energy center worked upon in those teachings considered inner, hidden, and occult, for this ray is that which is infinite in its possibilities. As you are aware, those who heal, teach, and work for the Creator in any way which may be seen to be both radiant and balanced are those activities which are indigo ray.

As you are aware, the **violet ray** is constant and does not figure into a discussion of the functions of ray activation in that it is the mark, the register, the identity, the true vibration of an entity. [39.10]

Elsewhere violet ray is described as the ‘thermometer’ of the health of the lower rays.

Following is a summary statement about the spectrum of rays:

Why are the red, yellow, and blue energy centers called primary centers? I think from the previous material I understand this, but is there some tracing of these primary colors back to intelligent infinity that is more profound than what you have given us?

The red, yellow, and blue rays are primary because they signify activity of a primary nature.

They also happen to be the three primary colors, because the other four colors can be made by combining them, but that does not seem to be the point of Ra’s characterization of these colors as “primary” rays.

Red ray is the foundation; **orange ray** the movement towards **yellow ray** which is the ray of self-awareness and interaction. **Green ray** is the movement through various experiences of energy exchanges having to do with compassion and all-forgiving love to the primary **blue ray** which is the first ray of radiation of self regardless of any actions from another.

In the table at the end of this chapter, I use some of these words to describe the rays. Blue Ray is the first of the Cardinal Rays, which is why it is described as “radiation”.

The **green-ray** entity [person] is ineffectual in the face of blockage from other-selves [in lower rays]. The blue-ray entity is a co-Creator. This may perhaps simply be a restatement of previous activity, but if you consider the function of the Logos as representative of the Infinite Creator in effectuating the knowing of the Creator by the Creator you may perhaps see the steps by which this may be accomplished. [41.25]

People functioning in Green-Ray consciousness do not have enough positive energy operating within themselves to override the negativity of people in Ordinal Rays, but Cardinal Ray people can effectuate and create and radiate their positive energy without being de-energized.

Seven Levels of the Physical Plane

There are some uncertainties in my mind about how to correlate the information in this section with other sections of this chapter, and with other chapters that present information from other sources. My attempts to sort it out are interspersed among quotations from the Ra material. My best guess is that Ra is referring to the seven levels of the Physical Plane as it applies to all that a human being is, as having facets of its total self existing on all seven levels of the Physical Plane.

In our esoteric literature numerous "bodies" are listed. I have here a list of the [1] physical body, the [2] etheric, the [3] emotional, the [4] astral, and the [5] mental [and the [6] causal]. Can you tell me if this listing is the proper number, and can you tell me the uses and purposes and effects, etc., of each of these or any other bodies that may be in our mind/body/spirit complex?

In the esoteric literature that I am familiar with, those six so-called "bodies", mentioned by the questioner, live on the lowest three "planes": physical and etheric on the first plane, emotional and astral on the second plane, mental and causal on the third plane. In that same literature, there are said to be seven levels to each plane, with three Ordinal levels and three Cardinal levels, with the middle Neutral level overlapping or encompassing the Ordinal and Cardinal levels. In this scheme, physical, emotional, and mental bodies are Ordinal, whereas etheric, astral, and causal bodies are Cardinal. Other sources just have one body for each plane, thus four bodies, with one body per plane, and the fourth body being of the fourth plane, the Akashic Plane. It seems Ra has a different scheme.

Because of these discrepancies and ambiguities among various sources, I am not certain of the following speculation, but it seems to me that all of the "bodies", spoken of by Ra in the following quotation, are more like "sub-bodies" of the body that lives on the Physical Plane, rather than the "bodies" that inhabit the four lower planes. Refer to [Chapter 2x](#), "The Four Bodies", for more discussion of the bodies that live on the four Planes.

The seven ray-colors (red to violet) are ascribed to these bodies same as they were to the chakras in a previous section. This is a potential source of confusion, but I understand the ray-colors to be a convenient way to correlate septenaries all up and down the Great Chain of Being. [Even though Ra does not say so, one may speculate that the chakras connect from the ... refer to Chapter 2x, "The Aura", for more discussion of that topic. What Ra says is compared and contrasted with other sources.](#) As you read the following, see if you agree or disagree with my interpretation that Ra's bodies are something different from bodies discussed in other esoteric literature and discussed in another chapter here in this *Cosmogony* book.

To answer your query fully would be the work of many sessions such as this one, for the interrelationships of the various bodies and each body's effects in various situations is an enormous study. However, we shall begin by referring your minds back to the spectrum of true colors and the usage of this understanding in grasping the various densities of your octave. [47.8]

Based on subsequent comments in this section, I take this phrase, "densities of your octave", to refer to the Physical Plane octave, which is said in various esoteric teachings, such as Theosophy and the Michael Teaching, to have seven levels or sub-planes; Ra said the same thing in the section on seven densities above. In Ra terms, these sub-planes would be secondary "densities" of the seven primary densities, aka planes.

We have the number seven repeated [as nested fractals] from the macrocosm to the microcosm in [space] structure and [time] experience. Therefore, it would only be expected that there would be seven basic bodies which we would perhaps be most lucid by stating as red-ray body, [orange-ray body,] etc. However, we are aware that you wish to correspond these bodies mentioned with the color rays. This will be confusing, for various teachers have offered their teach/learning understanding in various terms. Thus one may name a subtle body one thing and another find a different name. [47.8]

Semantics is often a problem; that is where two sources give the same name to two things, or two sources give a different name to one thing. One of the objectives of this *Cosmogony* book is to collate the information, compare and contrast what is said, attempt to reconcile it all, and provide a basis for uniformity of terminology from the derivation of the Process/Aspect System matrix from clearly-defined first principles.

The **red-ray body** is your chemical body. However, it is not the body which you have as clothing in the physical. It is the unconstructed material of the body, the elemental body without form. This basic unformed material body is important to understand, for there are healings which may be carried out by the simple understanding of the elements present in the physical vehicle. [47.8]

Perhaps Ra is saying here that the red-ray, chemical body, is what pharmaceutical drugs act upon, rather than other healing methods. [Based on what is said next, the mere chemical body would appear to be a](#)

machine that is not yet animated with mind and spirit, perhaps not even animated with the organizing principle of “life”, as in the life-force or the anti-entropy energy.

The **orange-ray body** is the physical body complex. This body complex is still not the body you inhabit but rather the body formed without self-awareness, the body in the womb before the spirit/mind complex enters. This body may live without the inhabitation of the mind and spirit complexes. However, it seldom does so.

[[Research if Ra compares this body to animal bodies that likewise are not animated with mind and spirit.]]

The **yellow-ray body** is your physical vehicle which you know of at this time and in which you experience [spiritual] catalyst. This body has the mind/body/spirit characteristics and is equal to the physical illusion, as you have called it. [47.8]

“Catalyst” is Ra’s word for life experiences that prompt spiritual seeking and growth. Without prompting from higher rays (green and up), the personality self would care nothing about spiritual seeking and growth.

The **green-ray body** is that body which may be seen in séance when what you call ectoplasm is furnished. This is a lighter body packed more densely with life. You may call this the astral body following some other teachings. Others have called this same body the etheric body. However, this is not correct in the sense that the etheric body is that body of gateway wherein intelligent energy [from higher rays] is able to mold the mind/body/spirit complex [the yellow-ray body]. [47.8]

My understanding from Theosophy is that the word “etheric” typically refers to the three Cardinal levels of the Physical Plane. These are the abstract levels, the “mind”, you might say, of the world, not recognized by materialism, but recognized by spiritualism. I understand the etheric body to be the residence of the individual human soul, the soul that is the “gateway to”, aka has contact with, the astral body, aka the higher self. The etheric body also “molds” or forms the personality the individual identity that survives the death of the physical (red-orange-yellow) body. So, the green-ray body is the interface between the Cardinal bodies and the Ordinal bodies of the Physical Plane.

The light body or **blue-ray body** may be called the devachanic body. There are many other names for this body especially in your so-called Indian Sutras or writings, for there are those among these peoples which have explored these regions and understand the various types of devachanic bodies. There are many, many types of bodies in each density [plane], much like your own [plane]. [47.8]

Wikipedia has an article on the devachan realm: <https://en.wikipedia.org/wiki/Devachan> . [[This is something I need to research and write about in other chapters.]]

The **indigo-ray body** which we choose to call the etheric body is, as we have said, the gateway body. In this body, form is substance, and you may only see this body as that of light as it may mold itself as it desires.

My interpretation here is that Ra seems to limit the “etheric” body to just the sixth level of the Physical Plane, rather than use the word to refer to all three Cardinal levels of the Physical Plane, which is what I have seen in other esoteric literature.

The **violet-ray body** may perhaps be understood as what you might call the Buddha body or that body which is complete.

Each of these bodies has an effect upon your mind/body/spirit complex in your life beingness. The interrelationships, as we have said, are many and complex.

Perhaps one suggestion that may be indicated is this: The indigo-ray body may be used by the healer once the healer becomes able to place its consciousness in this etheric state. The violet-ray or Buddhic body is of equal efficacy to the healer, for within it lies a sense of wholeness which is extremely close to unity with all that there is. These bodies are part of each entity and the proper use of them and understanding of them is, though far advanced from the standpoint of third-density harvest, nevertheless useful to the adept. [47.8]

So, it would seem that the Buddha body is the sum total of the other six bodies, and the goal of “healing” of lower bodies is to come to realize the completeness, the unity, the wholeness that simply exists in the Buddha body. Elsewhere in this book, the seventh level of whatever septenary has the Attributes of One-Dimensional Cardinal, which is the essence of health, unity, wholeness, completion.

[[I do not see a way to fit the following unedited Q&A exchanges into the sections; revisit during polishing.]]

Will you expand on the positive and negative magnetic polarizations in general and how it applies to, say, individuals and planets, etc.? I think there is a correlation here, but I’m not sure.

It is correct that there is a correlation between the energy field of an entity of your nature and planetary bodies, for all material is constructed by means of the dynamic tension of the magnetic field. The lines of force in both

cases may be seen to be much like the interweaving spirals of the braided hair. Thus positive and negative wind and interweave forming geometric relationships in the energy fields of both persons, as you would call a mind/body/spirit complex, and planets. The negative pole is the south pole or the lower pole. The north or upper pole is positive. The crisscrossings of these spiraling energies form primary, secondary, and tertiary energy centers. You are familiar with the primary energy centers of the physical, mental, and spiritual body complex. Secondary points of the crisscrossing of positive and negative center orientation revolve about several of your centers. The yellow-ray center may be seen to have secondary energy centers in elbow, in knee, and in the subtle bodies at a slight spacing from the physical vehicle at points describing diamonds about the entity's navel area surrounding the body. One may examine each of the energy centers for such secondary centers. Some of your peoples work with these energy centers, and you call this acupuncture. However, it is to be noted that there are most often anomalies in the placement of the energy centers so that the scientific precision of this practice is brought into question. Like most scientific attempts at precision, it fails to take into account the unique qualities of each creation. The most important concept to grasp about the energy field is that the lower or negative pole will draw the universal energy into itself from the Cosmos. Therefrom it will move upward to be met and reacted to by the positive spiraling energy moving downward from within. The measure of an entity's level of ray activity is the locus wherein the south pole outer energy has been met by the inner spiraling positive energy. As an entity grows more polarized this locus will move upwards. This phenomenon has been called by your peoples the kundalini. However, it may better be thought of as the meeting place of cosmic and inner, shall we say, vibratory understanding. To attempt to raise the locus of this meeting without realizing the metaphysical principles of magnetism upon which this depends is to invite great imbalance. [49.5]

More on Red Ray

In the last session [you] made the statement that experiences are attracted to the entity through the south pole. Could you expand on that and give us a definition of what you mean?

It takes some consideration to accomplish the proper perspective for grasping the sense of the above information. The south or negative pole is one which attracts. It pulls unto itself those things magnetized to it. So [it is] with the mind/body/spirit complex. The in-flow of experience is of the south pole influx. You may consider this a simplistic statement. The only specific part of this correctness is that the red-ray or foundation energy center, being the lowest or root energy center of the physical vehicle, will have the first opportunity to react to any experience. In this way only, you may see a physical locus of the south pole being identified with the root energy center. In every facet of mind and body the root or foundation will be given the opportunity to function first. What is this opportunity but survival? This is the root possibility of response and may be found to be characteristic of the basic functions of both mind and body. You will find this instinct the strongest, and once this is balanced much is open to the seeker. The south pole then ceases blocking the experiential data, and higher energy centers of mind and body become availed of the opportunity to use the experience drawn to it. [50.2]

In many of the septenaries reviewed this book, it is said that the first stage is about survival, the preference of life over death.

[[I do not see a way to fit the following unedited Q&A exchanges into the sections; revisit during polishing.]]

Right now I'm getting two feelings simultaneously. Is this normal to get two at once?

The most normal for the adept is the following: the indigo stimulation activating that great gateway into healing, magical work, prayerful attention, and the radiance of being; and the stimulation of the violet ray which is the spiritual giving and taking from and to Creator, from Creator to Creator. [50.13]

I would like to make a statement. I'm sure I'm somewhat off with this. It's a very difficult question to ask for me, because I don't really know what I'm talking about. But it seems to me, and you can tell me where I am going wrong with this statement, that we have seven bodies each corresponding to one of the seven colors of the spectrum and that energy that creates these seven bodies is a universal type of energy that streams into our planetary environment and comes in through seven energy centers that we have called chakras to develop and perfect these bodies, and this is.... Each of these bodies is in somehow related to the mental configuration that we have and the perfection of each of these bodies and the total instreaming, you might say, of this energy is a function of this mental configuration, and through this mental configuration we may block, to some extent, the instreamings of energy that create each of these seven bodies. Could you comment on where I am wrong and correct me in this that I have stated?

Your statement is substantially correct. To use the term "mental configuration" is to oversimplify the manners of blockage of instreaming which occur in your density. The mind complex has a relationship to the spirit and body complexes which is not fixed. Thus blockages may occur betwixt spirit and mind, or body and mind,

upon many different levels. We reiterate that each energy center has seven sub-colors, let us say, for convenience. Thus spiritual/mental blockages combined with mental/bodily blockages may affect each of the energy centers in several differing ways. Thus you may see the subtle nature of the balancing and evolutionary process. [51.5]

Do all mind/body/spirit complexes in the entire creation have the seven energy centers once they have reached full development or development to the point where they can have seven energy centers?

These energy centers are in potential in macrocosm from the beginning of creation by the Logos. Coming out of timelessness, all is prepared. This is so of the infinite creation. [54.9]

I'll make this statement which may be somewhat distorted and let you correct it. We have, coming through the feet and base of the spine, the total energy that the mind/body/spirit complex will receive in the way of what we call light. Each energy center as it is met filters out and uses a portion of this energy, red through violet. Is this correct?

This is largely correct. The exceptions are as follows: The energy ingress ends with indigo. The violet ray is a thermometer or indicator of the whole. [54.30]

As this energy is absorbed by the energy centers at some point it is not only absorbed into the being but radiates through the energy center outwardly. I believe this begins with the blue center and, and also occurs with the indigo and violet? Is this correct?

Firstly, we would state that we had not finished answering the previous query and may thus answer both in part by stating that in the fully activated entity, only that small portion of instreaming light needed to tune the energy center is used, the great remainder being free to be channeled and attracted upwards. To answer your second question more fully we may say that it is correct that radiation without the necessity of response begins with blue ray although the green ray, being the great transitional ray, must be given all careful consideration, for until transfers of energy of all types has been experienced and mastered to a great extent, there will be blockages in the blue and indigo radiations. Again, the violet emanation is, in this context, a resource from which, through indigo, intelligent infinity may be contacted. The radiation thereof will not be violet ray but rather green, blue, or indigo depending upon the nature of the type of intelligence which infinity has brought through into discernible energy. The green-ray type of radiation in this case is the healing, the blue-ray the communication and inspiration, the indigo that energy of the adept which has its place in faith. [54.31]

[[Make a section to discuss space/time and time/space and introduce Dewey Larson.]]

I want to go on more questioning on the pyramid, but I want to ask a question [name] has here. I'll throw it in at this point. Could you please expand on the concept of space/time and time/space and how to get past this, the concept of these things, and at what density level do these concepts no longer affect the individual?

The space/time (Ordinal levels of the Physical Plane) and time/space [Cardinal levels of the Physical Plane] concepts are those concepts describing as mathematically as possible the relationships of your illusion, that which is seen to that which is unseen. These descriptive terms are clumsy. They, however, suffice for this work. In the experiences of the mystical search for unity, these need never be considered, for they are but part of an illusory system. The seeker seeks the One. This One is to be sought, as we have said, by the balanced and self-accepting self, aware both of its apparent distortions and its total perfection. Resting in this balanced awareness, the entity then opens the self to the universe which it is. The light energy of all things may then be attracted by this intense seeking, and wherever the inner seeking meets the attracted cosmic prana, realization of the One takes place. The purpose of clearing each energy center is to allow that meeting place to occur at the indigo-ray vibration, thus making contact with intelligent infinity and dissolving all illusions. Service-to-others is automatic at the released energy generated by this state of consciousness. The space/time and time/space distinctions, as you understand them, do not hold sway except in third density. However, fourth, fifth, and to some extent, sixth, work within some system of polarized space/time and time/space. The calculations necessary to move from one system to another through the dimensions are somewhat difficult. Therefore, we have the most difficulty sharing numerical concepts with you and take this opportunity to repeat our request that you monitor our numbers and query any that seem questionable. [57.33]

You made the statement in a previous session that the true adept lives more and more as it is. Will you explain and expand upon that statement?

Each entity [person] is the Creator. The entity, as it becomes more and more conscious of its self, gradually comes to the turning point at which it determines to seek either in service to others or in service to self. The seeker becomes the adept when it has balanced with minimal adequacy the energy centers red, orange, yellow, and blue with the addition of the green for the positive, thus moving into indigo work.

On a spiritual path, a person becomes an “adept” after it has attained proficiency in the Ordinal and Neutral rays plus the Cardinal ray, Blue.

The adept then begins to do less of the preliminary or outer work, having to do with function, and begins to effect the inner work which has to do with being. As the adept becomes a more and more consciously crystallized entity it gradually manifests more and more of that which it always has been since before time; that is, the One Infinite Creator. [75.23]

The terms “outer” and “inner” are somewhat synonymous with Ordinal and Cardinal.

More Descriptions of the Rays

[[Delete information that is not descriptive of the nature or characteristics of the ray. Include information of previous Q&A exchanges. Include information that helps to correlate rays with other septenaries, Ra's or others. Organize the information as a progressive didactic revelation.]]

Rays in General

Red Ray

Orange Ray

Would you give me the same type of information about the self in relation to the societal self?

The unmanifested self may find its lessons those which develop any of the energy influx centers of the mind/body/spirit complex. The societal and self interactions most often concentrate upon the second and third energy centers. Thus those most active in attempting to remake or alter the society are those working from feelings of being correct personally or of having answers which will put power in a more correct configuration. This may be seen to be of a full travel from negative to positive in orientation. Either will activate these energy ray centers. There are some few whose desires to aid society [fix, change the world] are of a green-ray nature or above. These entities, however, are few due to the understanding, may we say, of fourth [green] ray that universal love freely given is more to be desired than [aid to] principalities [politics, government, bureaucracy] or even the rearrangement of peoples or political structures. [34.9]

I thought that that was correct, but I wasn't sure. Can you give me the same type of information that we have been getting here with respect to the unmanifested self interacting between self and gadgets, toys, etc. — inventions?

In this particular instance we again concentrate for the most part in the orange and in the yellow energy centers. In a negative sense many of the gadgets among your peoples, that is what you call your communication devices and other distractions such as the less competitive games, may be seen to have the distortion of keeping the mind/body/spirit complex unactivated so that yellow- and orange-ray activity is much weakened thus carefully decreasing the possibility of eventual green-ray activation. Others of your gadgets may be seen to be tools whereby the entity explores the capabilities of its physical or mental complexes and in some few cases, the spiritual complex, thus activating the orange ray in what you call your [competitive] team sports and in other gadgets such as your modes of transport. These may be seen to be ways of investigating the feelings of power; more especially, power over others or a group power over another group of other-selves. [34.12]

Is this energy center, then, on a very small scale related to the orange energy center in man?

The true color is precisely the same. However, the consciousness of the second-density [animal] beginning is primitive and the use of orange ray limited to the expression of self which may be seen to be movement and survival. In third density [ordinary humanity], at this time, those clinging to orange ray have a much more complex system of distortions through which orange ray is manifested. This is somewhat complicated. We shall endeavor to simplify. The appropriate true color for third density [humanoid] is, as you have ascertained, yellow. However, the influences of the true color, green, acting upon yellow-ray entities have caused many

entities to revert to the consideration of self rather than the stepping forward into consideration of other-self or green ray. This may not be seen to be of a negatively polarized nature, as the negatively polarized entity is working very intensively with the deepest manifestations of yellow-ray group energies, especially the manipulations of other-self for service to self. Those reverting to orange ray, and we may add these are many upon your plane at this time, are those who feel the vibrations of true color green and, therefore, respond by rejecting governmental and societal activities as such and seek once more the self. However, not having developed the yellow ray properly so that it balances the personal vibratory rates of the entity, the entity then is faced with the task of further activation and balancing of the self in relation to the self, thus the orange-ray manifestations at this space/time nexus. Thus true color orange is that which it is, without difference. However, the manifestations of this or any ray may be seen to be most various depending upon the vibratory levels and balances of the mind/body or mind/body/spirit complexes which are expressing these energies. [41.14]

Yellow Ray

Would you give me the same type of information about the self in relation to the societal self?

The unmanifested self may find its lessons those which develop any of the energy influx centers of the mind/body/spirit complex. The societal and self interactions most often concentrate upon the second and third energy centers. Thus those most active in attempting to remake or alter the society are those working from feelings of being correct personally or of having answers which will put power in a more correct configuration. This may be seen to be of a full travel from negative to positive in orientation. Either will activate these energy ray centers. There are some few whose desires to aid society are of a green-ray nature or above. These entities, however, are few due to the understanding, may we say, of fourth ray that universal love freely given is more to be desired than principalities or even the rearrangement of peoples or political structures. [34.9]

Now, is there — the two areas then that the instrument can look to for curing this problem... I understand that the yellow-ray blockage problem has completely repaired, shall I say. If this is not correct, could you make suggestions on that, please?

Each entity [person] must, in order to completely unblock yellow ray, love all which are in relationship to it, with hope only of the other-selves' joy, peace, and comfort. [102.11]

Green Ray

I just meant was it possible, say, for a green-ray... when we're talking about green-ray activation and energy transfers, is it possible for a green-ray person who is primarily green-ray activation to vary on both sides of green ray a large or a small amount in energy activation, or does he stay primarily green-ray?

We grasp the newness of material requested by you. It was unclear, for we thought we had covered this material. The portion covered is this: the green-ray activation is always vulnerable to the yellow or orange ray of possession, this being largely yellow ray but often coming into orange ray. Fear of possession, desire for possession, fear of being possessed, desire to be possessed: these are the distortions which will cause the deactivation of green-ray energy transfer. The new material is this: once the green ray has been achieved, the ability of the entity to enter blue ray is immediate and is only awaiting the efforts of the individual. The indigo ray is opened only through considerable discipline and practice largely having to do with acceptance of self, not only as the polarized and balanced self but as the Creator, as an entity of infinite worth. This will begin to activate the indigo ray. [32.14]

Blue Ray

I would like to take as an example an entity, at birth, who is roughly high on the seniority list for positive polarization and possible harvestability at the end of this cycle and follow a full cycle of his experience starting before his incarnation— which body is activated, process of becoming incarnate, the activation of the third-density physical body, process as the body moves through this density and is acted upon by catalyst, and then the process of death, and the activation of the various bodies so that we make a full circuit from a point prior to incarnation back around through incarnation and death and back to that position you might say in one cycle of incarnation in this density. Could you do that for me?

Your query is most distorted for it assumes that creations are alike. Each mind/body/spirit complex has its own patterns of activation and its own rhythms of awakening. The important thing for harvest is the harmonious balance between the various energy centers of the mind/body/spirit complex. This is to be noted as of relative import. We grasp the thrust of your query and will make a most general answer stressing the unimportance of such arbitrary generalizations. The entity, before incarnation, dwells in the appropriate, shall we say, place in time/space. The true color type of this location will be dependent upon the entity's needs. Those entities, for

instance which, being Wanderers, have the green, blue, or indigo true-color core of mind/body/spirit complex will have rested therein. Entrance into incarnation requires the investment or activation of the indigo-ray or etheric body for this is the form maker. The young or small physical mind/body/spirit complex has the seven energy centers potentiated before the birthing process. There are also analogs in time/space of these energy centers corresponding to the seven energy centers in each of the seven true-color densities. Thus in the microcosm exists all the experience that is prepared. It is as though the infant contains the universe. The patterns of activation of an entity of high seniority will undoubtedly move with some rapidity to the green-ray level which is the springboard to primary blue. There is always some difficulty in penetrating blue primary energy for it requires that which your people have in great paucity; that is, honesty. Blue ray is the ray of free communication with self and with other-self. Having accepted that an harvestable or nearly harvestable entity will be working from this green-ray springboard one may then posit that the experiences in the remainder of the incarnation will be focused upon activation of the primary blue ray of freely given communication, of indigo ray, that of freely shared intelligent energy, and if possible, moving through this gateway, the penetration of violet-ray intelligent infinity. This may be seen to be manifested by a sense of the consecrate or hallowed nature of everyday creations and activities. Upon the bodily complex death, as you call this transition, the entity will immediately, upon realization of its state, return to the indigo form-maker body and rest therein until the proper future placement is made. Here we have the anomaly of harvest. In harvest the entity will then transfer its indigo body into violet-ray manifestation as seen in true-color yellow. This is for the purpose of gauging the harvestability of the entity. After this anomalous activity has been carefully completed, the entity will move into indigo body again and be placed in the correct true-color locus in space/time and time/space at which time the healings and learn/teachings necessary shall be completed and further incarnation needs determined. [48.7]

Indigo Ray

I have a question here from Jim first. He says: "For the past nine years I have [had] what I call frontal lobes experiences in the pre-consciousness state of sleep just before I wake up in the morning. They are a combination of pleasure and pressure which begins in the frontal lobes and spreads in pulses through the whole brain and feels like an orgasm in my brain. I have had over 200 of these experiences and often they are accompanied by visions and voices which seldom make much sense to me. What is the source of these frontal lobes experiences?"

We scan the questioner and find some pertinent information already available which regards the physiological disposition of this particular part of the brain. The experiences described and experienced are those distillations which may be experienced after a concentration of effort upon the opening of the gateway, or indigo, mind complex so that experience of a sacramental, or violet, ray may occur. These experiences are the beginnings of that which, as the body, the mind, and the spirit become integrated at the gateway, or indigo, level, may then yield not only the experience of joy but the comprehension of intelligent infinity which accompanies it. Thus the body complex orgasm and mind complex orgasm becoming integrated may then set forth the proper gateway for the spiritual complex integration and its use as a shuttle for the sacrament of the fully experienced presence of the One Infinite Creator [in Violet Ray]. Thus there is much to which the questioner may look forward. [49.2]

The experience of the activation of Indigo Ray produces the physical sensation of pressure in the brain behind the forehead, at the location of the Brow Chakra. At the same time the consciousness experiences "pleasure, orgasm, vision, joy". Elsewhere, Ra located this more specifically in the pineal gland, deep within the brain. There is a very brief introduction to this idea in the Stanford Encyclopedia of Philosophy:

As philosophy reduced the pineal gland to just another part of the brain and science studied it as one endocrine gland among many, the pineal gland continued to have an exalted status in the realm of pseudo-science. Towards the end of the nineteenth century, Madame Blavatsky, the founder of theosophy, identified the "third eye" discovered by the comparative anatomists of her time with the "eye of Shiva" of "the Hindu mystics" and concluded that the pineal body of modern man is an atrophied vestige of this "organ of spiritual vision" (Blavatsky 1888, vol. 2, pp. 289–306). This theory is still fairly well-known today.

[><https://plato.stanford.edu/entries/pineal-gland/#PseuScie>< — retrieved 10 June 2020]

The sixth chakra is to be correlated with the Higher Emotional Center of the Gurdjieff Teaching, which I prefer to call the Sympathy Center.

In a subsequent session, more was said about the frontal lobes of the brain and their function.

OK, then I will ask this one. Could you tell us the purpose of the frontal lobes of the brain and the conditions necessary for their activation?

The frontal lobes of the brain will, shall we say, have much more use in fourth density. The primary mental/emotive condition of this large area of the so-called brain is joy or love in its creative sense. Thus, the energies which we have discussed in relationship to the pyramids — all of the healing, the learning, the building, and the energizing — are to be found in this area. This is the area tapped by the adept. This is the area which, working through the trunk and root of mind, makes contact with intelligent energy and through this gateway, intelligent infinity. [61.13]

I have a question here that I am going to answer and let you correct. I see that the disciplines of the personality feed the indigo-ray energy center and affect the power of the white magician by unblocking the lower energy centers and allowing for a free flow of the upward spiraling light to reach the indigo center. Is this correct?

No. [74.5]

Would you please correct me?

The indigo center is indeed most important for the work of the adept. However, it cannot, no matter how crystallized, correct to any extent whatsoever imbalances or blockages in other energy centers. They must needs be cleared seriatim [sequentially] from red upwards. [74.6]

I'm not sure if I understand this. The question is how do disciplines of the personality feed the indigo-ray energy center and affect the power of the white magician. Does that question make sense?

Yes. [74.7]

Would you answer it please?

We would be happy to answer this query. We understood the previous query as being of other import. The indigo ray is the ray of the adept. A great deal of the answer you seek is in this sentence. There is an identification between the crystallization of that energy center and the improvement of the working of the mind/body/spirit as it begins to transcend space/time balancing and to enter the combined realms of space/time and time/space. [74.8]

Violet Ray

Uh, just a minute. I don't think that anything I could ask at this time would be brief enough. Just a minute. [Sounds of papers being handled.] Yes, there's one question. Is there any difference in violet-ray activity or brightness between entities who are at the entrance level to fourth-density positive and negative?

This is correct. The violet ray of the positive fourth-density will be tinged with the green, blue, indigo triad of energies. This tinge may be seen as a portion of a rainbow or prism, as you know it, the rays being quite distinct. The violet ray of fourth-density negative has in its aura, shall we say, the tinge of red, orange, yellow, these three rays being muddled rather than distinct. [33.19]

Could you tell me how the various bodies, red through violet, are linked to the energy center, centers, red through violet? Are they linked in some way?

As we have noted, each of the true-color densities has the seven energy centers and each entity contains all this in potentiation. The activation, while in yellow ray, of violet-ray intelligent infinity is a passport to the next octave of experience. There are adepts who have penetrated many, many of the energy centers and several of the true colors. This must be done with utmost care while in the physical body for as we noted when speaking of the dangers of linking red/orange/yellow circuitry with true-color blue circuitry the potential for disarrangement of the mind/body/spirit complex is great. However, the entity who penetrates intelligent infinity is basically capable of walking the universe with unfettered tread. [48.10]

Overview of Rays

The steps are only one; that is, an understanding of the energy centers which make up the mind/body/spirit complex. This understanding may be briefly summarized as follows. The first balancing is of the Malkuth, or

Earth, vibratory energy complex, called the red-ray complex. An understanding and acceptance of this energy is fundamental.

The next energy complex, which may be blocked is the emotional, or personal complex, also known as the orange-ray complex. This blockage will often demonstrate itself as personal eccentricities or distortions with regard to self-conscious understanding or acceptance of self.

The third blockage resembles most closely that which you have called ego. It is the yellow-ray or solar plexus center. Blockages in this center will often manifest as distortions towards power manipulation and other social behaviors concerning those close and those associated with the mind/body/spirit complex. Those with blockages in these first three energy centers, or nexi, will have continuing difficulties in ability to further their seeking of the Law of One.

The center of heart, or green ray, is the center from which third-density beings may springboard, shall we say, towards infinite intelligence. Blockages in this area may manifest as difficulties in expressing what you may call universal love or compassion.

The blue-ray center of energy streaming is the center which, for the first time, is outgoing as well as inpouring. Those blocked in this area may have difficulty in grasping the spirit/mind complexes of its own entity and further difficulty in expressing such understandings of self. Entities blocked in this area may have difficulties in accepting communication from other mind/body/spirit complexes.

The next center is the pineal or indigo-ray center. Those blocked in this center may experience a lessening of the influx of intelligent energy due to manifestations which appear as unworthiness. This is that of which you spoke. As you can see, this is but one of many distortions due to the several points of energy influx into the mind/body/spirit complex. The indigo-ray balancing is quite central to the type of work which revolves about the spirit complex, which has its influx then into the transformation or transmutation of third density to fourth density, it being the energy center receiving the least distorted outpourings of love/light from intelligent energy and having also the potential for the key to the gateway of intelligent infinity.

The remaining center of energy influx [violet ray] is simply the total expression of the entity's vibratory complex of mind, body, and spirit. It is as it will be, "balanced" or "imbalanced" has no meaning at this energy level, for it gives and takes in its own balance. Whatever the distortion may be, it cannot be manipulated as can the others and, therefore, has no particular importance in viewing the balancing of an entity. [15.12]





Chapter II-6

① THE SEVEN PLANES

This chapter introduces and discusses the idea that there are six reality systems beyond what we call the universe. In the esoteric metaphysical literature, these are typically referred to as “planes” in the English language. By “reality system”, I refer to a coherent, consistent, mostly self-contained, objective world within which a subjective consciousness can be embedded. All of the planes are said in the esoteric literature to have this characteristic. It is typically said that there are seven of them, so this means that they constitute a septenary. As we will see in this chapter, they are typically said to follow the Natural Sequence, the subject of this *Cosmogony* book.

Like other instantiations of the Natural Sequence in ancient and modern-day spiritual teachings, this instantiation of the septenary does not have direct confirmation in the exoteric belief system of the scientific establishment at the present time. This means that the existence of these planes is not directly amenable to study by the so-called “hard” sciences, which study the objective world, and which rely on the five physical senses (touch, taste, sight, hearing, smelling) to give us reliable information about the world. However, the planes have been intuited and perceived by mystics and other types of psychonauts for millennia. It is my contention that the existence of the planes and their characteristics can also be inferred by extrapolation from the realm that is amenable to sensory examination, the exoteric realm that is discussed in other Parts of this book.

There is an enormous amount of information about the planes on the internet. It is overwhelming to even think about the herculean task of researching it all. Thus the presentation below does not even pretend to be exhaustive on the subject. And I may not have found the best sources in what little research I did. Readers are encouraged to do research on their own, and not take my word for it. Just direct your favorite search engine on “seven planes”, or narrow it down to the names of each of the planes you see in this brief document.

In the documentation of our research on planes, we are going to delve into various spiritual teachings and traditions. As we will see in this chapter, it is said in the esoteric literature that the soul or essence of all conscious beings cycles through these seven planes. As such, this is the longest developmental sequence reviewed in this book; all other developmental sequences are subsets and sub-subsets and so on of this longest developmental sequence.

The Great Chain/Nest of Being

While we are on the subject of planes, let me remind the reader of the subject of the Great Chain of Being (GCB), and the Great Nest of Being (GNB) — metaphors that appear in various other Parts and chapters of this *Cosmogony* book in relation to other subjects. Both the GCB and the GNB are expressions of the notion that I call “the Hierarchy Principle”, described and explained in Part One, in [Chapter I-X](#), “Principles of the Natural Sequence”.

Basically and briefly, the metaphor of the GCB is of interconnecting links of a chain representing how the universe is connected together in interdependent parts. The interconnections might be metaphorically one-dimensional as in a chain, or the interconnections might be metaphorically two-dimensional as in a net, or the interconnections might be metaphorically three-dimensional as in a lattice. An internet search will lead one to many resources on the topic of the GCB. As you might expect, Wikipedia itself has an introduction to the topic: https://en.wikipedia.org/wiki/Great_chain_of_being.

Regarding the GNB, that is a metaphor for the observation that lower–earlier levels and stages of the Cosmos are contained within higher–later levels and stages of the Cosmos. Its relevance to this *Cosmogony* book is that

the Cosmos, from weakest to strongest, from simplest to most complex, from smallest to largest, is an intricately-woven tapestry. Ken Wilber (refer to Part Five, Chapter V-12) formalized and elaborated on this concept in regard to human developmental psychology, but the notion had precursors going back into ancient times, and covers most instantiations of the Natural Sequence schema. The basic idea here is that the components of the universe, from atoms to galaxies, are nested within each other. That is, atoms are nested within molecules are nested within cells are nested within organisms are nested within ecosystems are nested within planets are nested within solar systems are nested within galaxies are nested within universes.

The notion of “planes” is a variation on the notion of the GC/NB. Its relevance to this chapter is that the planes are the largest ‘nest’, subplanes are nested within planes, then, in terms of the evolution of the soul or essence, Soul Ages/Worldviews are nested within the Physical Plane, Levels/Zones are nested within Ages, and Life-Stages are nested within Levels. The range of coverage of the GC/NB is the entire spectrum from the Cosmos to human consciousness, from the laws of physics to the laws of personality.

In the context of the GCB and the GNB, it seems appropriate to share a quotation from the Gurdjieffian teachings:

It is impossible to study a system of the universe without studying man. At the same time it is impossible to study man without studying the universe. Man is an image of the world. He was created by the same laws which created the whole of the world. By knowing and understanding himself he will know and understand the whole world, all the laws that create and govern the world. And at the same time by studying the world and the laws that govern the world he will learn and understand the laws that govern him. In this connection some laws are understood and assimilated more easily by studying the objective world, while man can only understand other laws by studying himself. The study of the world and the study of man must therefore run parallel, one helping the other. [P. D. Ouspensky, *In Search of the Miraculous*, p. 75]

Refer to Chapter II-3 for a brief review of those components of the Gurdjieffian teaching that are relevant to this *Cosmogony* book in realms other than planes.

It may be that a mathematical basis for the existence of the trans-physical planes can be found in some theories of physics, such as the string theory which proposes that there geometric “dimensions” beyond the three that we commonly experience. The basic notion is that there are influences on this world that are outside of the ordinary, therefore extraordinary, therefore paranormal. Superstitious religions with irrational and harmful dogmas and doctrines have given esotericism a bad name in the belief system of many people, but I suggest that the intuitions of mystics as well as mathematicians make the notion of hyper-dimensional, aka “spiritual”, realms worth considering in our ontology.

Introduction to Planes per Wikipedia

There is plenty of information about planes on the internet. Readers are encouraged to research the topic for themselves. Just point your favorite search engine to “seven planes,” or narrow it down to the name of each of the planes you see in this chapter. The following introduction is from the Wikipedia article on the subject. As usual, I underline words and phrases that I comment on between quotations, and I sometimes insert explanatory comments surrounded by [brackets].

In esoteric cosmology, a plane is conceived as a subtle state, level, or region of reality, each plane corresponding to some type, kind, or category of being.

The word “being” refers to the notion that the Cosmos is a belief/value/behavior system that is differentiated in the fundamental substance of the creator/sustainer, called “Tao” in this *Cosmogony* book. If we take “being” to refer to the space-like component of a reality system or plane, then we could take “doing” to refer to the time-like component of a reality system or plane. According to the esoteric traditions listed below, the planes have structure in both their space-like component and their time-like component:

The concept may be found in religious and esoteric teachings — e.g. Vedanta (Advaita Vedanta), Ayyavazhi, shamanism, Hermeticism, Neoplatonism, Gnosticism, Kashmir Shaivism, Sant Mat/Surat Shabd Yoga, Sufism, Druze, Kabbalah, Theosophy, Anthroposophy, Rosicrucianism (Esoteric Christian), Eckankar, Ascended Master Teachings, etc. — which propound the idea of a whole series of subtle planes or worlds or dimensions which, from a center, interpenetrate themselves and the physical planet in which we live, the solar systems, and all the physical structures of the universe. This interpenetration of planes culminates in the universe itself as a physical structured, dynamic, and evolutive expression emanated through a series of steadily denser stages, becoming progressively more material and embodied.

This chapter on planes discusses what those three traditions that have their names underlined have to say about planes. Other chapters in this book discuss other aspects of some of the other named traditions that have a septenarian cosmogony. Notice the underlined words “evolutive” and “stages”; as we will see in this chapter, esotericists propose that the seven planes consist of seven space-like levels/seven time-like stages where/when sub-units of the Cosmic Unit evolve.

The emanation is conceived, according to esoteric teachings, to have originated, at the dawn of the universe’s manifestation, in The Supreme Being who sent out — from the unmanifested Absolute beyond comprehension — the dynamic force of creative energy, as sound-vibration (“the Word”), into the abyss of space. Alternatively, it states that this dynamic force is being sent forth, through the ages, framing all things that constitute and inhabit the universe.

Part I, the Introduction of this *Cosmogony* book, discusses concepts mentioned in this quotation, such as the Absolute, the Logos (“Word”), the Supreme Being (“Tao”), emanationism, involution, and evolution.

ORIGINS OF THE CONCEPT

The concept of planes of existence might be seen as deriving from shamanic and traditional mythological ideas of a vertical world-axis — for example a cosmic mountain, tree, or pole (such as [Norse] Yggdrasil or [Oriental] Mount Meru) — or a philosophical conception of a Great Chain of Being, arranged metaphorically from God down to inanimate matter.

Refer to the subsection on the “Great Chain of Being” in [Chapter I-x](#) in Part One, “Principles of the Natural Sequence”, for more information about that concept.

However, the original source of the word ‘plane’ in this context is the late Neoplatonist Proclus, who refers to *platos*, “breadth”, which was the equivalent of the 19th-century theosophical use. An example is the phrase *en to psychiko platei*.

CONCEPTIONS IN ANCIENT TRADITIONS

Directly equivalent concepts in [south Asian] Indian thought are *lokas* and *bhuvanas*. In Hindu cosmology, there are many *lokas* or worlds, that are identified with both traditional [objective] cosmology and [subjective] states of meditation.

Both ancient and modern mystics understood that there is a correlation or correspondence between the characteristics of objective planes and subjective states of consciousness. The Tao’s Template ontology, the Natural Sequence schema, the Process/Aspect System matrix is the map of that pervasive pattern of characteristics.

Planes of existence may have been referred to by the use of the term corresponding to the word “egg” in English. For example, the Sanskrit term *Brahmanda* translates to “The entire creation” as opposed to the lazy inference “The Egg of Creation”. Certain Puranic accounts posit that the *Brahmanda* is the superset of a set of fractal smaller Eggs, as is seen in the assertion of the equivalence of the *Brahmanda* and the *Pinda*.

This passage seems obscure to me, begging further research. Perhaps a reason for the use of the ‘egg’ as a metaphor for the cosmogony of planes is that each plane emerges successively from its more primitive predecessor. The Fractilicity Principle discussed in [Chapter I-x](#) in Part One, “Principles of the Natural Sequence”, shows up in the traditions that speak of the seven planes as each having seven sub-planes; see below. Graphic representations of the seven planes sometimes show them as concentric circles, the ‘smaller’ nested within the ‘larger’.

The ancient Norse mythology gave the name “*Ginnungagap*” to the primordial “Chaos”, which was bounded upon the northern side by the cold and foggy “*Niflheim*” — the land of mist and fog — and upon the south side by the fire “*Muspelheim*”. When heat and cold entered into space which was occupied by Chaos or *Ginnungagap*, they caused the crystallization of the visible universe.

Notice here, as documented in Part I, in Chapter X-x, “Yin + Yang = Chi”, that the universe emerges from the interaction of complementary opposites, in this case hot + cold. It is common in ancient cosmological and cosmogonical traditions to have their ultimate primitive ontology to be either the void or chaos; refer to the [section “Void versus Chaos” in Chapter I-X in Part One](#). Whether emergent from chaos or void, the metaphor of ‘crystallization’ is one way to understand disorderly chaos/void becoming orderly Cosmos. This is explained in terms of so-called “[information theory](#)” in [Chapter I-X in Part One](#). Basically and briefly, that the Cosmos is said to emerge from “mist and fog” is similar to knowledge and understanding “crystallizing” in the brain of a person from birth onward.

In the medieval West and Middle East, one finds reference to four worlds (*olam*) in Kabbalah, or five in Sufism (where they are also called *tanazzulat*; “descents”), and also in Lurianic Kabbalah. In Kabbalah, each of the four or five worlds are themselves divided into ten *sefirot*, or else divided in other ways.

Some of what the Kabbalah has to say about planes is discussed in its own section further on in this chapter.

ESOTERIC CONCEPTIONS

The alchemists of the Middle Ages proposed ideas about the constitution of the universe through a hermetic language full of esoteric words, phrases, and signs designed to cloak their meaning from those not initiated into the ways of alchemy. In his “*Physica*” (1633), the Rosicrucian alchemist Jan Baptist van Helmont, wrote: “*Ad huc spiritum incognitum Gas voco*” q.e., “This hitherto unknown Spirit I call Gas.” Further on in the same work he says, “This vapor which I have called Gas is not far removed from the Chaos the ancients spoke of.” Later on, similar ideas would evolve around the idea of aether.

Some of what Rosicrucians have to say about planes is discussed in its own section further on in this chapter. Rosicrucians are of the opinion that Cosmos emerges from Chaos rather than Void; see below.

In the late 19th century, the metaphysical term “planes” was popularized by the theosophy of H. P. Blavatsky, who in [her book] *The Secret Doctrine* and other writings propounded a complex cosmology consisting of seven planes and subplanes, based on a synthesis of Eastern and Western ideas. From theosophy the term made its way to later esoteric systems such as that of Alice Bailey, who was very influential in shaping the worldview of the New Age movement. The term is also found in some Eastern teachings that have some Western influence, such as the cosmology of Sri Aurobindo and some of the later Sant Mat, and also in some descriptions of Buddhist cosmology. The teachings of Surat Shabd Yoga also include several planes of the creation within both the macrocosm and microcosm, including the Bramanda egg contained within the Sach Khand egg. Max Theon used the word “States” (French *Etat*) rather than “Planes”, in his cosmic philosophy, but the meaning is the same.

The cosmology of Sri Aurobindo is discussed in its own section further on in this chapter.

The planes in Theosophy were further systematized in the writings of C.W. Leadbeater and Annie Besant.

The cosmology of Theosophy is discussed in its own section further on in this chapter.

In the early 20th century, Max Heindel presented in [his book] *The Rosicrucian Cosmo-Conception* a cosmology related to the scheme of evolution in general and the evolution of the Solar System and the Earth in particular, according to the Rosicrucians. He establishes, through the conceptions presented, a bridge between modern science (currently starting research into the subtler etheric plane of existence behind the physical) and religion, in order that this last one may be able to address man’s inner questions raised by scientific advancement.

The cosmology of Rosicrucianism is discussed in its own section further on in this chapter.

EMANATION versus BIG BANG

Most cosmologists today believe that the universe expanded from a singularity approximately 13.8 billion years ago in a ‘smeared-out singularity’ called the Big Bang, meaning that space itself came into being at the moment of the big bang and has expanded ever since, creating and carrying the galaxies with it.

However, in esoteric cosmology expansion refers to the emanation or unfolding of steadily denser planes or spheres from the spiritual summit, what Greek philosophy called The One, until the lowest and most material world is reached.

In both scientific and esoteric cosmogony, the Cosmos begins with the ultimate simplicity of Oneness, or lack of differentiation of any kind, and increases in complexity thereafter. As Tao’s Template says, “Tao produced the One; the One produced the Two; the Two produced the Three; the Three produced All things. All things carry the Yin and embrace the Yang, and through the blending of the Chi they achieve harmony.”

According to Rosicrucians, another difference is that there is no such thing as empty or void space.

The space is Spirit in its attenuated form; while matter is crystallized space or Spirit. Spirit in manifestation is dual, that which we see as Form is the negative manifestation of Spirit — crystallized and inert. The positive [Cardinal] pole of Spirit manifests as Life, galvanizing the negative [pole, Ordinal] Form into action, but both Life and Form originated in Spirit, Space, Chaos! On the other hand, Chaos is not a state which has existed in the past and has now entirely disappeared. It is all around us at the present moment. Were it not that old forms — having outlived their usefulness — are constantly being resolved back into that Chaos, which is also as constantly giving birth to new forms, there could be no progress; the work of evolution would cease and stagnation would prevent the possibility of advancement.”

[>[http://en.wikipedia.org/wiki/Plane_\(esotericism\)](http://en.wikipedia.org/wiki/Plane_(esotericism))< — retrieved 14 May 2022]

That is another mention of the metaphor of the ‘crystallization’ of the ultimately simple immanent substance of deity. I take the so-called “positive pole” of spirit to correspond to Cardinality in the Tao's Template ontology, and the so-called “negative pole” of spirit to correspond to Ordinality. In the Tao's Template ontology as well as in Rosicrucianism, the interplay of Cardinal and Ordinal, Chaos and Form (order) drives involution and evolution on all planes.

The other polarity mentioned in that quotation is between inanimate and animate realms, which also correlate with Ordinality and Cardinality respectively; refer to the section “Inanimate versus Animate” in **Chapter I-X**, “Yin + Yang = Chi” in Part One.

I looked for descriptions of the higher planes on the internet but there is a lot of disagreement about names and characteristics of those planes. This is as one might expect since experience there is, so far as I can tell, “qualitative” rather than “quantitative”. That is, on the lower planes, souls are said to be fragments of Tao who experience evolution as integration with other fragments in increasingly larger agglomerations. On the higher planes, the evolution of the soul is said to be something like the All or the One not being amorphous or homogeneous but having a “quality” gradient or gradients of various kinds on each plane, a gradient that is ascended on the way to union with the immanent Tao. Perhaps this is one reason why there is a dearth of detail about the nature or qualities of the Cardinal planes.

From these mere introductory quotations it is obvious that the concept of planes is very common with various spiritual traditions going back thousands of years. We also see that before we even review the nature of the planes, we see mentioned some Attributes of the septenary: the Fractality Principle of planes with subplanes, and the Dialectic Principle (thesis + antithesis = synthesis, aka Ordinal + Cardinal = Neutral).

In this chapter, we are going to review several of those mentioned above, specifically Kabbalah, Theosophy, Rosicrucianism, and Sri Aurobindo. But first, it is expedient to provide an overview of the subject other than via Wikipedia, namely via an esotericist, Lee Bladon:

Planes per Bladon

The following table is from ><https://evolvingsouls.com/book/article10a/><. This is a product of the research of Lee Bladon. From the name of his website, we see that Bladon is concerned with the development of the soul. The table shows the stages of development from the beginning to the end, from the so-called “Physical Plane” to the so-called “Monadic Plane”. Note in this table that the evolution of the soul from its most primitive state to its most developed state is graphically represented in a stack of planes from Physical at the bottom to Monadic at the top. This is reminiscent of the stratification of sedimentary rocks, where the later strata are stacked above the earlier strata. This is a mere convenient convention; the alleged actuality is that all seven planes interpenetrate each other, but exist and function at different ‘frequencies’, metaphorically speaking, somewhat like radio stations and television channels. I regard each plane as a distinct “reality system”, with its own “laws of physics”.

Table Xba — PLANES per BLADON									
	BLADON	LAURENCY	THEOS'Y	KABBALAH	VARIOUS EASTERN DESIGNATIONS				TRANSLA'
7	Upper Monadic	Manifestal	Logoic	Kether	Mahapara-nirvana	Ataia	Satyaloka	Adi	First
	Lower Monadic			Chokmah					
6	Divine	SubManifestal	Monadic	Binah	Paranirvana	Vitalia	Taparloka	Anapadaka	Parentless
5	Upper Spiritual	Super- Essential	Atmic	Daath	Nirvana	Sutala	Janarloka	Atma	Spirit
	Lower Spiritual			Chesed					
4	Unity	Essential	Buddhic	Geburah	—	Rasatala	Maharloka	Buddhi	Intuition
3	Causal	Causal	Causal	Tiphereth	Formless Heavens	Talatala	Svarloka	Manas	Mind
	Mental	Mental	Mental	Netzach	Form Heavens				
2	Emotional	Emotional	Astral	Hod	Desire Heavens	Mahatala	Bhuvarloka	Kama	Desire
1	Etheric	Etheric	Etheric	Yesod	—	Patala	Bhurloka	Sthula	Coarse
	Physical	Physical	Physical	Malkuth					

My comments on this table are as follows:

- **RANK:** The first column shows a numbering of the seven planes, from the first plane at the bottom row of the table to the seventh plane at the top. Some sources start the numbering at the top and work downward. This difference means nothing other than that the numbering scheme is just a convenient convention to show relative ranks.
- **BLADON:** The second column shows the descriptive names of the planes that Lee Bladon settled on after his investigations into what others had to say.
- **LAURENCY:** The third column shows the names that Henry Laurency settled on. Wikipedia has an article on him: >https://en.wikipedia.org/wiki/Henry_T._Laurency<. That article refers to a website dedicated to his work: ><http://www.laurency.com/introduc.htm><. According to those websites, he adapted the teachings of Theosophy, which was developed by a Russian-American mystic named Helena Blavatsky who borrowed much from Oriental religions using a more Westernized perspective.
- **THEOSOPHY:** The fourth column shows the names of the planes as given in Theosophy.
- **KABBALAH:** The fifth column shows the names of the ten *sefirot* of the Kabbalah of Jewish Mysticism, the so-called “Tree of Life”. Esotericists often seek to correlate systems with one another. The correlation shown is not the way I understand it; refer to a previous section.
- **EASTERN:** I have nothing to say regarding the various eastern designations in the next four columns. I have not done the research that would allow me to discuss them in an informed fashion.
- **TRANSLATION:** The last column provides an English translation of the foreign language words found in the four columns immediately to the left of the right-most column (“Eastern Designations”).

It is not obvious from this table that the three ‘higher’ planes (5, 6, 7) have a Yang/Cardinal quality to them, and they reflect (in reverse order) the sequence of the ‘lower’ (1, 2, 3) three planes, which have Yin/Ordinal characteristics, per the Process/Aspect System matrix. However, that is explicitly stated elsewhere, as we see in some subsequent sections.

Olamot: The Worlds According to Kabbalah

Recently I began to investigate the cosmological and cosmogonical components of Judaism that have been gathered into a body of work called “Kabbalah”. As I have explored it, I have found that the Kabbalah includes a component that is functionally equivalent to the notion of the seven soul ages (refer to [Chapter II-8](#)

further on), and another component that is functionally equivalent to raising one's consciousness on a spiritual path (refer to Part Six), and another component that is functionally equivalent to the seven planes; all three of those components are touched upon in various places in my *Cosmogony* book. In this section of this chapter, I discuss the component that is functionally equivalent to the seven planes. In this examination, we find that it conforms to the Natural Sequence schema, but we must use the Natural Sequence schema as a filter to distinguish between the 'signal' and some 'noise'. In other words, a pattern that was poorly understood and presented in the Kabbalah is well understood and presented in the Natural Sequence schema. My process of discernment was step-wise. In the following three subsections, I trace the steps of my research.

The First Approximation

The following lengthy quotation is from the Wikipedia article on the "worlds" spoken of in Kabbalah. The Hebrew word for worlds is *Olamot* (singular *olam*), and the Kabbalistic concept is functionally equivalent to the planes spoken of in other esoteric cosmologies. In the quotation, italicized words are Hebrew; English transliterations vary, so I have standardized on the spelling found in one of the quoted sources. Underlined words are my emphasis, to draw attention to subjects that I comment on. I insert some words of clarification in [brackets], and I intersperse some commentary between paragraphs of the quotation.

I have also included a graphic image of the so-called "Tree of Life" (TOL), one of the representations of the structure of the Cosmos per Kabbalistic cosmology. It shows features that are mentioned in the quotation, but it also shows features that are not mentioned in the quotation and are of no concern in this section; of the very many images that are available on the internet, it was the most appropriate that I found.

The following quotations were extracted from >https://en.wikipedia.org/wiki/Four_Worlds< on 16 June 2020.

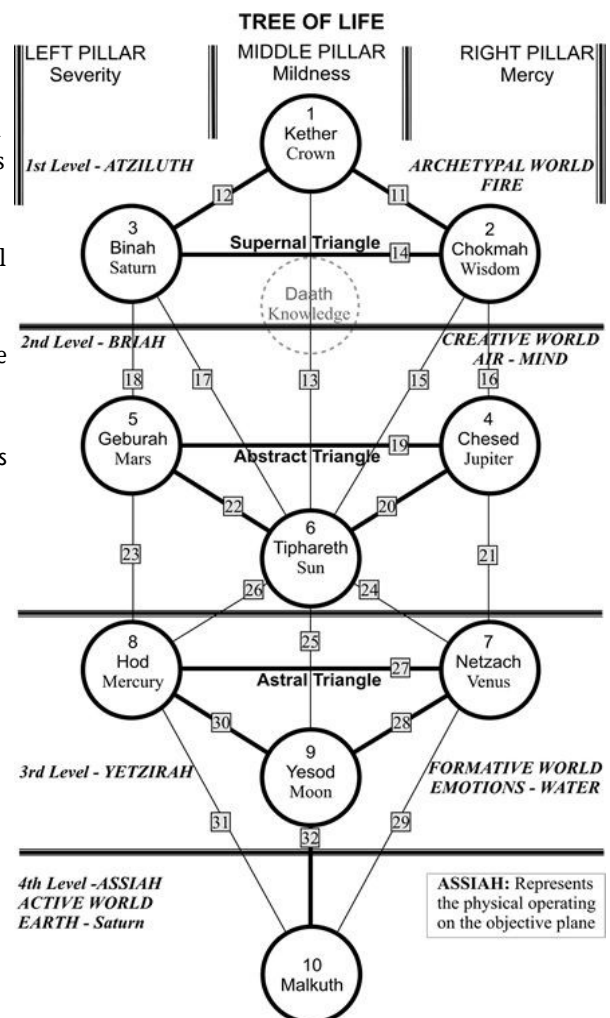
The Four Worlds, sometimes counted with a prior stage to make Five Worlds, are the comprehensive categories of spiritual realms in Kabbalah in the descending chain of Existence.

The "descending chain of Existence" is indicated by the numbers in the circles on the graphic image. (The circles collectively are referred to as *sefirot* (singular *sefirah*), and their Hebrew names are shown. The names of the planets shown with the names of the *sefirot* are irrelevant to this discussion.) The ascending numbers indicate the alleged path of the emanation of creation from the most spiritual at the top to the most physical at the bottom. As we will see during the course of this review, that is the successive fragmentation of the All on the middle plane down to the level of the individual incarnate soul on the Physical Plane.

THE 4 MAIN WORLDS. The Tree is divided into four levels known as the Four Worlds... :

Refer to the graphic image nearby as you read the following names and descriptions of the Worlds. Notice the three heavy horizontal lines dividing the *sefirot* into *olamot*—worlds—planes. The names shown in brackets are from Bladon per previous section.

The Archetypal World called *Atzilut* [Unity Plane], the Creative World called *Briah* [Causal/Mental Plane], the Formative World called *Yetzirah* [Emotional Plane], and the Material World called *Assiah* [Etheric/Physical Plane]. The concept of "Worlds" denotes the emanation of creative life force from the *Ein Sof* Divine Infinite [Cardinal Planes], through progressive, innumerable *tzimtzumim* (concealments—veilings—condensations) [qualitative gradations in the Cardinal Planes].... While these dimmings [of the divine light] form innumerable



differentiated spiritual levels, each a particular World/Realm, nonetheless, through the mediation of the *sefirot* (Divine attributes) [quantitative variations], five Comprehensive Worlds emerge.

The fifth World is named *Adam Kadmon* further on. In many other esoteric teachings, there are a total of seven, not five planes/worlds as in Kabbalah. My understanding of this discrepancy is that the three Cardinal “planes” found in other teachings are regarded in Kabbalah as one “world” beyond the four main worlds; adding one world to four makes five, but adding three higher planes to four lower planes makes a total of seven. One can see why three higher worlds would be conflated into one “infinite” world in Kabbalah because of their “innumerable” progressive dimmings of the divine light.

“Higher” realms metaphorically denote greater revelation of the Divine *Ohr* light, in more open proximity to their source, “Lower” realms are capable of receiving only lesser creative flow. The Worlds are garments [aka overlays] of the *Ein Sof*, and Hasidic thought interprets their reality as only apparent [maya, aka illusory, aka not real] to [the point of view of] Creation, while “from above” the Divine Infinite fills all equally.

“Higher” and “Lower” do not actually have any spatial meaning; their use is only a convenient metaphor. The Higher realms of the *Ein Sof*, aka The Infinite, are metaphorically like the spectrum of the rainbow that has an infinite gradation of qualitative differentiation. This is an apt description of the nature of the journey of the “spark” (see below), or the “Essence” on the Cardinal planes. In the Lower realms (Neutral and Ordinal planes), the experience of the soul and its composites is fragmentary, in the same way that the *sefirot* have distinct characteristics, unlike the infinite gradations in the Higher realms. From the point of view of the Lower realms, the Higher realms are illusory; from the point of view of the Higher realms, the Lower are illusory.

As particular *sefirot* dominate in each realm, so the primordial fifth [Cardinal Planes] World, [named in Kabbalah as] *Adam Kadmon*, is often excluded for its transcendence, and the four subsequent Worlds are usually referred to. Their names are read out from Isaiah 43:7: “Every one that is called by My name and for My glory (*Atzilut* “Emanation/Close”), I have created (*Beriyah* “Creation”), I have formed (*Yetzirah* “Formation”), even I have made (*Assiyah* “Action”).” Below *Assiyah*, the lowest spiritual World, is *Assiyah-Gashmi* (“Physical *Assiyah*”), our Physical Universe, which enclothes its last two *sefirot* emanations (*Yesod* [Ethereic levels of the Physical Plane] and *Malchut* [material levels of the Physical Plane]). Collectively, the Four Worlds are also referred to as ABiYA, after their initial letters. As well as the functional role each World has in the process of Creation, they also embody dimensions of consciousness within human experience [aka Centers].

Notice that in this description the lowest two *sefirot* are considered to be a part of Bladon’s Etheric/Physical Plane, whereas the graphic image places only the lowest *sefirot* in Bladon’s Etheric/Physical Plane. Further on, we will find other ideas about where the dividing lines between worlds should go on the TOL. The sequence of worlds is always the same, but which *sefirot* should go in which world is not universally agreed upon among Kabbalists. Notice that in the graphic image, the physical world is the lowest, the emotional/astral world is above that, the mental world is above that, and the archetypal world is above that. We will see below that other sources shift the descriptions of the worlds up the *sefirot* a notch. The fact that Kabbalists are not in agreement means that they did not have as clear an understanding as is provided by the Tao’s Template ontology.

The correspondence of the structure of the Cosmos (physical, affective, mental, spiritual) and the structure of the human psyche (behavior, emotion, thinking, essence) is recognized in Kabbalah as well as many other esoteric teachings, as we see in this *Cosmogony* book. Recall what I have said before and will say again, that this is why I have this chapter on planes in this book on the structure and function of the Cosmos.

THE FIVE WORLDS IN DESCENDING ORDER:

Adam Kadmon, meaning Primordial Man [aka Oversoul]. The anthropomorphic metaphor “Adam” denotes the *Yosher* (Upright) configuration of the *sefirot* in the form of Man, though not yet manifest. “*Kadmon*” signifies “primary of all primaries”, the first pristine emanation, still united with the *Ein Sof*. *Adam Kadmon* is the realm of *Keter Elyon* (Supernal Crown of Will), “the lucid and luminous light” (*Tzachtzachot*), “the pure lucid *sefirot* which are concealed and hidden” in potential. Containing the future emergence of Creation, it is Divine light with no vessels, the manifestation of the specific Divine plan for Existence, within Creation (after the *Tzimtzum* in Lurianic Kabbalah). In Lurianism, the lights from *Adam Kadmon* precipitate *Tohu* [“chaos”, aka fragmentation of the Oversoul into individual souls] and *Tikun* [“repair”, aka reintegration into the Oversoul]. As *Keter* [at the top of the TOL] is elevated above the *sefirot*, so *Adam Kadmon* is supreme above the Worlds, and generally only Four Worlds are referred to.

The *olam* described above looks like the three Cardinal planes to me, or perhaps just the fifth plane. In Kabbalah, *Adam Kadmon* and the lower *olamot* are said to be a concealing–veiling–condensation of higher levels of deity, namely *Ohr Ein Sof* (“infinite light”, perhaps an appropriate name for the sixth plane), *Ein Sof* (“infinity”, perhaps an appropriate name for the seventh plane or the immanent Tao), and *Ayin* or *Ein* (“nothing”, or zero, perhaps an appropriate name for the transcendent Tao). Refer to another website, namely >https://en.wikipedia.org/wiki/Ein_Sof<, for the explanation of those Hebrew terms and their concepts in relation to the created world represented by the TOL.

Atzilut, meaning World of Emanation, also “Close”. On this level the light of the *Ein Sof* (Infinite Divine “without end”) radiates and is still united with its source. This supernal revelation therefore precludes the souls and Divine emanations in *Atzilut* from sensing their own existence. In *Atzilut* the 10 *sefirot* emerge in revelation, with *Chochma* (Wisdom) dominating, all is nullification of essence (*Bittul HaEtzem*) to Divinity, not considered created and separate. The last *sephirah* *Malchut* (Kingdom) is the “Divine speech” of Genesis 1, through which lower Worlds are sustained.

The *olam* described above is functionally equivalent to Bladon’s Unity Plane, the dividing plane between the higher *olam*, the Cardinal planes, and the lower *olam*, the Ordinal planes. This *olam*/plane is the Source of differentiation into separated consciousnesses that get successively broken down into individuated souls.

Beriyah, meaning World of Creation. On this level is the first concept of *creatio ex nihilo* (*Yesh miAyin*), however without yet shape or form, as the creations of *Beriyah* sense their own existence, though in nullification of being (*Bittul HaMetzius*) to Divinity. *Beriyah* is the realm of the “Divine Throne”, denoting the *sefirot* configuration of *Atzilut* descending into *Beriyah* like a King on a Throne. The *sephirah* *Binah* (Understanding) predominates, Divine intellect. Also called the “Higher Garden of Eden”. The Highest Ranking Angels are in *Beriyah*.

The *olam* described above is functionally equivalent to Bladon’s Causal/Mental Plane, functioning as the “intellect” of the Cosmos.

Yetzirah, meaning World of Formation. On this level the created being assumes shape and form. The emotional *sefirot* *Chesed* to *Yesod* predominate, the souls and angels of *Yetzirah* worship through Divine emotion and striving, as they sense their distance from the Understanding of *Beriyah*. This ascent and descent channels the Divine vitality down through the Worlds, furthering the Divine purpose. Therefore, in *Yetzirah* are the main angels, such as *Seraphim*, denoting their burning consummation in Divine *emotion*. Also called the “Lower Garden of Eden”.

The *olam* described above is functionally equivalent to Bladon’s Emotional Plane, functioning as the “emotion” of the Cosmos.

Assiyah, meaning World of Action. On this level the creation is complete, differentiated and particular, due to the concealment and diminution of the Divine vitality. However, it is still on a spiritual level. The angels of *Assiyah* function on the active level, as the *sephirah* *Malchut* (fulfillment in Kingship) predominates. Below spiritual *Assiyah* [Ethereic levels of the Physical Plane] is *Assiyah Gashmi* (“Physical *Assiyah*”), the final, lowest realm of existence, our material Universe with all its creations. The last two *sefirot* [*Yesod* and *Malchut*] of *Assiyah* channel the life force into Physical *Assiyah*. [https://en.wikipedia.org/wiki/Four_Worlds — retrieved 16 June 2020]

The *olam* described above is functionally equivalent to Bladon’s Etheric/Physical Plane, functioning as the “action” of the Cosmos. The “spiritual” level of the Physical Plane is called the “etheric” level in other esoteric cosmologies, and corresponds to the abstract features such as laws and fields; the lowest level of the Physical Plane is the concrete world of particles, atoms, molecules, polymers, cells, plants, animals, planets, stars, and such.

The correlation of *olamot*–worlds with planes seems obvious upon this cursory examination, but there is an incongruity, or at least the necessity for interpretation of a finer point. Take another look at the graphic image of the TOL. Notice that there are three vertical “pillars”, a left pillar called “Severity”, a middle pillar called “Mildness”, and a right pillar called “Mercy”. Other names found on other graphic images of the TOL are Negative, Neutral, Positive; Feminine, Androgynous, Masculine; Passive, Balanced, Active. It is obvious that these three pillars are functionally equivalent to Ordinal, Neutral, and Cardinal in the Process/Aspect System matrix respectively. This is a huge clue for correlating the TOL with the Natural Sequence schema, but it adds a wrinkle.

The question is, how does this component of the TOL correlate with the planes as understood in the Michaelian teachings and elsewhere? The correlation could be that the *sefirot* on the left-side pillar represent the Ordinal Levels of each plane, the *sefirot* on the central pillar represent the Neutral Level of each plane, and

the *sefirot* on the right pillar represent the Cardinal Levels of each plane. This is not completely consistent with the Kabbalistic notion that the numbers of the sefirot, shown on the graphic image, represent the sequence of creation from top to bottom, zigzagging down through the *sefirot* from top to bottom. That is, on each plane, the Cardinal *sefirot* is first, then the Ordinal *sefirot* is second, and the Neutral *sefirot* is third, and so on down the *sefirot*. In every other system of planes, the Neutral level is sandwiched between the three Ordinal levels and the three Cardinal levels, just as the central vertical pillar is sandwiched between the polarized pillars in the graphic image. My view is that the TOL might be inconsistent with itself in this regard. Except perhaps the TOL numbering sequence represents the Dialectic Principle, where thesis (right column, Cardinal) plus antithesis (left column, Ordinal) equals synthesis (center column, Neutral).

The table below shows the suggested correlation of the Tree of Life with the planes per information provided in this subsection.

Table II-6a — PLANES per the TREE OF LIFE?							
DIALECTIC	–ORDINAL–			=NEUTRAL=	+CARDINAL+		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
PLANE	ETHERIC/ PHYSICAL	EMOTIONAL	CAUSAL/ MENTAL	UNITY	SPIRITUAL	LOGOIC	MONADIC
OLAMOT	Assiyah	Yetzirah	Beriyah	Atzilut	Adam Kadmon		
SEFIROT	=Malchut=	+Netzach+ =Yesod= –Hod–	+Chesed+ =Tiferet= –Gevurah–	+Chochmah =Da’at= –Binah–	=Keter=		

My comments on this table are as follows:

- DIALECTIC: The first row shows the Dialectic Attributes of the Natural Sequence schema.
- AXIAL: The second row shows the Axial Attributes of the Natural Sequence schema. Combine the Dialectic Attributes with the Axial Attributes and we have the Septenarian Attributes of the Natural Sequence schema. The Septenarian Attributes say a lot about the archetypal nature of the planes named in the next row.
- PLANE: The third row shows the names of the planes as proposed by Lee Bladon and shown in the previous section. Other sections in this chapter on the seven planes show other names for the planes.
- OLAMOT: The fourth row shows the names of the so-called “worlds” according to the Kabbalah. One name apparently covers the “infinite” worlds according to Kabbalah, emanated from the infinite and transcendent realm of *Ein Sof*.
- SEFIROT: The fifth row shows the names of the *sefirot* correlated with the planes according to the interpretation presented in this subsection. The *sefirot* with the “+”, “=”, and “–” signs refer to the Cardinal triad of Levels, the Neutral Level, and the Ordinal triad of Levels of a plane, respectively. In the quoted text, the lowest Olam is said to be divided into two *sefirot*, *Yesod* and *Malchut*, is said to be divided into a dichotomy, equivalent to the material and the nonmaterial levels of the Physical Plane, unlike the other Worlds that are divided into a trichotomy, as shown on the table. The quotation borrowed from Wikipedia does not match the graphic image borrowed from somewhere on the internet in this regard.

In whatever way the discrepancy between the text and the graphic may be understood, I find the correlations in this table ugly and unsatisfying. Can we do better than this, regarding correlating Kabbalah with the Natural Sequence schema? Let’s keep looking.

The Second Approximation

Take a look at another graphic image of Tree of Life that I found on the internet and inserted nearby. If you look at the English translations of the *sefirot*, you can see that the words might not immediately make clear how they should be correlated with features of the Natural Sequence schema, or of the planes. Apparently, Kabbalists have the same problem with interpretation and understanding among themselves, because they have various interpretations about which *olamot* contain which *sefirot*; that explains why there is a difference between this TOL and the TOL that was reviewed above.

This TOL shows another way to group the *sefirot* in order to delineate the planes from each other. Notice that the “Action Level” in this TOL is regarded as “emotional” in the previous TOL; notice that the “Emotional Level” in this TOL is regarded as the “mind” level in the previous TOL; notice that the “Cognitive Level” in this TOL is regarded as the “archetypal” level in the previous TOL.

In support of this TOL, I call upon a source different from Wikipedia. That source is the book *Kabbalah for Dummies (KFD)*, written by Arthur Kurzweil, and published in 2006.

Kabbalists view reality as consisting of four fundamental worlds. In Hebrew, the term used is *olam*.... In order to understand the Kabbalistic conception of the soul, which has five levels ..., you first have to explore the notion of the four worlds. The four worlds correspond to the first four levels of the soul.... Humans are a microcosm of the universe; just as the universe consists of four worlds, the human soul has four corresponding levels.... When Kabbalists speak of “worlds”, they’re not talking about different location but rather different dimension of being. These four worlds are four general levels of reality [internally consistent reality systems], and Kabbalists conceive of the human consciousness as constantly going up and down and back and forth between worlds.

Following are the four worlds, according to Kabbalistic tradition:

Atzilut: The world of emanation; the world of the spirit

Beriyah: The world of creation; the world of the intellect, where ideas reside

Yetzirah: The world of formation; the world of emotions

Assiyah: The world of action; the concrete, physical world [KFD, p. 95–96]

Following that introduction is a page of explanation and description, but all I want to do in this section is make it obvious that the *olam* of Kabbalah clearly correlate with features of the Natural Sequence schema and other esoteric teachings, particularly the notion of “planes” and their characteristics.

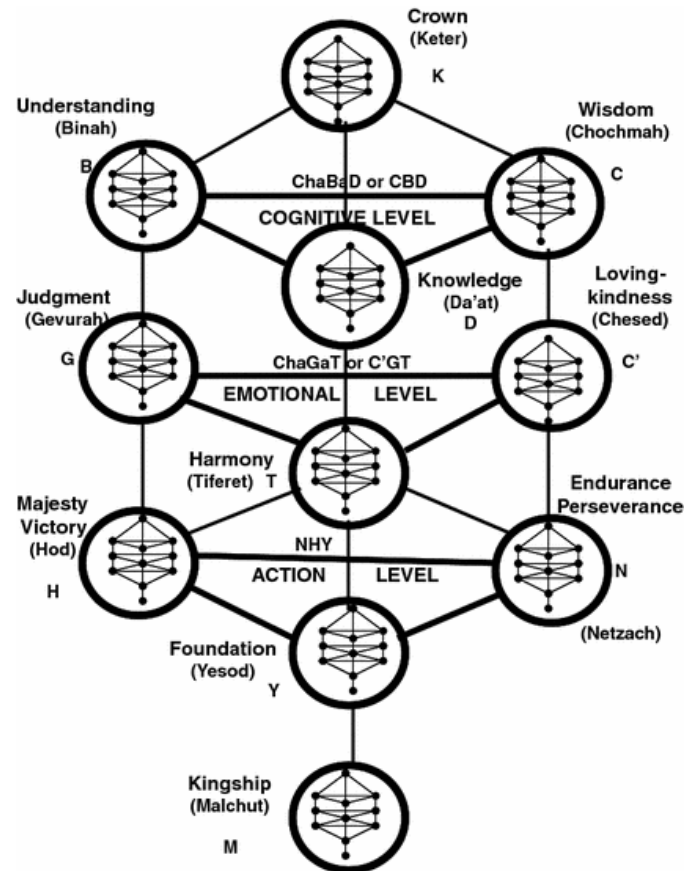
The description continues:

Another way of looking at Kabbalah’s four worlds in order to understand them is to relate them to the four realms of human experience: the physical, the emotional, the intellectual, and the spiritual.

Each human being exists simultaneously in these four levels:

Physical: Every person has a physical aspect that includes the body and the physical senses. This aspect corresponds to the world of action, in which the human being acts within the physical world.

Emotional: Every person lies within the world of emotions, which is more spiritual than the physical world. All have within them a wide array of emotions of seemingly infinite gradations. The world of emotions that each person experiences is said to reside in the world of formation.



Intellectual: Every person has an intellectual life that exists above the world of emotions. Just as the world of emotions is not a physical world, so too the world of ideas is an abstract spiritual world.

Spiritual: Above the intellectual world of each human being is the world of emanation. Sometimes this realm isn't even considered a world; because it is so abstract and transparent some consider it to be God Himself. [KFD, 97–98]

So now the question is, which of the *sefirot* belong in which world? The answer given in *KFD* agrees with the second graphic:

The horizontal lines of the Tree of Life reveal three pairs of *sefirot*.

Chochmah and *Binah*: When a Kabbalist uses his mental faculties, he employs a combination [*Da'at*] of *Chochmah* (intuition) and *Binah* (logical analysis). A Kabbalist may say that, at any given moment as he thinks, he is going back and forth between *Chochmah* and *Binah* and between a combination of the two [*Da'at*] because some situations call for more intuition and others call for more logical analysis. *Chochmah* (wisdom), *Binah* (understanding), and *Da'at* (knowledge): these three *sefirot* correspond to mental or intellectual activities. [KFD, p. 70]

Recall from the section on my “first approximation” that the *sefirot* on the right side of the TOL are Cardinal, and the *sefirot* on the left side are Ordinal, to use Process/Aspect System terms. That and this description makes it obvious that the correlation here is *Chochmah* with the Concept Center and *Binah* with the Intellect Center of the Process/Aspect System matrix. *Da'at* could be correlated with the Neutral Assimilation Impulse Center, or it could be regarded as the Expression Axis, which also comprises the Concept and Intellect Centers. (This is shown graphically in the table below.)

Chesed and *Gevurah*: In all relationships, in almost everything a Kabbalist does, she's constantly negotiating *Chesed* (giving) and *Gevurah* (receiving) and finding the proper balance for every situation. [KFD, p. 70]

Elsewhere in *KFD* (see below), and in the TOL in this subsection, this triad is said to involve emotional factors. *Chesed* is obviously correlated with the Sympathy Center and *Gevurah* with the Emotion Center of the Process/Aspect System matrix. The *sefirot* of balance in this triad is *Tiferet*, which could also be correlated with the Impulse Center, or *Tiferet* could be regarded as the Inspiration Axis, which also comprises the Sympathy and Emotion Centers. (This is shown graphically in the table below.)

Netzach and *Hod*: Particularly when a Kabbalist works on something in the world, he's actively exercising the *sefirot* of *Netzach* (the urge to get things done) and *Hod* (persistence). *Netzach* prompts him to participate in the task before him, and *Hod* keeps the Kabbalist motivated and provides the power and strength to see a job thorough to its conclusion. [KFD, p. 70]

It is obvious that the correlation here is *Netzach* with the Excitation Center and *Hod* with the Motion Center of the Process/Aspect System matrix. The *sefirot* of balance in this triad is *Yesod*, which could also be correlated with the Impulse Center, or *Yesod* could be regarded as the Action Axis, which also comprises the Excitation and Motion Centers. (This is shown graphically in the table below.)

This correlation of *sefirot* with the Axial Attributes of the Natural Sequence schema is reinforced by these statements:

There are also three triads, or groups of three *sefirot*, each also with its own significance. Following are the three triads on the Tree of Life:

Chochmah (wisdom), *Binah* (understanding), and *Da'at* (knowledge): These three *sefirot* correspond to mental or intellectual activities.

Chesed (lovingkindness), *Gevurah* (justice), and *Tiferet* (harmony): These three *sefirot* comprise emotional lives.

Netzach (eternity), *Hod* (splendor), and *Yesod* (foundation): These three *sefirot* generally act on the physical world in which people live. [KFD, p. 70]

Yet another passage in *KFD* clinches the notion that *Binah* and *Chochmah* have to do with cognitive functions:

Modern theorists observe that *Binah* and *Chochmah* correspond neatly with left-brain and right-brain thinking. Of course, the notions of *Chochmah* and *Binah* predate such theories by many centuries, but it's not unusual for Kabbalistic insights made generations ago to foreshadow scientific discoveries. [KFD, p. 62]

In this “second approximation”, instead of correlating the Ordinal and Cardinal levels of a plane with the *sefirot* on the left pillar and the right pillar of the TOL respectively, those *sefirot* are correlated with Ordinal and Cardinal Centers of the Process/Aspect System matrix. This is my preference, but it reveals a confusion

somewhere, either in the TOL or in the correlation of the TOL with the Process/Aspect System matrix; I say the confusion is in the TOL, and I say this because the Centers correlate with planes per the Process/Aspect System matrix as shown in the following table and documented in this chapter of this *Cosmogony* book.

Table II-6b — WORLDS/CENTERS per the TREE OF LIFE							
DIALECTIC	–ORDINAL–			=NEUTRAL=	+CARDINAL+		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
PLANE	PHYSICAL	ASTRAL	MENTAL	AKASHIC	TRUTH	LOVE	ENERGY
CENTER	MOTION	EMOTION	INTELLECT	IMPULSE	CONCEPT	SYMPATHY	EXCITATION
OLAMOT	<i>Assiyah</i> “Action”	<i>Yetzirah</i> “Formation”	<i>Beriyah</i> “Creation”	<i>Atzilut</i> “Emanation”	<i>Adam Kadmon</i> “Primordial Man”	<i>Ohr Ain Sof</i> “Infinite Light”	<i>Ain Sof</i> “Infinite”
SEFIROT	–Hod– “Honor”	–Gevurah– “Justice”	–Binah– “Under-standing”	=Keter= =Da’at= =Tiferet= =Yesod= =Melchut=	+Chochmah+ “Wisdom”	+Chesed+ “Loving-kindness”	+Netzach+ “Eternity”

My comments on this table are as follows:

1. DIALECTIC: The first row shows the Dialectic Attributes of the Process/Aspect System matrix.
2. AXIAL: The second row shows the Axial Attributes of the Process/Aspect System matrix. Combine the Dialectic Attributes with the Axial Attributes and we have the Septenarian Attributes of the Process/Aspect System matrix
3. PLANE: The third row shows the names of the planes as appropriate for this subsection, which you may notice if you compare these names with the names below them in the same column. Other sections in this chapter on the seven planes show other names for the planes.
4. CENTER: The fourth row shows the names of the Centers of the Process/Aspect System matrix as I prefer to call them. It is often useful to include the Centers in many tables of correspondences because of our personal familiarity with them. That is, we all experience all of the Centers to some degree or another, so we understand what they are like. It is particularly relevant in this table because the Kabbalah actually uses those names or synonyms to describe the nature of the corresponding plane.
5. OLAMOT: The fifth row shows the Hebrew names of the worlds according to the Kabbalah. Unlike Table II-6a, I do not conflate the three Cardinal *olamot* into one *Adam Kadmon*; instead, I show Kabbalistic words that are said to refer to levels of divinity beyond the divinity of *Adam Kadmon*, but they might or might not apply to *olamot* above *Adam Kadmon*; at the time of this writing, I am unclear on the correlation of this feature of the Kabbalah with the Michaelian teachings, but I am pretty sure there is a correlation. The words in quotation marks are English translations of the Hebrew words; most of them are somewhat sensible in terms of comparability to their Process/Aspect System matrix correlates.
6. SEFIROT: The sixth row shows the Hebrew names of the *sefirot* correlated with the planes according to the interpretation presented in this subsection, my “second approximation”. I find this schema more satisfying than the “first approximation”. The words in quotation marks are English translations of the Hebrew words; most of them are somewhat sensible in terms of comparability to their Process/Aspect System matrix correlates.

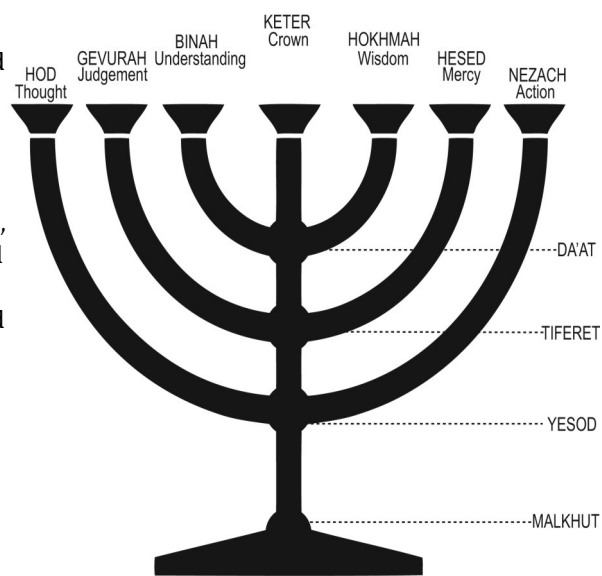
Although the second approximation looks better to me than the first approximation, I am not completely satisfied yet. Notice that in the TOL image shown in this subsection, a miniature TOL image is shown within each *sefirot* circle. There is a reason for this, as follows:

Kabbalistic tradition teaches that each of the ten *sefirot* has each of the ten *sefirot* within it. [KFD, p. 71]

This is the same situation as in the Process/Aspect System matrix: each plane has seven sub-planes. This idea creates another problem for the interpretation presented in the first approximation. That is, if we understand one of the triads of *sefirot* to refer to one of the Ordinal planes as shown in the TOL image in this subsection, and if we understand one of those *sefirot* to refer to either the Cardinal triad of Levels, or the Neutral Level, or the Ordinal triad of Levels, it makes no sense. However, identifying *sefirot* with Centers rather than with the Ordinal planes and the Levels of the planes leads one to wonder if something is awry with the structure of the TOL (assuming there is nothing wrong with the Process/Aspect System matrix). A suggested improved structure for the TOL is presented in the next subsection, and we do not even need to leave the Kabbalah, and it agrees with the second approximation.

The Third Approximation

As I was nearing the completion of my research for this section, it occurred to me to check if Kabbalists recognized a correlation of the structure of the *sefirot* with the structure of the *menorah*. That is another meaningful symbol in Jewish tradition besides the Tree of Life that I have long recognized to be an instantiation of the Process/Aspect System matrix. So, I did an internet search, and sure enough, this graphic image is what I found, and there were others like it. I was delighted by the results, because it turns out to be exactly what I thought it should be if my interpretation in the second approximation was correct.



The *menorah* is a candelabrum with deep meaning in Judaism. It has seven candle-holders, as shown schematically in this graphic image. The central candle-holder stem has three branches with nested U-shaped candle-holders. The central stem has the same lineup of *sefirot* as the central column of the TOL from top to bottom. That is: *Keter* at the top, *Da'at* below that where *Binah* on the left and *Chochmah* on the right connect to the stem; *Tiferet* below that where *Gevurah* on the left and *Chesed* on the right connect to the stem; *Yesod* below that where *Hod* on the left and *Netzach* on the right connect to the stem. The lowest *sefirot*, *Melchut*, is at the base on which the *menorah* stands.

The correlation of the *sefirot* with the Septenarian Attributes of the Process/Aspect System matrix is as follows:

Keter = the next higher septenary, the superconscious levels

Hod = Ordinal Action; *Gevurah* = Ordinal Inspiration; *Binah* = Ordinal Expression

Chochmah = Cardinal Expression; *Chesed* = Cardinal Inspiration; *Netzach* = Cardinal Action

Da'at = Expression Axis; *Tiferet* = Inspiration Axis; *Yesod* = Action Axis

Melchut = the next lower septenary, the subconscious levels

The discovery of this alternative graphic with the same *sefirot* as the TOL clinched the way that I correlate the *sefirot* (archetypal attributes) and *olamot* (planes) with the planes as understood in other teachings, which have obvious Septenarian Attributes. My sense of the situation with the Tree of Life, as it is typically shown, is that it is confused and therefore misleading; it provides a distorted view of the way the Cosmos is actually structured. In my view, Kabbalists would have benefited if they had had knowledge of the clear and clean, logical and mathematical, Process/Aspect System matrix, and which is more accurately represented in their own *menorah*.

Readers who wish to pursue the Kabbalah further might wish to check out dozens of articles on the subject in Wikipedia. Just check the one linked in this section, then jump to the others from that one. Also check Chapter II-8, here in Part Two, "The Seven Soul Ages/Worldviews", for another dip into the vast pool of Kabbalah correlations with the Process/Aspect System matrix.

Accepting the correlation of *sefirot* with the Septenarian Attributes as shown in this subsection, it is possible to correlate the *sefirot* with the Centers, and from there correlate *sefirot* with chakras. Check out Chapter II-3

here in Part Two, “The Instinctive Center”, where I correlate the zeroth Center, the Physiology Center, with the root chakra. That correlates the *Melchut Sefirot* with the Physiology Center, the septenary ‘below’ the Centers of personality.

This section on the planes is by no means the end of the discussion. The correlation of the Process/Aspect System matrix with the planes as understood in Theosophy is not nearly as challenging as it is with Kabbalah.

Planes per Theosophy

The modern incarnation of Theosophy originated in the late Nineteenth Century. Some branches off from Theosophy have originated in the decades since then. One may choose to begin to read about Theosophy on the internet at ><https://en.wikipedia.org/wiki/Theosophy><. The Theosophists have created their own internet wiki: ><https://theosophy.fandom.com/wiki/Special:AllPages><. Theosophy, along with some of its septenaries other than planes, is discussed in other chapters of this *Cosmogony* book.

Let’s take a look at a general description of the planes as provided by Theosophy. And let me warn you in advance: the terminology for the planes in this Theosophy section is not going to be the same as what we will see in sections on planes further on. The descriptions here seem to be a summary combination drawn from various esoteric teachings, but they most closely resemble the descriptions of the branch called Neo-Theosophy. Following are some brief quotes borrowed from Wikipedia about the planes. One may of course do an internet search on each of the names of these planes and supplement from other sources what is said below.

In occult teachings and as held by psychics and other esoteric authors there are seven planes of existence. Most occult and esoteric teachings are in agreement that seven planes of existence exist; however, many different occult and metaphysical schools label the planes of existence with different terminology.

[First] PHYSICAL PLANE [Ordinal Action]

The physical plane, physical world, or physical universe, in emanationist metaphysics taught in Neoplatonism, Hermeticism, Hinduism, and Theosophy, refers to the visible reality of space and time, energy and matter: the physical universe in occultism and esoteric cosmology is the lowest or densest of a series of planes of existence.

According to Theosophists, after the physical plane is the etheric plane and both of these planes are connected to make up the first plane. Theosophy also teaches that when the physical body dies the etheric body is left behind and the soul forms into an astral body on the astral plane.

The so-called “planes” are usually and conventionally visually depicted or visualized in a graphic as stacked in layers or levels, with the physical plane shown on the bottom of the stack. This is a metaphor, not an actuality. The actuality is perhaps better conveyed in the other metaphor found in this quotation, namely that of “density”. One may extrapolate from the levels of physical-plane density from solid to liquid to gas that the higher planes also have gradations of something like lesser and lesser ‘density’ in terms of the concentration or amalgamation of divine consciousness on those planes. Sometimes the planes are graphically depicted as nested concentric circles, with the physical plane as either the innermost or the outermost ring. That all planes interpenetrate each other cannot be graphically represented, and cannot be conceptualized, except perhaps by people who have a highly developed mathematical intuition about hyper-dimensional objects.

The quotation is not exactly clear about the notion that the so-called “etheric” plane is not actually separate from the physical plane; the word etheric refers to the Cardinal ‘levels’ of the physical plane, each plane having seven sub-planes (see below). Most people think of the physical planes as what our five senses perceive, but these are just the Ordinal levels. The Cardinal levels of the physical plane, the etheric levels, we perceive via insight and intuition. The so-called “laws of nature” exist and function on the etheric levels of the physical plane; they provide the abstract structural framework or organizing principles of the Ordinal levels.

The physical plane is an instantiation of Ordinal Action in the Natural Sequence schema, and correlates with the Motion Center. The next plane is an instantiation of Ordinal Inspiration in the Natural Sequence schema.

[Second] ASTRAL PLANE [Ordinal Inspiration]

The astral spheres were thought to be planes of angelic existence intermediate between Earth and heaven.

The astral plane, also called the astral world, is where consciousness goes after physical death. According to occult philosophy, all people possess an astral body. The astral plane (also known as the astral world) was postulated by classical (particularly neoplatonic), medieval, oriental, and esoteric philosophies and mystery

religions. It is the world of the planetary spheres, crossed by the soul in its astral body on the way to being born and after death, and generally said to be populated by angels, spirits, or other immaterial beings. In the late 19th and early 20th century the term was popularized by Theosophy and neo-Rosicrucianism.

Throughout the Renaissance, philosophers, Paracelsians, Rosicrucians, and alchemists continued to discuss the nature of the astral world intermediate between Earth and the divine. The *Barzakh*, *alam mithal* or intermediate world in Islam and the “World of *Yetzirah*” in Lurianic Kabbalah are related concepts.

The Theosophist author Curuppumullage Jinarajadasa wrote: “When a person dies, they become fully conscious in the astral body. After a certain time, the astral body disintegrates, and the person then becomes conscious on the mental [third] plane.”

In early theosophical literature the term “astral” may refer to the aether. Later theosophical authors such as Annie Besant and C. W. Leadbeater make the astral finer than the etheric plane but “denser” than the mental plane. In order to create a unified view of seven bodies and remove earlier Sanskrit terms, an etheric plane was introduced and the term “astral body” was used to replace the former *kamarupa* — sometimes termed the body of emotion, illusion or desire. Some of those propounding such claims explain their belief that letting go of desires is spiritual progress by noting that, the more one lets go of feelings, the less [one is] tied down to the physical world, a world of illusion, and the more [one is] connected to the astral, where all is visible and known. According to Max Heindel’s Rosicrucian writings, desire-stuff may be described as a type of force-matter, in incessant motion, responsive to the slightest feeling. The desire world is also said to be the abode of the dead for some time subsequent to death.

The astral plane correlates with the Emotion Center of the Process/Aspect System matrix, which is an Aspect of Ordinal Inspiration.

Astral projection author Robert Bruce describes the astral as seven [sub-]planes that take the form of planar surfaces when approached from a distance, separated by immense colored “buffer zones”. These planes are endlessly repeating ruled Cartesian coordinate system grids, tiled with a single signature pattern that is different for each plane. Higher planes have bright, colorful patterns, whereas lower planes appear far duller. Every detail of these patterns acts as a consistent portal to a different kingdom inside the plane, which itself comprises many separate realms. Bruce notes that the astral may also be entered by means of long tubes that bear visual similarity to these planes, and conjectures that the grids and tubes are in fact the same structures approached from a different perceptual angle.

The understanding that the Natural Sequence schema has mathematical underpinnings, one of them being the Cartesian coordinate system, is expounded in **Chapter I-x in Part I**, “Derivation of the Natural Sequence”. All seven planes are said to have seven sub-planes, which is consistent with the Fractalicity Principle of the Natural Sequence schema. All planes and sub-planes are separated by a “buffer zone”, analogous to a porous membrane, as in a biological cell, that distinguishes inner and outer realms, in a holarchy of the seven planes as a whole. The developmental transition between planes and sub-planes is a transformational transition in the evolution of the soul. This experience is consistent with the Transition Principle of the Natural Sequence schema.

In his book *Autobiography of a Yogi*, Paramhansa Yogananda provides details about the astral planes learned from his resurrected guru Swami Sri Yukteswar Giri. Yogananda reveals that nearly all individuals enter the astral planes after death. There they work out the seeds of past karma through astral incarnations, or (if their karma requires) they return to earthly incarnations for further refinement. Once an individual has attained the meditative state of *nirvikalpa samadhi* in an earthy or astral incarnation, the soul may progress upward to the “illuminated astral planet” of *Hiranyaloka*. After this transitional stage, the soul may then move upward to the more subtle causal spheres where many incarnations allow them to further refine until final unification.

The next subtle plane is an instantiation of Ordinal Expression in the Process/Aspect System matrix. It correlates with the Intellect Center.

[Third] MENTAL PLANE [Ordinal Expression]

The mental plane is the third lowest plane according to Theosophy. The mental plane is divided into seven sub-planes [as usual].

[Theosophist] Charles Webster Leadbeater wrote: “In the mental world one formulates a thought and it is instantly transmitted [telepathically] to the mind of another without any expression in the form of words. Therefore on that plane [syntactical, grammatical, verbal] language does not matter in the least; but [language does matter to] helpers working in the astral world, who have not yet the power to use the mental vehicle.”

[Theosophist] Annie Besant wrote that “The mental plane, as its name implies, is that which belongs to consciousness working as thought; not of the mind as it works through the brain, but as it works through its own world, unencumbered with physical spirit-matter.”

A detailed description of the mental plane, along with the mental body, is provided by [Theosophist] Arthur E. Powell, who has compiled information in the works of Besant and Leadbeater in a series of books on each of the subtle bodies.

The so-called “bodies” (physical, astral, mental, divine) are discussed in greater detail in **Chapter II-x** in this Part. The basic point made in that chapter is that if an individual soul (typically called a “fragment” in the Michaelian teachings) is made analogous to a ‘cell’ on the physical plane, then a combination of ‘cells’ forms a ‘tissue’ on the astral plane, and a combination of ‘tissues’ forms an ‘organ’ on the mental plane, and a combination of ‘organs’ forms the complete “divine” body on the next ‘higher/denser’ so-called “buddhic” plane (see below).

According to Hindu occultism the mental plane consists of two divisions, the lower division is known as heaven (*swarglok*) and the upper division is known as the causal plane (*maharlok*).

In terms of the Natural Sequence schema, these ‘lower’ levels of the third plane are Ordinal in their characteristics, and the ‘higher’ levels of the third plane are Cardinal in their characteristics. It does not say so here, but the middle level of the septenary within a plane is a so-called “akashic” level for that plane, which is metaphorically like an ‘historical record’ of the plane as a whole.

Satguru Sivaya Subramuniyaswami wrote: “The causal [another term for “mental”] plane is the world of light and blessedness, the highest of heavenly regions, extolled in the scriptures of all faiths. It is the foundation of existence, the source of visions, the point of conception, the apex of creation. The causal plane is the abode of Lord Siva and his entourage of Mahadevas and other highly evolved souls who exist in their own self-effulgent form — radiant bodies of centillions of quantum light particles.”

Sri Aurobindo developed a very different concept of the mental plane, through his own synthesis of Vedanta (including the *Taittiriya Upanishad*), Tantra, Theosophy, and Max Théon ideas (which he received via The Mother, who was Theon’s student in occultism for two years). In this cosmology, there are seven cosmic planes, three lower, corresponding to relative [Ordinal] existence (the Physical, Vital, and Mental), and four higher, representing infinite [Neutral and Cardinal] divine reality (*Life Divine* bk. 1 ch. 27) The Aurobindonian Mind or Mental Plane constitutes a large zone of being from the mental vital to the overmental divine region (*Letters on Yoga*, Jyoti and Prem Sobel 1984), but as with the later Theosophical concept it constitutes an objective reality of sheer mind or thought.

The next subtle plane in this Theosophical extract is an instantiation of Neutral Assimilation in the Natural Sequence schema. It correlates with the Impulse Center.

[Fourth] BUDDHIC PLANE [Neutral Assimilation]

The buddhic plane is described as a realm of pure consciousness. According to Theosophy the buddhic plane exists to develop buddhic consciousness which means to become unselfish and solve any problems with the ego. [Theosophist] Charles Leadbeater wrote that in the buddhic plane man casts off the delusion of the self and enters a realization of unity.

[Theosophist] Annie Besant defined the buddhic plane as “Persistent, conscious, spiritual awareness. This is the full consciousness of the buddhic or intuitional level. This is the perceptive consciousness which is the outstanding characteristic of the Hierarchy. The life focus of the man shifts to the buddhic plane. This is the fourth or middle state of consciousness.”

Sri Aurobindo calls the level above the mental plane the supermind.

The references to the lack of “ego self” and the presence of unity-consciousness distinguish the fourth plane from the Ordinal planes, which are all about quantitative individuality, where individual souls evolve and join with each other into successively larger ‘bodies’ or composites on those Ordinal planes. The complete assembly, the spiritual/divine/logoic body, is conglomerated on the plane of assimilation, and then it continues to evolve on the Cardinal planes in terms of a qualitative gradient, until its consciousness achieves full conformity with the maximum pole of the immanent deity:

[Fifth] SPIRITUAL PLANE [Cardinal Expression]

George Winslow Plummer wrote that the spiritual plane is split into many sub-planes and that on these planes live spiritual beings who are more advanced in development and status than ordinary man. According to metaphysical teachings the goal of the spiritual plane is to gain spiritual knowledge and experience.

It does not say so here, but the Process/Aspect System matrix and other esoteric cosmologies declare that there are no “beings” on the Cardinal planes. Rather there is a single continuous Being that is nevertheless variegated in terms of something like ‘qualities’. One could perhaps visualize this Being as variegated in terms of colors that grade into each other without distinct divisions. One might say that that Being is ‘enriched’ by the qualities that completed souls bring to it from the Ordinal planes, thus improving the ‘quality’ of that Being. It is said that our human conceptions and values and energies do not translate well to those realms, so for this reason, descriptions of the Cardinal planes provided by various sources are somewhat ambiguous and brief. In the Process/Aspect System matrix, the fifth plane is an instantiation of Cardinal Expression, and the next plane is an instantiation of Cardinal Inspiration.

[Sixth] DIVINE PLANE [Cardinal Inspiration]

According to some occult teachings, all souls are born on the divine plane and then descend down through the lower planes; however souls will work their way back to the divine plane. On the divine plane souls can be opened to conscious communication with the sphere of the divine known as the Absolute and receive knowledge about the nature of reality.

The divine plane (hyperplane or continuum/universe, enclosing and interpenetrating grosser planes, respectively) is the plane in which Brahman and Om or Aum, i.e. Logos or Agathon, i.e. (according to Theosophy) spirit of deity (as Brahman, Logos i.e. Agathon, etc.,) i.e. the creative Word (as the Pranava Om or Aum, Logos, Tikkun, etc.) and ideal, exists. The term is from the Greek word “Logos” and is used in the Arcane School ideas. ‘Classical’ 1800s Theosophy does not say whether this spiritual plane is the only one that has to do with Logos is human [sic], but Annie Besant & Charles Leadbeater may have said so, and Alice Bailey or others, who uses similar ideas, did say so.

[Seventh] LOGOIC PLANE [Cardinal Action]:

The ‘highest’ plane is the broadest instantiation of Cardinal Action. This is the Source plane; this is where it all starts, namely with the Logos, the organizing principle of all creation.

The logoic plane is the highest plane. It has been described as a plane of total oneness, the “I AM Presence”.

Joshua David Stone describes the plane as complete unity with God [the Father].

[>[https://en.wikipedia.org/wiki/Plane_\(esotericism\)](https://en.wikipedia.org/wiki/Plane_(esotericism)) — retrieved 04 August 2019]

Comments on Planes per Theosophy

- “Emanationist metaphysics” is mentioned in the description of the Physical Plane. This idea is expounded upon in several chapters of this *Cosmogony* book.
- Descriptions of a couple of the planes mention that they have seven levels within them. This is consistent with various esoteric sources, as quoted further on.
- Descriptions of the second plane, the Astral Plane, mention that it is the realm of emotions, feelings, and desires. This is consistent with various esoteric sources, as quoted further on.
- In the description of the third plane, the Mental Plane, it is said that some sources regard the upper levels of the Mental Plane as the “causal” levels. In a following chapter on subtle “bodies”, there is discussion of the so-called “causal body”.
- In the internet information about the planes, the descriptions of the three “lower” planes are fairly consistent. If one looks for descriptions of the four “higher” planes on the Internet one will see that there is a dearth of information, and also there is a lot of disagreement about names and characteristics of those planes. A suggested reason for this is that their nature is not as comprehensible to humans as the ‘lower planes are.
- Information about the nature and function of the seven planes according to Theosophy is supplemented by information about the seven so-called “rays”. This information is documented in Chapter II-6.

Planes per the Rosicrucians

Near the same time that Theosophy was flourishing in the early part of the 20th Century, another modern religious movement appeared, and that was Rosicrucianism, initiated by a fellow with the pen-name Max Heindel. As you can read in the Wikipedia article about him, he was influenced by Theosophy, but he had mystical experiences in which he allegedly made contact in out-of-body visits with so-called “Elder Brothers”, who more-or-less dictated a teaching about how the universe functions, among other things.

The Rosicrucian Fellowship (TRF) (“An International Association of Christian Mystics”) was founded in 1909 by Max Heindel with the aim of heralding the Aquarian Age and promulgating “the true Philosophy” of the Rosicrucians. It claims to present Esoteric Christian mysteries or esoteric knowledge, alluded to in Matthew 13:11 and Luke 8:10, to establish a meeting ground for art, religion, and science and to prepare the individual through harmonious development of the mind and the heart for selfless service of humanity.

As part of their cosmology, the Rosicrucians have a teaching about the nature of seven planes. The names given to them are different, but they have similar descriptions to what we saw in the previous section on the Theosophical teaching. Bracketed comments are mine. Notice that the sequence in which the planes are listed is the reverse order of the previous section.

[7] THE WORLD OF GOD [Cardinal Action]

[6] THE WORLD OF VIRGIN SPIRITS [Cardinal Inspiration]: home of the virgin spirits, differentiated within God Himself as “sparks from a flame” at the beginning of manifestation, prior to the beginning of pilgrimage through matter. Rosicrucianism teaches that the [sixth] plane is where Jesus dwelt in Christ consciousness.

[5] THE WORLD OF DIVINE SPIRIT [Cardinal Expression]: related to the threefold Spirit’s Divine Spirit aspect; home of The Father, inhabited by the Lords of Wisdom, a hierarchy of Elohim astrologically associated with Virgo.

[4] THE WORLD OF LIFE SPIRIT [Neutral Assimilation]: related to the Ego’s life spirit aspect; home of the Christ (The Son, the Solar Logos); inhabited by the Lords of Individuality, a Hierarchy of Elohim astrologically associated to Libra; higher Memory of Nature, events from the earliest dawn of our present manifestation, open only to Adepts and higher Spiritual Beings.

[3] THE WORLD OF THOUGHT [Ordinal Expression]

- Region of Abstract Thought: inhabited by the Lords of Form, a Hierarchy of Elohim...; the “Third heaven” state of consciousness; Germinal idea(s); related to the Ego’s human spirit aspect; the home of Jehova, The Holy Spirit. This Great Hierarchy is the evolved form of the third aspect of God, the creative energy in Nature....
- Region of Concrete Thought: related to the Mind; inhabited by the Lords of Mind, a Hierarchy of Elohim...; the “Second heaven” state of consciousness; Archetypes; memory of nature in the highest subdivision (covering the essence of a whole life or event); ocean of harmony: the Music of the Spheres.

[2] THE DESIRE WORLD [Ordinal Inspiration], the world of color: related to the Desire body; home of the Archangels...; the abode of deceased persons for some time subsequent to the event of death.

- higher regions, Attraction, the “First heaven” state of consciousness
- intermediate region, Interest and Indifference
- lower regions, Repulsion, the “Purgatory” state of consciousness

[1] THE PHYSICAL WORLD [Ordinal Action], composed of seven regions;

- Etheric Region: related to the etheric body; home of the Angels (seen as being one step beyond the human stage, as humans are a degree in advance of the animal evolution)...; Akashic records in the reflecting ether (pictures at least several hundred years back or much more in some cases, almost as the pictures on a screen, scene shifts backward). The etheric region is subdivided in four regions according to the grades of density of the aether permeating our physical planet Earth; Reflecting Ether, Light Ether, Life Ether and Chemical Ether.
- Chemical Region; the physical Earth as perceived through the five senses enhanced by the current technological equipment, subdivided in three regions according to the four main states of matter: solid, liquid, gaseous, and plasma. It is the current home of the self-conscious humanity.... The Chemical region of the physical world is home to four life waves, or kingdoms, at a different stage in the evolutionary path: mineral life is the first and lowest level of spiritual evolution on Earth; then comes plants, with actual life, then animals (cold-blooded animals, then warm-blooded), and finally the human

being. The beings belonging to each life wave either evolve through the work of the individual Spirit (human being) or are yet evolving under a group spirit and have acquired more or less subtle bodies according to the development stage of each life wave.

The worlds of matter (Physical world, Desire world and World of Thought/Region of Concrete Thought) are considered to be a reverse reflection of the worlds of Spirit (World of Thought/Region of Abstract Thought, World of Life Spirit and World of Divine Spirit). [http://en.wikipedia.org/wiki/Rosicrucian_Fellowship< — retrieved 04 August 2019]

The statement about the Ordinal planes and the Cardinal planes being in the reverse sequence of each other is, as you must surely already know by now, a feature of the Natural Sequence schema.

Planes per Sri Aurobindo

You might or might not be familiar with an Indian (south Asian) guru who westernized many of the oriental spiritual traditions. His name was Sri Aurobindo and he lived from 1872 to 1950, which was contemporaneous with early Theosophy and Rosicrucianism. You can read about him, among other places on the Internet, at: http://en.wikipedia.org/wiki/Sri_Aurobindo<.

It so happens that he concurs with many other traditions about the planes. Note the quotation found at this following Internet site: http://www.kheper.net/topics/Aurobindo/Aurobindo_cosmology.htm<. Some relevant comments from me are interspersed in [brackets], and I underlined some words or phrases for emphasis; please pay attention.

Sri Aurobindo's Cosmology — The Seven Planes

Aurobindo's writing style, like that of other esotericists like Blavatsky and Steiner, is heavy and repetitious. This is unfortunate, as the poor style veils a cosmology of great comprehensiveness and profundity.

Of great relevance ... is his detailed map of states of consciousness. Influenced by such diverse sources as the Theosophical idea of seven planes of consciousness and existence, the "Hindu" (Vaishvanite) Puranas with their poorly-defined idea of seven *Lokas* or "Worlds", and the early Taittiriya Upanishad (700 B.C.E.), which refers to an ascending series of five "selves" (atma) — [#1] Food (*anna*), [#2] Life (*prana*), [#3] Mind (*manas*), [#4] Consciousness (*Vijnana*), and [#5] Bliss (*Ananda*); Aurobindo postulated seven planes of being. But these are not equivalent to Theosophical ones. The higher four [Neutral and Cardinal] are totally transcendent planes of infinite Consciousness and Bliss. The lower [Ordinal] three — the [#1] physical, [#2] vital, and [#3] mental — are the planes of finite [fragmentary, quantitative] existence. Beyond all the planes was "the Supreme" or Absolute.

The four higher [Cardinal] planes are eternally pre-existent, and constitute the modes or qualities of the Absolute (in Indian philosophy, the Absolute is described as being Sat-Chit-Ananda or Sachchidananda, of the nature of pure Being, Consciousness, and Bliss. The 'Supermind' is Sachchidananda in manifestation; the transitional [Neutral] stage between the unchanging planes of Sat, Chit-Tapas and Ananda and the finite lower ones. Aurobindo considers it pivotal for the Divine transformation of the world. "It alone contains the self-determining Truth of the Divine Consciousness (that) is necessary for a Truth-creation." (*Letters on Yoga*, Vol. 1, p. 239)

Between the Supermind and the lower three planes is a transitional [Neutral] level, the Overmind, a level of global or cosmic consciousness [#4 Akashic Plane]. Beneath the Overmind one passes from Truth (albeit a multiform, rather than as in the Supermind a Unitary, Truth) into falsehood and ignorance. These are the lower planes of Mind [#3 Mental Plane], Life [#2 Astral Plane], and Matter [#1 Physical Plane]. It is also in these lower [Ordinal] planes that there dwells the Divine Soul, or "Psychic Being".

The terminology in all this is a little confusing, for Aurobindo and [his female coworker] Mirra use the term Life or "Vital" to designate what Western occultists and Theosophists call the Astral plane. "Vital" in this context therefore has nothing to do with the life-principle (the Etheric plane of Steiner and the Prana of the Hindus). Similarly, "Psychic" is used to refer to the Spiritual or Higher Self, the Divine Soul, rather than the Astral realms, as is the case with the common understanding of the word (e.g. "psychic experiences"). This curious terminology derives originally from Max Theon, Mirra's teacher in occultism. [Retrieved on 04 August 2019, but his link is dead as of this writing in 2022.]

Note that his names and descriptions differ from others, yet there are enough similarities to consider Aurobindo to be in basic agreement with with Kabbalah and Theosophy and Rosicrucianism. In my view, Aurobindo's "heavy and repetitious style" would have benefited if he had had knowledge of the clear and clean, logical and mathematical, Natural Sequence schema.

This same website has another extensive exposition of Aurobindo's cosmology, specifically about his "psychology", which of course is his version of how the "planes" correspond to states of "consciousness". You may read all this in other Parts, so there is no use repeating it here. However, if you are curious, you can read it for yourself at this Internet link: ><http://www.kheper.net/topics/Aurobindo/psychology.html><. (This internet link is now dead.)

General Comments on Aurobindo

As usual, the Natural Sequence is followed by this teacher.

As usual with various teachers, Aurobindo's teaching on this subject is different enough from other teachings that it could be argued he did not entirely copy from them, yet similar enough that it could be argued he is referring to the same thing, namely the Natural Sequence.

So many of the teachings about metaphysical realms of creation ("planes", "subtle bodies", *et cetera*) use the Natural Sequence that it might be appropriate to refer to it as the Supernatural Sequence. However, these realms of creation are not so accessible to scientific validation, so I still prefer to use evidence from the physical plane as documented in other Parts. Hence I keep to the term, "Natural" Sequence.

Planes per the Michaelian Teachings

The Michaelian teachings (reviewed in a previous chapter in this Part) is the product of channeling sessions that began in 1973 and that continue to the time of the writing of this *Cosmogony* book. The nature of the planes in terms of the Natural Sequence schema is not easily discerned in the original revelation in the original Michaelian group, or from the earliest two books, compiled and written by Chelsea Quinn Yarbro. However, when we review subsequent Michaelian teachings sources, we find that the Michaelian teachings about the seven planes correlates completely and unambiguously with the Natural Sequence schema.

Planes per José Stevens in The Michael Handbook

So far as I have been able to determine, the pattern of the current understanding of planes in the Michaelian teachings came from the channel, José Stevens. He presents an emanationist cosmology, the fragmentation of the Absolute:

To accomplish the goal of self-knowledge the Tao has divided itself into seen stages (planes) of existence, the structure that provides the awesome order. [A graphic shows Physical, Astral, Causal, Akashic, Mental, Messianic, and Buddhaic Planes as subsets of Tao.] The Physical Plane is the most isolated one, by virtue of its properties of time. On the Physical Plane, energy vibrates so slowly that it appears to be solid matter. Bumping into things is a good reminder that you and the object are separate. On higher planes, energies can merge and separate at will. So the game begins on the physical plane.... The fragment or essence evolves this way until upon the completion of many lifetimes it ultimately fulfills its purpose and completes its experience. At that time it reunites with its fellow fragments on the Astral Plane, one dimension above the Physical Plane. [Stevens, *The Michael Handbook* (1986), pp. 4-6]

Beyond that, there is no descriptions of the seven planes in *The Michael Handbook*. However, moving on to Stevens's third book, *Earth to Tao* (ETT, 1989), on page 131 he has a table showing the correlation of the seven planes with the seven Centers of the Gurdjieffian teachings (from which the Michaelian teachings originally received their understanding of the planes):

Buddhaic Plane = Higher Moving Center
Messianic Plane = Higher Emotional Center
Mental Plane = Higher Intellectual Center
Akashic Plane = Instinctive Center
Causal Plane = Intellectual Center
Astral Plane = Emotional Center
Physical Plane = Moving Center

A more adequate representation of the Michaelian teachings understanding of the planes is provided by other student-teachers in another book:

Planes per Michael: The Basic Teachings

Two years after Stevens published his *Handbook*, three channels published a book, *Michael: The Basic Teachings*, that described the planes in terms of the Centers:

The Physical, the first of the planes, is where you experience solidity, separateness, and forgetfulness....

The Astral Plane is where you ... deal with ['lower'] emotional lessons....

On the Causal Plane ... you learn ['lower'] intellectual lessons regarding the structure of the universe....

The Akashic Record ... provides a place where the memories of everything that happens: all thoughts, emotions, and kinesthetic experiences are stored....

On the Mental Plane, you have direct intellectual contact with the Tao.... On this plane, you have an ['higher'] intellectual perception of the whole.

The Messianic Plane is where you experience total agape and love... You have direct ['higher'] emotional perception of the Tao....

The Buddhaic Plane is where you merge with the totality of the universe on an energetic level. [*Michael: The Basic Teachings*, pp. 13-18.]

Planes per Shepherd Hoodwin

Yet another channel, writing in the 1990s, adds his assent to what was said in the 1980s channeling:

This universe has seven planes or dimensions. Three are ordinal (concrete), three are cardinal (abstract), and one is neutral, providing connection. The most ordinal plane is the *physical*, which is concrete energy. Its position is mirrored by the most cardinal plane, the *buddhaic*, which is abstract energy. The *astral* plane (concrete emotion) is the middle ordinal plane. It is mirrored by the middle cardinal plane, the *messianic* (abstract emotion). The *causal* plane (concrete thought) is the highest ordinal plane. ("Highest" here refers to frequency or speed of vibration, not to a hierarchy.) It is mirrored by the lowest cardinal plane, the *mental* (abstract thought). This mirroring balances the universe. The higher planes are about the universal forces of love, truth, and beauty; the lower planes are about manifesting them. The fulcrum of the balance is the neutral akashic plane. It connects the others through the akashic or record-keeping aspect of each plane, which feed into it. [Shepherd Hoodwin, *The Journey of Your Soul* (1995), pp. 336-337 and *Journey of Your Soul* (2013), pp. 363-364]

All of these Michaelian sources explicitly agree that the nature of the seven planes correlates with the Natural Sequence schema, even though they do not call it the "Natural Sequence" (I invented that phrase).

Attributes and Principles of the Planes

In the many chapters in this *Cosmogony* book, the term "Attributes" is applied to all seven elements of each instantiation of a Natural Sequence septenary. There are Dialectic Attributes and there are Axial Attributes, and together they are called the Septenarian Attributes. These Attributes are typically shown in the headers of columns and rows in the tables where I show names of the elements of whatever septenary is under discussion. Those Attributes are:

Dialectic Attribute names: Ordinal — Neutral — Cardinal.

Axial Attribute names: Action — Inspiration — Expression — Assimilation.

Septenarian Attribute names = the combination of Dialectic and Axial Attributes: Ordinal Action, Ordinal Inspiration, Ordinal Expression, Neutral Assimilation, Cardinal Expression, Cardinal Inspiration, Cardinal Action.

As we saw above in this chapter, especially in the previous section, it is fairly obvious how the Septenarian Attributes apply to the seven planes, even though the Natural Sequence names are not used by people other than myself.

Beyond Attributes, various septenaries can be evaluated in terms of how obvious the Natural Sequence Principles apply to them. In a couple of places in this chapter, I pointed out a couple of instances where the particular Natural Sequence Principle applied. Some of the understanding of Natural Sequence Principles appears to be common knowledge in esoteric circles, as we see from the following quotation, borrowed from ><http://www.kheper.net/topics/Theosophy/HPB-planes.html>< (this link is now dead):

Madame Blavatsky's cosmology is nothing if not elaborate. As with her cycles and subcycles of cosmic evolution, she has planes and subplanes of being, a fractal ontological spectrum of innumerable divisions, comparable to the elaborate theosophies of Gnosticism and Kabbalah, but actually deriving from the "cosmic philosophy" and classifications of Max Theon. [retrieved 04 August 2019]

That is an explicit allusion to what I refer to as the Fractalicity Principle as it applies to the Natural Sequence schema.

Furthermore, ><http://www.innerlab.com/atmanet/ing/sevenplanes.htm>< (this link is now dead) provides an allusion to another Natural Sequence Principle:

In a septenary, the number four is the point of balance and the zone where two opposites meet. We have talked of opposite forces while considering other planes and subplanes, like the opposing energies within the Astral and Mental Planes, but this fourth principle is the meeting point, or the point of crisis where the major opposites in a septenary manifestation meet, where a definite line is drawn between them and where the balance and fusion of both can reach its highest expression.

At this point in the text, there was an image of a *menorah*, the Jewish candelabrum with seven candle holders. Out of the central stem candle holder there are three nested U-shaped candle holders, showing opposition of candles 1 and 7, 2 and 6, 3 and 5. This is an appropriate image showing the mirror image of the lower (Ordinal) and higher (Cardinal) planes with the Neutral (Akashic) plane in the middle. As you will recall from previous discussions, I refer to this as the Dialectic Principle of the Natural Sequence schema: the reconciliation of opposites drives development.



Next, I would like to point out the Dimensionality Principle of the Natural Sequence schema, and by that I refer to the division of the septenary into two triads of one-dimensional Action Axis, two-dimensional Inspiration Axis, and three-dimensional Expression Axis. This Principle appears in the continuation of the website quotation:

THE MENTAL OR MANASIC PLANE

All the mental functions in human beings have their origin in this plane, where the thoughts of men assume very definite shapes of mental matter. Thoughts are things in this plane where they originate.

The Ego is located in the third subplane of the Mental Plane, ... as it is the source of self-consciousness in man, or the sense of I am. The Ego can be said to be also what is known as the Soul, and it is that which for eons assumes in a cyclic way a form (or vehicle) constructed with matter from the Mental, Astral and Physical Planes in a process called Reincarnation.

THE EMOTIONAL OR ASTRAL PLANE

The Astral Plane is the sixth subplane of the Cosmic Physical Plane, and it is also very special for various reasons: From this plane, everything that we understand as the emotions have their origin. The Ego clothes itself on every incarnation with a new body or vehicle made of astral matter so it will be capable of experiencing the high sensitive response that this vehicle is capable of providing.

Many people can (voluntarily or involuntarily) abandon their physical vehicles and move with certain freedom on this plane (where what we call "dreams" occur) and this phenomenon is commonly called Astral Travel. Most of the time when we dream, what is really happening is that we are experiencing this kind of "travel", but because it occurs unconsciously the events and the perceptions experienced are scattered and incoherent, and our memories of them are distorted and truncated.

[T]his plane has a very strong influence on a man, and until he is capable of controlling the lowest aspects of this energy (anger, hate, etc.), the chances of assimilating the positive influences of the higher Mind or the Ego are very remote. The lower emotions have to be superseded by the highest aspect of this plane, which are spiritual aspiration, devotion and dedication towards that which is seen as the highest goals. Even these qualities can sometimes turn into some kind of stubborn fanaticism.

After the Second Initiation, a great measure of control over the lower subplanes of the Astral plane is achieved, and the Initiate ceases to be swayed by the powerful currents of emotions, gaining thus a good deal of inner peace.

Desire also has its origin in this plane, and the focusing of its force on that which is material (sensory pleasures and money together with all it can buy) instead of its transmutation into spiritual aspiration is what prevents Humanity and most aspirants to the Mysteries to achieve the so much needed inner peace and the freedom that will make their progress possible. Until the aspirant learns to desire only that which is essential to carry on his service to Humanity (and to the Planetary Hierarchy) and learns to be dispassionate towards those things that create unnecessary attachments in the material world, his path will be one full of deceptive turns, something more like a labyrinth instead of a straight path from where he can always see his goal ahead (his inner God, the Monad) no matter how far it may seem to be.

THE PHYSICAL PLANE

The Physical Plane is the last to be treated in this section related to the seven planes. Because of the fact that Humanity is most familiar with this plane, the field of sensory perceptions, little explanation will be required.

As I said before, each of the seven planes is at the same time a septenary. ... the complete seventh plane is considered purely physical, and doesn't have much to do with the higher faculties that makes us humans, like reason, emotions and our sense of individuality or self-consciousness. Those are the results of vibrations originated in the higher planes we already treated.

Here we move on to another presentation, once found on the internet at (this link is now dead):
><http://www.geocities.com/xeroiii/6planes.htm><.

HIGHER PLANES OF EXISTENCE

A fundamental Theosophical teaching is that our solar system is divided into seven "Worlds" or "Planes" of existence. We are all familiar with the lowest one, the Physical Plane, but there are also 6 more, each more subtle than the last. These planes are (from the least subtle to most): the Physical, the Emotional, the Mental, the Buddhic, the Atmic, the Monadic, and the Adi Planes. Many different names have been used to denote these planes, but these will be used for this site for ease of recognition and clarity.

In my opinion, the Natural Sequence schema provides a tool for understanding the nature of each plane better, and provides a well-defined system that 'separates the wheat from the chaff' found in the various and sometime disparate traditions and teachings.

Each of these planes is then sub-divided into seven sub-planes. The Physical Plane is divided into (from least subtle to most): Solid, Liquid, Gas, Fourth, Third, Second and First Ethers. The solid, liquid, and gas we are all familiar with through general science, and observation of nature. The ethers however are generally considered to be not perceived by the five senses, but the effects of which we can perceive. The fourth ether is regarded as the medium for ordinary electrical current and sound. The Third ether for the medium of light. The second ether for the medium of the finer forms of electricity (Kundalini power is also given by E. C. Chaney in [his book] *Man — the Measure of All Things*). The first is the medium for the transmission of thought from brain to brain (Psychic Powers). It is within this, the Physical Plane that the Physical and Etheric Bodies lie, and the chakras are part of the Etheric body, so they too lie here.

The Mental Plane houses the Mental Body, which is made from particles of the lower four sub-planes of the Mental Plane. It also houses the Causal Body, made solely of the particles from the third (... most subtle) sub-plane of the Mental Plane. Also on this Plane is the Spiritual Mind, made of the most subtle (first) sub-plane of this plane.

Notice that here the Causal Body is said to exist on the Mental Plane. This is in disagreement with some other sources, and reflects the fact that there is frequently a confusion in the terminology more than a disagreement in the nature of the plane among various sources.

Scoring Planes versus the Natural Sequence Schema

For your convenience, the five sources reviewed in previous sections are tabulated below.

Table II-6a — PLANES per PRIMARY SOURCES							
DIALECTIC	ORDINAL			NEUTRAL	CARDINAL		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
CENTER	MOTION	EMOTION	INTELLECT	IMPULSE	CONCEPT	SYMPATHY	EXCITATION
KABBALAH	<i>Assiyah</i> “Action”	<i>Yetzirah</i> “Formation”	<i>Beriyah</i> “Creation”	<i>Atzilut</i> “Emanation”	<i>Adam Kadmon</i> “Primordial Man”	<i>Ohr Ain Sof</i> “Infinite Light”	<i>Ain Sof</i> “Infinite”
THEOSOPHY	Physical	Astral	Mental	Buddhaic	Spiritual	Divine	Logocic
ROSICRUCIAN	Physical	Desire	Thought	Life Spirit	Divine Spirit	Virgin Spirit	God
AUROBINDO	Matter	Life/Vital	Mind	Overmind	Supermind		
BLADON	Etheric Physical	Emotional	Causal Mental	Unity	Spiritual	Divine	Monadic
MICHAELIAN	Physical	Astral	Causal	Akashic	Mental	Messianic	Buddhic
NATURAL SEQ.	Physical	Emotional	Mental	Beauty	Truth	Love/Bliss	Energy

My comments on this table are as follows.

- DIALECTIC: The first row shows the Dialectic Attributes of the Natural Sequence schema.
- AXIAL: The second row shows the Axial Attributes of the Natural Sequence schema. Combine the Dialectic Attributes with the Axial Attributes and we have the Septenarian Attributes of the Natural Sequence schema. The Septenarian Attributes say a lot about the archetypal nature of the planes named in six rows below.
- CENTER: The third row shows the names of the Centers of the Natural Sequence schema as I prefer to call them. It is often useful to include the Centers in many tables of correspondences between instantiations of Natural Sequence schemas because of our personal familiarity with them. That is, after we are made aware of the function of Centers in processing our experiences, we notice that we experience all of the Centers to some degree or another, so we can correlate that with other instantiations of the Natural Sequence schema, such as the seven planes.
- PLANE: The fourth, fifth, sixth, seventh, eighth, and ninth rows shows the names of the planes as given in six previous sections of this chapter. It is especially easy to discern the Natural Sequence schema in the Ordinal triad of planes; it is not so easy to do the same with the Cardinal triad of planes. That task was performed in the previous section.
- NATURAL SEQUENCE: The tenth row shows the names of the seven planes as I prefer to label them. These names are descriptive, and are consistent with the various teachings reviewed in this chapter.

Concluding Comments on Planes

Following are some general observations about what has been presented so far.

- One can do an internet search on “seven planes” and come up with enough material to read for months if not years. Personally, I have not done exhaustive research, but I have done enough to notice that every writer puts their own embellishment to the subject. Of course this is based on each personality and its biases. The biased filter through which I interpret the planes is of course the Natural Sequence schema, which includes my understanding of the logical-mathematical structure underlying that septenary. Continued research, were I to do it, would presumably refine and enlarge that understanding.
- If you care to research the planes further on the internet, you will notice that they are correlated with other concepts, such as “rays” and “bodies” and “states of consciousness”. There are other Chapters in this Part that explain these concepts and their correlations.

- In your research, you might notice that the planes are sometimes graphed as a layered stack, with the Physical Plane at the bottom of the stack, and the Astral, Mental, and so on, planes stacked above it. These can be numbered with 'one' at the top and 'seven' at the bottom rather than the other way around as is normally done in the Natural Sequence. I do not have a problem with this, since I see no intrinsic meaning in the numbers. What is intrinsic is the nature of each Plane, not the number artificially attached to it.
- Descriptions as well as names of the 'higher' (Cardinal) planes differ from esoteric teaching to esoteric teaching. This is to be expected because — sources agree at least on this — experience there is indescribable in human terms. Generally, one can say that experience on the 'lower' (Ordinal) planes is "quantitative" in nature, and experience on the 'higher' planes is "qualitative" in nature. That is, on the 'lower' planes, souls are said to be fragments of Tao experiencing evolution as integration with other fragments in increasingly larger composites. On the 'higher' planes, evolution is something like the All or the One not being amorphous or homogeneous but having a "quality" gradient or gradients of various kinds on each plane, a gradient that is ascended on the way to Tao.
- Note that the seven planes are each divided into seven subplanes in some of the various sources. There is a principle here that also applies to the correlates of planes, such as Worldviews with its Zones, and Life-Stages with its Sub-stages. As you surely know by now, this is the Fractality Principle.
- In various esoteric cosmologies, it is recognized that the three Ordinal planes are a reflection of the three Cardinal planes, the middle plane being a turning point, where the order reverses. This is due to the structure of the universe in time — refer to Part One of this *Cosmogony* book for the explanation.
- The third plane has been named Causal in the Michaelian teachings. Its name according to Neo-Theosophy is Mental, and this fits with the correlation with the Intellectual Center in the Michaelian teachings. In numerous other esoteric cosmologies, the third plane is considered to have a mental, thought nature. Lee Bladon's research, referred to in this chapter, reveals that the name Causal should perhaps be applied to the Cardinal levels of the third plane.
- Whenever I use the word "Cosmos" in this book, I am referring to all seven planes; whenever I use the word "Universe" in this book, I am referring to the Physical Plane only.





Chapter II-7

① THE SEVEN RAYS

It is obvious to everyone that the universe is not entirely chaotic; the Cosmos also has an orderly pattern or structure, from beginning to end, from top to bottom, from inside to outside. This means that there appear to be ‘laws’ about what can and cannot exist in space, and about what can and cannot happen in time. From ancient times, the concept of the septenary — “sevenness” — has been in use as one of the fundamental principles for organizing ideas. The basic idea is that the undifferentiated Source Substance is said to differentiate itself into the seven so-called “Rays” of manifest reality, each Ray having a particular quality or characteristic nature. The concept of Rays is dual in terms of space and time: it is a part of an “emanationist” cosmology (structure of the Cosmos in space) and cosmogony (structure of the Cosmos in time).

In the Introduction to this *Cosmogony* book, Part I, in the chapter “Emergentism”, there was discussion of Emanationism. Basically and briefly, that is the notion that the Cosmos is the differentiation of the amorphous Tao into distinctive components according to a particular logic and mathematics. As we saw in that chapter, Emanationism is a common notion in many ancient and modern religious and spiritual traditions, as well as in scientific investigations and philosophical argumentations. In this chapter, we see that the emanations from the ultimate Source are usually numbered at seven, and they are typically referred to as Rays, as if white light is passed through a prism and therewith separated into seven colors.

As you may recall from Part I of this book, according Tao’s Template found in the 42nd chapter of the *Tao Te Ching*, the Tao differentiates according to a cascade of principles, first Oneness then Twoness then Threeness then Allness. As you may recall, these components can be logically and mathematically arranged in a particular septenarian pattern that I call the Natural Sequence schema. As you may recall, the linear or one-dimensional Natural Sequence schema can be further differentiated into a two-dimensional 7x7 grid that I refer to as the Process/Aspect System matrix. As you may recall, that matrix can be further differentiated into a three-dimensional 7x7x7 block that I call the Cosmos. In the chapter just previous, “The Seven Planes”, we reviewed the notion that the Physical Plane (aka the Universe) in which we find our consciousness embedded is one of seven Planes in the Cosmos. The notion of seven Planes is conceptually equivalent to the notion of the seven Rays of emanation. As with the notion of Planes in esoteric cosmologies going back to antiquity, there is a long history of the notion of Rays going back to antiquity. As we will see, unsurprisingly, Planes and Rays are said in those esoteric cosmologies to abide by the same septenarian pattern, which happens to be what I refer to as the Natural Sequence schema.

One can read about the seven Rays in various places on the internet, but the Theosophy wiki is especially useful:

>https://theosophy.wiki/en/Septenary_Principle<

>https://theosophy.wiki/en/Primordial_Seven<

>https://theosophy.wiki/en/Seven_Rays<

By all means read those if you want to dig into the backstory of this chapter. However, I dig into the Wikipedia entry on the subject.

The Seven Rays per Wikipedia

Following is a brief introduction to the seven Rays, extracted from Wikipedia:

The ‘seven rays’ is a concept that has appeared in several religions and esoteric philosophies in both Western culture and in India since at least the sixth century BCE. Also they are known as *chohans* or angels from heaven. In

the west, it can be seen in early western mystery traditions such as Gnosticism and Mithraism; and in texts and iconic art of the Catholic Church as early as the Byzantine Empire. In India, the concept has been part of Hindu religious philosophy and scripture since at least the Vishnu Purana, dating from the post-Vedic era. Beginning in the late 19th century, the seven rays appeared in a modified and elaborated form in the teachings of Theosophy, first presented by Helena Blavatsky. The Theosophical concept of the seven rays was further developed in the late 19th and early 20th centuries in the writings of Theosophist Charles Webster Leadbeater, and by other authors such as Alice Bailey, Manly P. Hall, and others, including notably the teachings of Benjamin Creme and his group Share International; and in the philosophies of organizations such as Temple of the People, “I AM” Activity, The Bridge to Freedom, The Summit Lighthouse, The Temple of The Presence (1995) and various other such organizations promulgating what are called the Ascended Master Teachings, a group of religious teachings based on Theosophy. As the New Age movement of the mid-to-late 20th century developed, the seven rays concept appeared as an element of metaphysical healing methods such as Reiki and other modalities, and in esoteric astrology. [http://en.wikipedia.org/wiki/Seven_Rays< — retrieved 01 June 2020]

The Wikipedia article continues with sections on the seven Rays in antiquity, in Catholicism, in Hindu scripture, and in syncretistic efforts in more modern times such as Theosophy and Neo-Theosophy. By “syncretistic”, Wikipedia refers to teachings that gathered and attempted to harmonize and embellish teachings from various earlier sources. Thus, there seems to have been an evolution or development of the original and basic notion of sevenness that has converged on the modern notion of Rays.

After that extensive provenance of the concept of seven Rays, there are sections in the Wikipedia article describing the qualities of the seven Rays compiled from a couple of sources. However, they are not in harmony with each other, so they are of dubious value on that account alone. They are also of dubious value because many seemingly irrelevant items have been cobbled together and dumped into the seven ‘buckets’, so to speak, as if that explained and/or reinforced its truth or value. It is as if sevenness is just a metaphorical ‘cooking pot’ in which various people with a syncretistic mindset can throw a bunch of random ‘vegetables’ (colors, planets, gems, glands, weekdays, archangels, personality traits, qualities, whatever) to make a ‘stew’. To my way of thinking, these syncretistic projects add a significant amount of ‘noise’ to the ‘signal’ of what the Rays are really about; they do not get to the source or derivation of the concept itself, which I believe to be logic and mathematics and physics. Therefore, I seriously doubt their value and utility and accuracy.

I am going to bang on about this problem, as I see it, for one more paragraph.

As you would see if you read the entirety of the Wikipedia article, these esoteric teachings have not always had an unambiguous understanding of the septenary of Rays. My suggestion is that the reason for this lack of clarity is that they did not understand that the Rays have a logical and mathematical basis, namely the Tao's Template ontology. It is as if ancient and modern esotericists have an intuitive capacity for seeing that sevenness is valid, but their intuition does not get *behind* sevenness, to the layer that explains *why* sevenness is one of the fundamental structures of the Cosmos. My algorithmic derivation of the Natural Sequence from first principles, presented in Part One of this *Cosmogony* book, presumes to do just that. It explains the pattern of the breakdown of the undifferentiated Tao into Oneness then Twoness then Threeness then Sevenness. In spite of their lack of deep understanding, it is remarkable that so many esoteric teachings from ancient to modern times have found the septenarian cosmology to provide a map of the structural pattern of the Cosmos.

There is a source other than Wikipedia that presents descriptions of the seven Rays that are consistent with my algorithmic derivation of the Natural Sequence schema from the Tao's Template ontology, hence the seven Rays. That is presented in the next section of this chapter. Even in that accurate description of the Rays, the algorithm that generates the seven Rays is not mentioned or understood.

The Seven Rays per Alice Bailey

Alice Bailey was a prolific writer during the first half of the Twentieth Century. She came out of a background in Theosophy, and claimed to channel a non-physical being called Djwhal Khul. An internet search revealed that numerous websites discuss her work, and I found one that seems to work well for my purpose in this *Cosmogony* book, that being to demonstrate the universality of the Tao's Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix. The following lengthy quotation was extracted from the official website for preserving and promulgating Alice Bailey's legacy, namely Lucis Trust. As I am accustomed to do, I underlined some words for emphasis and to call attention to stuff that I comment on, I placed some explanatory comments in [brackets] within the quoted text to show the reader my correlations of

the text with the Tao's Template ontology and Natural Sequence schema, and I interpolated some explanatory commentary between blocks of quoted material.

THE SCIENCE OF THE SEVEN RAYS: A Tool For Understanding Ourselves, Our Fellowmen, And Our World

A talk given at the Theosophical Society of Edinburgh, 30 September 2010 by Sarah McKechnie

Thank you very much for this opportunity to share some of the teachings on the seven rays from the books of Alice Bailey. The concept of the seven rays was introduced by H. P. Blavatsky and later developed by Ernest Wood. Alice Bailey then developed the teaching considerably in a number of her books, especially *A Treatise on the Seven Rays*.

Introduction

We might begin by asking, Why seven rays? Why not ten or twelve, for those are also numbers of considerable spiritual significance? The number seven features prominently in the human perception of [the] structure of the world: the seven colors of the rainbow, seven notes of an octave; in occult cosmology the seven major planes and subplanes of existence, and in the calculation of time the seven days of a week. Then there are the seven sisters of the Pleiades [star cluster], the seven Rishis of the Great Bear [constellation], and the seven Spirits before the Throne of God [Biblical book: "Revelation"]. All are essentially living forces carrying the one Life into expression — seven great interpreters of the One Essence [Tao] as it takes on [produces] form [Oneness, Twoness, *et cetera*].

Except for the mention of "planes and subplanes", no phenomena in that list of septenaries actually have anything to do with the "structure of the world"; refer to the previous chapter here in Part Two, Chapter II-6, "The Seven Planes" for more about that equivalent of the seven Rays. The other septenaries mentioned are obviously coincidental and irrelevant; they have no logical or mathematical significance.

It is interesting to me that many ancient and modern esotericists intuitively recognize that there is something of profound significance about the septenary, but they do not understand why and how this is the case. Only a few of the people who talk about septenaries understand that the fundamental structure of the world consists of the Oneness of motion, the Twoness of space/time and time/space, and the Threeness of the dimensionality of space and time. Consequently, their descriptions of the components of the septenary lack logical-mathematical clarity.

The cosmology of the Ageless Wisdom gives an explanation [description] of the seven rays so profound, so occult that it's beyond the grasp of the human mind, but to summarize and thereby grossly simplify it:

Actually, the Ageless Wisdom only provides a vague description of the Rays, not an explanation; it is the Tao's Template ontology that provides the explanation in terms of First Principles. The knowledge that the seven rays are structured according to logic (yes, no, both, neither) and mathematics (geometric dimensions) makes them comprehensible to the human mind, but Bailey and the lecturer were not schooled in those philosophical matters, so the meaning of the seven Rays seems "profound" and "occult" (hidden) and "beyond grasp" to students of Theosophy.

As part of the initial Plan, the one Life sought expansion. Initially, that Life expressed in triple formation: as Life [Action], Quality [Inspiration], and Appearance [Expression], or Monad [Action], Soul [Inspiration], and Personality [Expression]; Will [Action], Love [Inspiration], and Intelligence [Expression]. The seven rays are the first differentiation of this divine triplicity: from three major rays, four minor rays unfold to reveal the sevenfold nature of divinity.

That passage seems somewhat garbled to me. In the Tao's Template ontology, the "divine" (Tao in terms of its unmanifest transcendence) is not itself a triplicity, as in a Trinity, but its derivatives (Tao in terms of its manifest immanence) — the three principles of Oneness, Twoness, and Threeness — are the components that are necessary and sufficient to make a complete manifest Cosmos. Considering what is documented elsewhere in this book, it was easy for me to apply the names of the Axial Attributes (words shown in brackets) that correspond to the three groups of triplicity mentioned by the lecturer.

Also, Theosophy misunderstands the progression from divinity to seven: it is not that there are three *major* Rays from which four *minor* Rays emanate — that makes no logical or mathematical sense. Rather, it is that the One emanates from the immanent Tao, the Two (a Cardinal/Ordinal pair) emanates from the One, the Three emanate from each of the Twos, and then the two Threes (a Cardinal triplicity and an Ordinal triplicity) are considered as an All in the middle of the Seven. For your convenience, Table II-7a below shows this logical-mathematical progression in graphical form.

Yet the seven emanations came forth from the central vortex [immanent Tao], and as such are seven aspects of one whole [immanent Tao] and therefore interrelated. "Each of the great rays has a form of teaching truth to humanity which is its unique contribution", Alice Bailey wrote, yet only in their composite do we understand [the] nature of the One, of Deity [immanent Tao].

Transcendent Tao is beyond human understanding, but immanent Tao is humanly understandable via the Tao's Template ontology. The Theosophical schema is a garbled attempt at an understanding of the septenary. The Tao's Template ontology makes a distinction between the Transcendent Tao and the Immanent Tao and the One, aka Deity, aka Unity (see below), but Theosophy might not.

She [Alice Bailey] said "The endless diversity of forms hides a subjective synthesis. Man can therefore eventually see, expressing itself through all forms in all kingdoms, a universal septenate, and when this happens, he is entering into [the] world of subjective unity, and can proceed on his way consciously towards the One. He cannot as yet enter into the consciousness of that basic essential Unity, but he can enter into that of his own ray-life, of the emanating source of his own temporarily specialized life."

That statement is predicated on the notion that "consciousness" or "awareness" is fundamental, meaning that the immanent Deity is in some sense 'alive', meaning that it is fundamentally 'experiential'. I agree with the statement that the immanent Deity is a "subjective synthesis", an "All" that contains everything 'within' it, that there is no something else "objective" to it, because the transcendent Tao is not perceivable. In the Tao's Template ontology, there is a pole antithetical to this maximum Unity, a minimum unity in which there is a something else, in which there is an "objective" All else, meaning, 'outside' of itself. I refer to this primordial dichotomy as the +Quantum pole and the -quantum pole of the One. The entire emanated manifest Cosmos exists and functions in between these two extremes, meaning that every distinct phenomenon consist of a subjectivity/objectivity ratio, meaning that every subset of the Cosmos consists of a varying amount of +Quantum subjectivity and -quantum objectivity. (According to this schema, the immanent undifferentiated Tao could be labeled "=Omnijjective", having the Neutral Assimilation Attribute.)

The passage mentions humans. In the Theosophical conception — which is consistent with the Tao's Template ontology in this case — humans can be differentiated in terms of the seven Rays; this is a personality typology that they call "the seven human temperaments". (These are discussed in Chapter 1F in my book *A History of the Overleaf Chart*.) As small subsets of the immanent Deity, humans have a ratio of a tiny amount of the +Quantum subjectivity and a large amount of the -quantum objectivity. That passage hints at the Theosophical conception that there is a reversal of the process of the Deity emanating Itself into Rays and sub-Rays and so on, such that over time the Cosmos as a whole is turning itself inside-out in terms of the subjectivity/objectivity ratio, meaning that subsets of the Deity evolve to become the Deity.

The following passage more-or-less reiterates the previous passage but using different metaphors:

The energies which emanate from what is esoterically called the "heart of the sun" sweep through the planets in seven great streams and pour into human soul producing what we call awareness. These seven types of energy produce the seven types of souls or rays. These differentiations are like the coloring that the prism takes when subjected to the rays of the sun. But the prism is one.

The prism analogy leaves a lot to be desired, because it does not really explain the differentiation of the Rays to the extent that the logical-mathematical Tao's Template ontology does. The Astrological allusion to the planetary energies is also of dubious merit, except to the extent that the seven planets can serve as mere metaphors for the seven Rays, not to be taken literally.

At this point in the lecture, the description of each of the Rays was initiated, listed according to their rank.

TO ENUMERATE EACH OF THE SEVEN RAYS:

The numbering of Rays typically provided by the Theosophists is the opposite of the numbering provided elsewhere in this *Cosmogony* book. If this has any significance, it is as explained with the Taijitu Tango Principle, discussed in several places in this *Cosmogony* book.

Another preliminary comment to be made here is that the quotation characterizes the Rays, not so much in abstract terms — because Theosophists did not understand the logical-mathematical underpinnings of the Rays — but in concrete human terms, where human temperaments and human perceptions and human affairs are instantiations of the Rays. This way of describing the characteristics of the Rays gives humans something they can easily understand and relate to.

Not only did the Theosophists have a notion that humans had seven basic personality types correlating with the Rays (which the Process/Aspect System matrix calls “Roles”), they also had a notion of cultural evolution correlating with the Rays (which the Process/Aspect System matrix calls “Culture”), and they also had a notion of soul ages correlating the Rays (which the Process/Aspect System matrix calls “Worldviews”). That is why I show the correlations the way I do in what follows.

Another preliminary comment to insert here is that the lecturer provide a description of a ‘higher’ and a ‘lower’ manifestation of each Ray. This is similar to the notion of Positive and Negative Poles or Cardinal and Ordinal sides in every component of the Tao’s Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix.

7) Cardinal Action = Origination Process = Excitation Center = King Role = Messianism Worldview:

FIRST RAY — The energy of Will, Purpose or Power, which is essentially the Will of Deity. This ray is of such dynamic intensity that it’s called the ray of the Destroyer. We are told that there is no true first ray type [Worldview] in incarnation yet, due to its potency. Perhaps the best example of the first ray’s potency is found in the mineral kingdom, for radium is said to hold the key to the mystery of the first ray. Courage is also an aspect of the first ray, but true courage is not a fighting courage or any sort of struggle to be what is called “brave”. It is the courage of sure knowledge, held steadily and without questioning in the midst of difficulty and discomfort.

Higher Expression: The science of statesmanship, of government.

Lower Expression: Modern diplomacy and politics.

Perhaps the words of great servers can add a human dimension to the quality of particular rays. Goethe, I think, touched upon the dynamic, initiating power of the first ray when he said: “Whatever you can do or dream you can, begin it. Boldness has genius, power, and magic in it. Begin it now.” And the courage of the first ray lies behind the Christ’s promise: “Ye shall know the truth, and the truth shall make you free.”

The underlined words fit well with the Origination Process, the Excitation Center, and the King Role of the Process/Aspect System matrix. To originate something usually means that something old is “destroyed”, aka made obsolete.

6) Cardinal Inspiration = Evolution Process = Sympathy Center = Priest Role = Transpersonalism Worldview:

SECOND RAY — The energy of Love-Wisdom; the desire or love of Deity. This is not emotional desire, but desire as the great Law of Attraction, the capacity to draw to itself that which is loved. It’s the bond of coherence, the principle of magnetic cohesion which works through all creation of forms on every level, from a crystal to a solar system. All have been created to satisfy the desire of the Creator.

Higher Expression: The process of initiation as taught by the hierarchy of adepts.

Lower Expression: Religion

The inclusiveness of the second ray is encapsulated in some words of Krishna: “Whatever path men travel is my path; No matter where they walk it leads to Me.”

In the Tao’s Template ontology, love and spiritual or religious initiation fits well in the Second Ray (the Evolution Process), but wisdom, attraction, coherence, and magnetism fit better in the Third Ray (the Synthesis Process).

5) Cardinal Expression = Synthesis Process = Concept Center = Sage Role = Holism Worldview:

THIRD RAY — The energy of active Intelligence or, to reverse it, intelligent activity; the intelligent use of form building, of all creative effort, to reveal divine purpose.

Higher Expression: Means of communication or interaction. The radio, telephone, telegraph, and the power to travel.

Lower Expression: The use and spread of money and gold.

The intelligence expressed through the third ray is the authority the Buddha pointed his disciples to in his final sermon: “Be a lamp unto yourselves. Hold fast to the Truth as a lamp. Look not for refuge in anyone beside yourselves.”

The words “communication” and “truth” fit well with this Ray, but the description is improved by the transfer of some words erroneously applied to the previous Ray, as noted above.

4) Neutral Assimilation = Combination Process = Impulse Center = Scholar Role = Collectivism Worldview:

FOURTH RAY — The energy of Harmony through Conflict. This ray produces beauty and works towards the harmonising of effects. Essentially, it is the refiner, the producer of perfection within the form so that the objective world becomes a true house of Light.

Higher Expression: Masonry, based on formation of hierarchy, and rules for admittance.

Lower Expression: Architectural construction. Modern city planning.

Perhaps the words of Julian of Norwich, the fourteenth-century mystic whose puzzlement over the existence of sin was appeased in the revelation that “All shall be well, and all shall be well, and all manner of thing shall be well”. This summarizes the essential harmony that in time prevails when conflict has exhausted itself.

According to the Tao's Template ontology, some of those statements about “architecture” and such fit better in the Fifth Ray, except to the extent that the Fourth Ray is about the science or foundational knowledge that is required for any planning activity and construction trade.

3) Ordinal Expression = Analysis Process = Intellect Center = Artisan Role = Materialism Worldview:

FIFTH RAY — The energy of Concrete Knowledge or Science. This energy has produced science and led to man's comprehension of the natural world. Because it operates on the plane of the higher and lower mind and because “man” is literally “one who thinks”, the fifth ray has special significance to humanity.

Higher Expression: The science of the soul. Esoteric psychology.

Lower Expression: Modern educational systems and mental science.

Again, the words of the Buddha invoke the essence of the fifth ray: “Believe nothing, no matter where you read it or who has said it, not even if I have said it, unless it agrees with your own reason and your own common sense.”

According to the Tao's Template ontology, some of those statements about “science” fit better in the Fourth Ray, except to the extent that the Fifth Ray is about the technological and engineering applications of science. I suggest that the confusion exists because Fourth-Ray scientists often use technologies to advance their goal of acquiring knowledge for its own sake, not to use it in a technology. However, that last comment about the virtue of skepticism is definitely in alignment with the Skeptic Attitude, the Fifth Ray Attitude in the Process/Aspect System matrix.

2) Ordinal Inspiration = Involution Process = Emotional Center = Server Role = Traditionalism Worldview:

SIXTH RAY — The energy of devotion or idealism. This ray endows man with the capacity to see the ideal, the reality behind the form. It endows man with the urge to penetrate behind the veiled and hidden realms. The past 2000 years have produced fantastic gains in the understanding of what were, to early man, “magical” realms. Christ hinted at this when he said “Greater things than I have done ye shall do”. Einstein also touched upon this urge to penetrate beyond the outer realms in his statement, “The most beautiful and deepest experience a man can have is the sense of the mysterious. It is the underlying principle of religion as well as all serious endeavor in art and science.”

Higher Expression: Christianity and diversified religions. (Notice here relation to second ray.)

Lower Expression: Churches and organized religions.

The devotion of the sixth Ray is perhaps best expressed by Jesus, the sixth ray Master: “Whosoever would find his life must lose it for my sake.”

The penchant of the Sixth Ray energy to form organized religions is well represented in the description of the Traditionalism Worldview found in Chapter II-4 on the Michaelian teachings.

1) Ordinal Action = Termination Process = Motion Center = Warrior Role = Primitivism Worldview:

SEVENTH RAY — The energy of Ceremonial Order. This is the coordinating capacity which unifies inner quality and outer tangible form or appearance. This ray primarily involves the etheric levels and thus governs the true magical work, the spiritualizing of forms.

Higher Expression: All forms of white magic.

Lower Expression: Spiritualism, emphasis on form, “phenomena”.

The essence of the seventh ray is found in the familiar aphorism of Hermes Trismegistus: “As above so below”.

The scientist David Bohm also touched upon the seventh ray in his theory of the Implicate Order, a new form of insight which he defined as Undivided Wholeness in Flowing Movement. A hologram is the symbol of the implicate order, he said: A total order is contained, in some implicit sense, in each region of space and time.

[>https://www.lucistrust.org/arcane_school/talks_and_articles/the_science_the_seven_rays< — retrieved 13 July 2023]

In the Tao's Template ontology, orderliness is congealed or condensed or solidified out of chaos at the 'lowest' level or stage of the Cosmos. That notion explains the references to the "magic" of shaping "spirit" into "form", aka the phenomenal universe.

More is said about septenaries in Theosophy in other chapters here in Part Two, for instance in the chapter on Planes, in the chapter on Soul Ages/Worldviews, and in the chapter on Theosophy.

General Comments on Alice Bailey

This information is different enough from other teachings in the same time period (the first half of the Twentieth Century), such as Gurdjieff, to indicate that it is an independent source, meaning that Alice Bailey's channeling did not copy it from someone else, except obviously Theosophy, with which Alice was at one time affiliated.

I frankly believe that these descriptions are somewhat confused with respect to Cardinality and Ordinality. Some of the descriptions of the Rays seem garbled and ambiguous to me, making it awkward to discern whether they started at the Ordinal Action end or the Cardinal Action end of the Natural Sequence numbering direction. However, I am reasonably certain, based on descriptions of the Rays elsewhere (see next section) that it starts with the Cardinal Action end. Therefore, one needs only reverse the numbers of Rays and one will have the numbering direction common to the other septenaries discussed in this book. In my opinion, the description would have been a lot clearer and more accurate and consistent if the channel and the lecturer had had an understanding of the pure abstract Ray as a logical-mathematical construction such as I provide in this *Cosmogony* book and in my *Cosmology* book.

What is not at all difficult to discern, because it said so explicitly in the lecture, is that the sequence is symmetrical around Ray 4, as the Natural Sequence schema is.

There is a fuller discussion of the seven Rays in the next section. It appears that Alice Bailey's students have built upon her work considerably.

Descriptions of the Rays

One of the best description of these Rays as derived from Neo-Theosophy that I have found on the Internet can be found at >www.uppertriad.org<. More specifically, you can freely download the entire document from >http://www.uppertriad.org/Chapters/4_TOP_15.pdf<. I have borrowed extensively from it, and in the following quotations, I have interspersed a few comments in [brackets]. For convenience, and consistency with other chapters in this *Cosmogony* book, I relate the descriptions of the Rays to terminology from the Process/Aspect System matrix. As in the previous section, notice that the sequencing starts at the Cardinal Action end of the Natural Sequence spectrum rather than the Ordinal Action end, contrary to the Natural Sequence numbering direction. Notice carefully as you read the similarity of descriptions with Process/Aspect System descriptions of Centers, Roles, and Worldviews. In my view, there is as much signal and as little noise in these descriptions as one can reasonably expect from people who do not know how to derive their understanding of the Rays from first principles using an algorithm of logic and mathematics, rather than getting descriptions from mystical revelations.

The first quoted paragraph establishes the Rays as a developmental sequence:

Since the spiral of evolution proceeds in a complex, cyclic manner, so do the rays governing or qualifying a cycle or sub-cycle change accordingly. Each unit is qualified by its individual rays, group rays, and cyclic rays. As a unit of life evolves, the dominating or primary ray will be succeeded by another. (p. 2)

7) Cardinal Action = Origination Process = Excitation Center = King Role = Messianism Worldview:

The FIRST ray is called the ray of power and will ... it is the ray of leadership, government, action, and adventure... It is also the ray that governs the beginning and ending of cycles of activity. ...there are very few (if any) first ray souls [Progressivism Worldview] in incarnation; thus, first ray personalities and those on other rays who are able to work effectively with first ray energies are relied upon for leadership. This power ray is a difficult personality ray to tame, for the will and power suggests a strength that discourages alignment with the soul. But where such an alignment has been effected, there results considerable strength (of alignment) and the will and power qualities can be wisely used for constructive work. The first ray type is characterized as the independent,

self-reliant leader who strives to excel in whatever field of endeavor is chosen. This ray is a ray of planning and of using whatever means are available to achieve the desired end. Without love and wisdom the first ray type may be forceful, arrogant, demanding, and destructive. With love and wisdom, the first ray type demonstrates mature leadership, as the personal will is aligned with the greater will. Self-reliance is one of the many lessons to be learned either on the first ray or through the application of first ray energy.... Self-reliance coupled with the alignment of the desire aspect to the will aspect of the soul results in a most potent and useful application of energy.... The first ray in the external world is leadership, government, statesmanship, and politics. As humanity evolves (and simultaneously as first ray souls evolve), so will the various governments evolve. And so will politics (a degeneration) be transmuted into statesmanship, and human government be transmuted into divine government. (pp. 8-9)

**6) Cardinal Inspiration = Evolution Process = Sympathy Center = Priest Role = Transpersonalism
Worldview:**

The SECOND ray is called the ray of love-wisdom.... The second ray is (as consciousness) the purpose or objective of evolution, experience, and the work of manifestation (as experience and expression contribute to the evolution of consciousness). On human levels it is the ray of teaching and healing, the ray of love and wisdom, the ray of union, and the ray of compassion, cooperation, and consciousness. The second ray is also the ray of magnetism, attraction, cohesion, mysticism, discipleship, and brotherhood. Upon the second ray, humanity learns to transmute desire into love, knowledge into wisdom, and personality into soul.... Being the ray of consciousness, the second ray is the field of activity and influence of the *bodhisattva*, the world teacher (the Christ). The *bodhisattva* is the leader of the *spiritual* hierarchy of the planet, and is responsible for guiding the development and expansion of consciousness. The lower aspects of the ray of love-wisdom are personal love (desire, and selfish, possessive, exclusive love) and knowledge. The higher aspects of the ray of love-wisdom are impersonal love (unselfish and all-inclusive) and consciousness (wisdom). The lower aspects are emotional and intellectual; the higher aspects are intuitive. The lower aspects are somewhat separative; the higher aspects are more inclusive.... The second ray is a ray of sensitivity leading to intuition. It is the opening of the lower self (the personality) to the higher self (the soul), and therefore to a loving understanding of humanity and of God. Wisdom and intuition are the results of the assimilation of the spiritual teachings. Love is the result of understanding (aspiration). The teachings must become so much a part of the consciousness that the emotional and intellectual response is superseded by the faculty of buddhi (the spiritual intuition). (pp. 9-11)

5) Cardinal Expression = Synthesis Process = Concept Center = Sage Role = Holism Worldview:

The THIRD ray is the ray of active intelligence. The third ray (on its major level) is (in a certain sense) a synthetic ray for the (minor) four rays of attribute (the fourth ray, the fifth ray, the sixth ray, and the seventh ray) which may be considered as sub-rays of the third ray. As manifestation proceeds, it is the third ray of creativity that is differentiated into a multiplicity and diversity of levels and dimensions. And as manifestation draws to a close, each ray will synthesize its domain, and the third ray will synthesize the minor four rays. During this process, each of the three major rays will also synthesize (perform abstraction upon) its reflection: the first ray upon the seventh ray, the second ray upon the sixth ray, and the third ray upon the fifth ray. In the human world, the third ray is the ray of economics, money, justice, philosophy, and scholarly pursuits. It is a ray of comprehension and understanding, of intellect and creative ideation, of active intelligence. It is through the third ray (and through the rays of attribute) that man learns to create.... (pp. 11-12)

4) Neutral Assimilation = Combination Process = Impulse Center = Scholar Role = Collectivism Worldview:

The FOURTH ray is called the ray of harmony through conflict. The fourth ray is the mystical ray of balance, between the inwardly directed rays (the first three rays) and the outwardly directed rays (the last three rays), and between each major ray and its reflection. The fourth ray is also a ray of balance and struggle between the objective and subjective worlds, and between all of the various pairs of opposites (such as: male and female, good and evil, positive and negative, soul and personality, reality and illusion). This ray is a major factor in the life of the spiritual student whose task it is to balance the pairs of opposites and tread the middle path. In the objective world, the fourth ray is the ray of beauty, culture, and art. It is a ray of imagination, perception, dramatization, and expression. The fourth ray of duality is a ray of conflict, struggle, and instability leading to harmony, peace, balance, and stability. It is often a painful ray with many lessons for the human personality; it is a ray of crisis, tension, and challenge. With fourth ray energy the spiritual student gradually learns to control the emotional life and bring it into harmony with the dominant mind. Then the student learns to bring the head (mind) and the heart (buddhi) (and the higher emotions) into balance. The fourth ray energy leads the student from the selfish

personal life into the unselfish, relatively impersonal life; from passion, extravagance, self-deception, and alternation of moods, to self-control, serenity, purity, and balance; from duality and separation from God to unity and oneness with God. The fourth ray principle in man is the spiritual intuition, the buddhic principle, the voice of the soul, the enlightenment and encouragement of the Christ-self. When the personality has been integrated, it must then be aligned properly with the soul so that the lower self may be guided and directed by the higher self through the intuition. The spiritual intuition is not the [sixth ray] emotional or astral sensitivity, though it is often confused with that lower psychic sense. The spiritual intuition is a much higher sense, as the higher self or soul functions through the mind that has integrated the personality. The possibility exists for both emotional and intellectual self-deception, until the mind has been properly absorbed by the soul. (pp. 13-14)

3) Ordinal Expression = Analysis Process = Intellect Center = Artisan Role = Materialism Worldview:

The FIFTH ray is the ray of concrete knowledge.... This ray demonstrates as the mental plane ... and the principle of mind. It is also the reflection of the third ray of active intelligence and divine mind.... The fifth ray (as the ray of science, knowledge, and education) plays a major role in the objective evolution of humanity and a preparatory role in the subjective evolution of mankind.... The fifth ray as concrete knowledge finds itself the reflection into matter of the third ray of abstract knowledge and comprehension. The ray of concrete knowledge is the ray of science, exoteric education, research, and objectivity. Through the fifth ray man learns about the objective world, and through the soul ray man gradually masters this worldly experience and frees himself from the limitations of objectivity.... The fifth ray domain is often the realm of the educated, evolving, thinking human being (regardless of ray). The fifth ray is an occult (intellectual) (head-centered) ray, and without a complementary mystical (devotional) (heart-centered) ray, it may be so intellectual or rational that the result is an unenlightening and illusionary rationalization of events, experiences, and observation.... A fundamental weakness of the lower mind is its tendency toward criticism (and all criticism is essentially destructive). The fifth ray in the human domain is primarily the ray of the lower concrete (rational) mind, which is the focus of attention in the outer, objective world.... The fifth ray dominates the process of discrimination (discernment) (judgment).... (pp. 14-16)

2) Ordinal Inspiration = Involution Process = Emotional Center = Server Role = Traditionalism Worldview:

The SIXTH ray is considered to be the ray of devotion and idealism.... This ray demonstrates as the astral plane (the plane of desire and emotion) ... and is the reflection of the second ray of love-wisdom.... The sixth ray is a ray of personal love, desire, idealism, devotion, aspiration, and religion. Through the sixth ray the unregulated and distorted (personal) emotions (stormy waters) are uplifted into the quiet, purified, and clarified (disciplined) emotions (the calm sea) of aspiration and impersonal devotion (to God rather than to personalities or individuals) The sixth ray is a very mystical ray, in which the heart (love) that is centered on the astral plane is transformed into the heart that is centered on the intuitional [fourth] plane.... The sensitivity of the sixth ray is primarily astral (emotional).... Relief occurs only when the mind has dominated and purified the emotions. Being the ray of religion and a ray of attribute (objectivity), the sixth ray is the means through which religious teachings are revealed.... The domain of service, from the highly selfish (personal) to the highly unselfish (impersonal), is the domain of the sixth ray. The lessons of reverence, self-sacrifice, and service are all within the domain of sixth ray energy.... (pp. 16-17)

1) Ordinal Action = Termination Process = Motion Center = Warrior Role = Primitivism Worldview:

The SEVENTH ray is called the ray of ceremonial order. The seventh ray ... demonstrates as the physical plane of consciousness, the lowest plane of objective manifestation. The seventh ray is the reflection into matter of the first ray of power.... As the ray of objectivity for the ray of power, the seventh ray is power inherent in physical matter (crystallized energy). ...the seventh ray is a ray of law and order. Where the first ray is a ray of government and leadership, the seventh ray is a ray of bureaucracy and politics. ...the seventh ray is a ray of ritual. The seventh ray is also a ray of rhythm, magic, and organization.... As a ray of extreme (physical) objectivity, the seventh ray is somewhat absorbed (distorted) by materialism. The lessons of the seventh ray eventually lead to a liberation from the lower life based upon material things and phenomena, from the lower chaos (the unorganized) to ordered objectivity, and from ordered objectivity to the higher chaos (synthesized order or abstraction). One of the problems of the seventh ray is that through ceremony, ritual, pageantry, and bureaucracy, the individual or the group can easily lose sight of purpose, meaning (significance) and reality.... The sensitivities of the seventh ray lend themselves to elementals and the lower psychic forces. These talents must ultimately be ordered to a higher purpose, that the forces of nature be used constructively and harmlessly.... The incoming ray brings a time of changes, a time of destroying (releasing) the old forms which imprison and hold back the desired progress. The incoming ray brings a time of new realizations. That which is old and no longer of value (having served its

purpose) must be discarded. That which is old yet continues to serve and be of value must be kept and properly assimilated. Through the incoming seventh ray, a growing (maturing) humanity will replace crime and lawlessness by peace, law, and order.... [pp. 18-19]

Not everything that is said in these descriptions is consistent with the Process/Aspect System matrix, derived as the latter is from pure abstract archetypes — all signal and no noise — but these descriptions are so instructive that I deemed it appropriate to quote them at length. My hope is that you took time to read them with thoughtful awareness. However, there are even more thorough descriptions of these rays on the uppertriad.org website, and you can look them up if you are so inclined. They are unmistakably similar to what I call the seven “Processes”, indicated in the heading to each Ray.

The anonymous author of this document makes a point to note that there is a mirror symmetry between the upper and lower triads, the reflection point being the fourth Ray:

The fifth (sixth) (seventh) ray is the reflection into matter of the third (second) (first) ray (respectively). The reflection of the first three rays (of the seven rays) into the lower triad of objective experience is an important process which contributes to the development of all the three rays and all of the lives within their field of manifestation. Each of the three major [cardinal] rays produces a reflection of itself by enfolding or casting its light (character) through the fourth ray of balance (or the absence of the fourth ray) (which constitutes a surface of reflection between the upper triad and the lower triad). [pp. 2-3]

This is a point that I want to emphasize also: there is a mirror image symmetry of the Cardinal with the Ordinal Rays.

Tabulation of the Rays

In the descriptions quoted in this chapter, we see that the Rays correlate well with what I call the “Processes” and the “Septenarian Attributes” of the Process/Aspect System matrix. In other chapters of this book these ideas are clarified and elaborated, and in my other books the elucidation goes even further. For here and now, and for your convenience in understanding my perceptions and correlations, this information is tabulated in the table immediately below. In the table, “PAS” is the abbreviation of Process/Aspect System.

Table II-7a — CORRELATION of RAYS, PROCESSES, ROLES, CENTERS, WORLDVIEWS, ATTRIBUTES							
RAY RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
DIALECTIC	Cardinal			Neutral	Ordinal		
DIMENSION	1-D	2-D	3-D	P-D	3-D	2-D	1-D
AXIAL	Action	Inspiration	Expression	Assimilation	Expression	Inspiration	Action
THEOSOPHY RAY NAME	Will or Power	Love-Wisdom	Active Intelligence	Harmony thru Conflict	Concrete Knowledge	Devotion	Ceremonial Order
PAS PROCESS	Origination	Evolution	Synthesis	Combination	Analysis	Involution	Termination
PAS ROLE	King	Priest	Sage	Scholar	Artisan	Server	Warrior
PAS CENTER	Excitation	Sympathy	Concept	Impulse	Intellect	Emotion	Motion
PAS WORLDVIEW	Messianism	Trans-personalism	Holism	Collectivism	Materialism	Tradition-alism	Primitivism

My comments on this table are as follows:

- This table is worth studying if you really want to understand what I am saying in this chapter. Furthermore, its contents and correlations are to be found throughout this *Cosmogony* book and my other books. It would ease your journey through this *Cosmogony* book if you studied this table, and similar tables scattered throughout this book.

- This table is structured in what I call the “Canonical Septenary”. Any seven items in a list can be arranged in any one of seven factorial ($7! = 5040$) ways, but Theosophy and the Tao’s Template ontology agree on the particular arrangement shown in this table — it is very special in both systematic cosmologies. A Cardinal triad and an Ordinal triad are on two sides of a Neutral, and Action, Inspiration, and Expression dimensions are in mirrored or reversed order in the triads.
- RAY RANK: In the first row below the title, the Rays are ranked from first to seventh. As you can see by comparing it with the other rows, this numerical sequence is the reverse of the way it is done in the Tao’s Template ontology.
- DIALECTIC ATTRIBUTES: The second row shows the names of the Dialectic Attributes, the names given in the Natural Sequence schema. The first three Rays are the mirror image of the last three Rays, the pivot being the Fourth Ray. That is why Cardinal is the opposite of Ordinal in this table. This is a claim of both Theosophy and the Natural Sequence schema. Theosophy does not use the words “Cardinal” and “Ordinal”, but it does use the words “Upper” and “Lower”. For more information on the Rays, refer to this website: ><https://www.uppertriad.org/main.html><. Theosophists did not understand the Axes of Action, Inspiration, Expression, and Assimilation as explained in the Natural Sequence schema, but they do understand the Dialectic attributes of Cardinal, Ordinal, and Neutral, but ascribe different names to them.
- DIMENSION: The third row shows the ascending and descending geometric Dimensionality of the Rays, which is what gives them their distinctive nature.
- AXIAL ATTRIBUTES: The fourth row shows the names of the Axial Attributes, the names given in the Natural Sequence schema. The combination of the names of the Dialectic Attributes and the names of the Axial Attributes generates the names of the Septenarian Attributes. The names of the Septenarian Attributes provide the characteristics of the named things in the same column.
- RAY NAME: The fifth row shows some of the names of the Rays as given in Theosophy. For alternative names, refer to >https://en.wikipedia.org/wiki/Seven_rays<. That article has several tables showing many sources and many alternative names.
- PROCESSES: The sixth row shows the seven “Processes” in the Process/Aspect System matrix that correlate with the Rays. What I refer to as Processes are just one-word descriptions of the “Septenarian Attributes”, which are the composite of Dialectic and Axial Attributes.
- ROLE: The seventh row shows the seven “Roles” which, in the Process/Aspect System matrix, have become a sort of a ‘stand-in’, or ‘personification’ of the seven Rays. (In my opinion, it is not proper to make Role = Ray; there is only a *correlation*; there is not an *identification*; this is explained elsewhere in several places in this book.) The Theosophical concept of Temperaments appears to be somewhat equivalent to the concept of Roles in the Process/Aspect System matrix. Thus, Roles and Temperaments are two names for the same phenomenon. The seven human temperaments are discussed in Chapter II-2, which covers the Theosophical teachings.
- CENTER: The eighth row shows the names of the “Centers” of the Process/Aspect System matrix. These provide the reader with yet another way to characterize the nature of each Ray.
- WORLDVIEW: The ninth row shows the “Worldviews” of the Process/Aspect System matrix. These provide the reader with yet another way to characterize the nature of each Ray.

In other chapters of this book, there is discussion of the colors of the rainbow ascribed to the seven Rays, and the Rays are correlated with the seven primary chakras, and with the seven planes.

General Comments on Rays

Although the concept of seven fundamental “rays” of creation goes back thousands of years, the most modern conception is apparently derived primarily from Alice Bailey’s channeling. She actually invented the term “New Age”, and many New Age ideas are borrowed from her work.

What is most important to note is that the sequence of the Rays is per the Natural Sequence, not some other arrangement of the septenary, and that the descriptions of the Rays are similar enough to the descriptions of the components of the Natural Sequence schema that their correlation is assured. Also important to note is that there is a stated symmetry between the “upper” (Cardinal) and “lower” (Ordinal) triads, with the central

(fourth) Ray being a neutral. This is per the Taijitu Tango principle discussed at length in [Part One](#), where the Natural Sequence is derived and described and explained in great detail.

It is interesting to me to note the relative accuracy of the information, even though neither Alice Bailey nor the author of uppertriad.org understood the Dialectic Attributes of Ordinal–Neutral–Cardinal, and the Axial Attributes of Action–Inspiration–Expression–Assimilation, and the Geometric Attributes of One-Dimensional–Two-Dimensional–Three-Dimensional–Pan-Dimensional. My assertion is that if esotericists understood the derivation of the Rays from these Attributes, they could improve the signal-to-noise ratio of their descriptions significantly.

Also important to note is that the rank of the Rays is opposite from most other esoteric sources in regard to other instantiations of the Natural Sequence. That is, the Rays are numbered from the “top down” rather than from the “bottom up”: they start at the Cardinal Action end rather than the Ordinal Action end. This is why I suggest that the number assignments themselves have no intrinsic meaning. The Taijitu Tango Principle also suggests that there is no intrinsic meaning to the direction of counting of the ranks. What is intrinsic is the nature of each Ray, not the rank artificially attached to it. This intrinsic nature follows a “natural” (logical, mathematical) sequence related to geometric dimensionality and the Cardinal–Ordinal–Neutral dialectic.

Based on the varying and ambiguous descriptions of the Rays down through history in the Wikipedia article culminating in the Theosophical formulation, this suggests to me that there has been an evolution of understanding of the Rays over the last couple of millennia, getting better all the time. Along comes the Natural Sequence, and now we know, for the first time, the logical and mathematical derivation of the septenary of Rays. Perhaps this is the last step in the progression of understanding the septenary, as well as the most recent.

Also note from the quotations that these Rays are considered to correspond to the seven Planes, and to stages of involution of spirit into matter from top to bottom, and of evolution from matter into spirit, from bottom to top.

The differentiation of the Rays has been compared to the colors emanating from a prism. However, the analogy of the color spectrum is not what really distinguishes the Rays from each other; that has always been just a metaphor; it is not a reality of how the emanation process works. What makes for the distinctions of the Seven from the One in the Canonical Septenary is mathematical, specifically geometrical. What makes the differences in Rays is the perpendicularity and dimensionality of the Axes, creating the framework of Process/Aspect, aka time/space: one-dimensional Action, two-dimensional Inspiration, three-dimensional Expression, and pan-dimensional Assimilation. It is accurate to say that there is a spectrum *on* each Axis, for instance between first ray and seventh ray at the extremes of the 1-D Axis, but the difference between Axes is defined as geometric orthogonal dimensions, commonly called ‘x, y, and z’ in space and tx, ty, and tz in time.

Another excellent source of information on this subject is this book available on the internet:
><https://www.theosophical.org/files/resources/books/SevenRays/SevenRays.pdf><.





Chapter II-8

① THE SEVEN SOUL AGES/WORLDSVIEWS

Many spiritual and esoteric teachings from ancient to modern times espouse the doctrine of the development of the so-called immortal spiritual “soul” via reincarnation over many lifetimes. As part of that, one can reasonably expect that there might be a spectrum of soul age, from ‘new’ souls to ‘old’ souls. The Natural Sequence schema and the Process/Aspect System matrix *per se* do not have anything to say about the validity of that doctrine, but it does provide a pattern that applies to so many other septenarian developments, such that one might reasonably wonder if it might apply to soul age. It so happens that several spiritual and esoteric teachings do in fact describe specific characteristics of stages of the alleged soul maturation process, and when we examine them we see that those descriptions indicate that the journey of the soul is yet another instantiation of the Natural Sequence schema.

The teachings that I have found are:

- The Michaelian teachings, channeled information that originated in the 1970s.
- The Jewish Kabbalah, which developed a theory of stages of soul development in the late Middle Ages, if not sooner.
- Theosophy and branches thereof, starting in the late 19th and ending in the mid 20th Century.
- The teachings of Meher Baba, a South Asian enlightened guru, also from the mid 20th Century.
- Laeh Maggie Garfield, who channeled information about soul ages in the 1980s.
- Michael Newton, a psychotherapist who did hypnotic regression work with his clients who told him about past lives and how reincarnation worked, which was published in the late 20th and early 21st Centuries.
- Lee Bladon, a researcher with a penchant for syncretizing spiritual traditions.
- Tessa Lynn, another psychotherapist/hypnotist whose work with clients in trance elicited information about Soul Ages in the late 20th and early 21st Centuries.
- John Christopher Daniels, yet another channeled source of information about reincarnation and its ramifications, which was published in 1975.

We will review them in the next several sections of this chapter of this *Cosmogony* book.

Hereinafter, I abbreviate the phrase “soul age” to just Age.

Based on the collective descriptions of these Ages from the sources listed above, these seven Ages could be named Infant, Child, Young, Mature, Senior, Elder, and Ancient.

Not everyone who reads this *Cosmogony* book will be open to the notion that reincarnation and one of its corollaries, Age, are actual real phenomena. For those people, the notion of Age can be framed in terms of what is often called “worldview”, and understood as merely another inborn personality trait. That word recognizes the validity of the general notion of a holarchy of psychological and perceptual levels and stages, but omits the interpretation of the alleged source of the phenomenon, reincarnation. In others Parts of this *Cosmogony* book, it is often expedient for me to refer to this phenomenon by the name Worldview in the context of a comparison and contrast with other Natural Sequence septenaries. In Part Three of my book *The Process/Aspect System* I provide a lengthy description of the seven Worldviews and a septenarian subset of them that I call Zones. At the end of this chapter, I provide a brief description of the seven Worldviews.

The Michaelian Teachings

The Michaelian teachings are reviewed here in Part Two, in Chapter II-4 above. Basically and briefly, a channeled source of information that called itself Michael revealed a system of forty-nine personality traits (in seven categories) that they called “Overleaves”, during the years 1973 to 1978, to a group of spiritual seekers that has come to be called the original Michael group (OMG). (This revelation is the basis for my Process/Aspect System matrix.) The transcriptions of this revelation have been published by the Center for Michael Teachings, Inc., as the book *Michael Speaks: The Legacy of Sarah Chambers*, Volume 1. The first of the seven personality traits revealed by Michael was that of the Ages of the soul. The first mention of Age came in the second-ever session with the Michaels, the 17 August 1973 session:

Regarding earlier [comment about] growth of group: We’ve had requests [to join]. Gene has misgivings about the group growing.

Those who should be part of this [group] will not need a lengthy invitation. They will arrive easily. Be careful of luring anyone in with glamour. This [group] could be devastating to Young Souls.

Are we Young Souls?

You are not Young Souls. [S/C1, 17 August 1973]

This was a hint of things to come. The exact date of the actual revelation of the seven Ages is not recorded, but it apparently happened between the sessions of 21 August and 26 August of 1973. There were several pages of description of these seven Ages in an edited compilation, made by a member of the OMG, of selected portions of all the channeling sessions conducted in 1973 after the Michaels appeared. Much of the material on the Ages quoted below has been published in a book by Chelsea Quinn Yarbro, namely *Messages from Michael*, pages 69–80 of the classic edition and pages 61–69 of the 25th Anniversary Edition.

Perception:

The approximate age of the soul can be determined by its perception of itself and the world around it.

The Infant or “first born” Soul perceives itself and the world around it simply as “me” and “not me”. In this Cycle, there are no racial memories. If “not me” is perceived as hostile and unkind early in life, withdrawal occurs and a condition known as autism often results. If this perception occurs later, the Infant Soul may react with unchecked violence: sadism, murder without visible provocation, acts of unbelievable cruelty. The Infant Soul truly does not know the difference between right and wrong action, but it can be taught the laws of common sense and decency.

The Baby Soul perceives itself and the world around it as “me” and “many other me-s”. The Baby Soul forms strong beliefs early in childhood, borrowed from those around it, and these are literally unshakable and incorruptible. The Baby Soul is normally agreeable, a pillar of the community — until an opposing viewpoint is expressed. Then, inwardly the Baby Soul is bewildered, baffled by the difference. Outwardly, it will express anger, hostility, negative emotional energy, belligerence.

The Young Soul perceives itself and the world around it in quite a different manner than in the preceding Cycles. It perceives itself as “me” and it perceives you as “you,” but it perceives “you” as different from “me” and experiences the need to change you — to bring you around to its point of view.

The Mature Soul: this is the most difficult Cycle of all, for the Mature Soul perceives others as they perceive themselves. Because of these perceptions, the Mature Soul will often seek to sever relationships seemingly for no reason or by the same token, seek to perpetuate outwardly inappropriate relationships. If you and I are both Mature Souls, within this framework are also your experiences of me. In other words, while I am experiencing you, you are also experiencing me and at the same time, you are aware of my experience, and upon this deeper awareness, you and I will base any future social intercourse.

The Old Soul perceives others as a part of something greater that includes itself.

The Transcendental Soul experiences others as itself. Telepathic rapport and psychic union occur. These exalted souls seldom seek reincarnation in the physical body. If they do, it is usually because of the spiritual and/or philosophical ennui existing on the planet, and then they normally precede the descent of the realized masters [Infinite Souls] by less than one hundred years. The Transcendental Soul can enter the physical body and displace an Old Soul at any time during the life Cycle. It has happened that the presence of the Transcendental Soul alone was enough to provoke the needed spiritual, philosophical or cultural revolution [so that an Infinite Soul was not necessary].

The Infinite Soul perceives the Tao.

Sexuality:

The Infant Soul perceives love only in the form of lust. It performs the sex act with all the frenzy of a wild animal, completely dependent upon some innate estrus lost to higher Cycles. It is powerless to change this.

The Baby Soul views its own sexuality with a vague uneasiness, and if the culture fosters such, will think of it as somehow shameful. The Baby Soul will be embarrassed by overt displays of honest sexuality, and it will strive to keep the others around it bound down by its own reprehensible moral code. Behind closed doors, the Baby Soul is more often than not quite as prudish as it is in public and seldom sustains any sort of sensual pleasure. Not having experienced such, it naturally does not “believe” in the existence of the experience.

If the Young Soul’s own personal opinion of sex is rather low, it will do its best to convince those around it that sex is evil and should be eschewed. Renunciate monks and nuns are quite often Young Souls. They renounce loudly and take every opportunity to remind the world around them that they have renounced. On the other hand, the Young Soul can be an equally zealous proponent of total sexual freedom. The Young Soul perceives love as Eros, solely predicated upon those expectations it has of the others around it. If the others fail to live up to those expectations, the Young Soul can hate with equal zest. Sexual conflicts can be agonizing in this Cycle — early training versus internal urge.

With the right partner (another Mature Soul who has become centered or an older soul), the Mature Soul can be an ardent lover. The love is deep and lasting, for Agape is possible during this Cycle if the inner conflicts are resolved. With the wrong partner, there is apathy, impotency, frigidity, infidelity. This soul has more of a tendency to “mate for life” than any of the other Cycles, providing a comfortable mating occurs.

The Old Soul is casual about sex in the earlier Levels because erotic love begins to lose its charm. In the final Level, the Old Soul often does not participate for lack of purpose (sex adds nothing to its life). The Old Soul is intensely sensual, however, and does enjoy close physical contact. The Old Soul is usually an experienced and exciting partner for a soul in an earlier Cycle, but can be a very disappointing lover because of its nonchalance.

Neither the Transcendental Soul nor the Infinite Soul pursues physical union. Quite often, however, the high Causal [plane] body or the high Mental [plane] body displaces an older soul, and at that time of the manifestation, the sexual activity ceases. These souls are not challenged by Maya.

Education:

Let it be known that intellect is not a factor in any of these Cycles. Intellect is a product of culture, and even firstborns and Infant Souls can be taught to read, write and compute arithmetically. Infant Souls rarely seek higher education unless forced. They are bewildered and hostile in strange situations.

The Baby Soul occasionally seeks higher education — does well in small, conservative liberal arts colleges, trade schools — learns “proper” subjects, is often the “good student”.

The Young Soul almost always seeks higher education, usually graduate degrees. The Young Soul is a tireless worker for its cause and will go through unbelievable hardship to bring this cause to bear; education can be an example of this.

The Mature Soul always seeks higher education, although not always in an institutional setting. It is often too uncomfortable in a school setting. The Mature Soul makes massive contributions to knowledge, both philosophical and scientific. Karl Marx, Alfred Adler, Fritz Perls, Sigmund Freud, Emmanuel Kant, Aristotle, and Albert Einstein were all Mature Souls.

The Older Soul usually enjoys hard, manual labor, but seldom works as an artisan. It may or may not seek higher education. If pressure is exerted by the guru, it will, or if it senses that its task somehow involves the necessity for obtaining the proper credentials.

The Transcendental Soul seldom “seeks” any sort of formal education, although it will go along with what is forced upon it cheerfully unless it interferes too greatly with its purpose. Then the Transcendental Soul will gently but firmly balk.

The Infinite Soul has direct access to all knowledge and has no need for education of any type.

Religions:

The Infant Soul adopts the religion of its parents without modification, although its interest is cursory and its understanding poor.

The Baby Soul tends to be fundamentalistic in its religious beliefs. Personification of the godhead is the strongest in this Cycle. The Baby Soul believes in the forces of evil.

The Young Soul, if religiously inclined, tends toward orthodoxy in the extreme. It will campaign tirelessly against all religious reform. If the Young Soul is atheistic, it will be equally as tireless in its efforts to wipe out the orthodoxy of others.

Religion becomes self-motivated in the Mature Soul Cycle. The Mature Soul seeks quiet faiths — Quakers, Unitarians, Buddhism.

The religion of the Old Soul is expansive and includes unorthodox rituals. Groves of trees become cathedrals, and the presence of the Realized Masters is often felt by Older Souls. The Synthesis is perceived in the final Cycle, and Old Souls seldom cling to dogma.

The Transcendental Soul perceives the Synthesis and teaches it as such — will not espouse popular dogma and does not affiliate with organized religion.

The religion of the Infinite Soul is the Logos.

Employment:

Old Souls are gardeners. Young Souls with fabulous estates pay them well to exercise this inborn talent. The money thus gained is used by the mid Causal body to perpetuate its influence on the Physical Plane.

Many nurseries are schools run by mid Causal teachers. The teaching there is nonverbal and extremely subtle, but it is easily recognized.

Food:

Infant Souls and Baby Souls cook and eat to survive, and the food is usually tasteless and overcooked. The Baby Soul is fearful (of almost everything), and her kitchen is usually antiseptically clean.

Early Cycle Young Souls tend to adhere to the food patterns learned in childhood. In the middle of this Cycle, experimentation is rampant, but the appetite is generally poor. Late Cycle Young Souls continue to experiment with food and foreign food fetishes often develop. Racial memories are stronger now and the *déjà vu* draws them to certain types of foods.

Mature Souls make fine chefs. They enjoy precision cooking and gourmet dining. Their Hollandaise sauce does not curdle — it would not dare. Wine fetishes are at their height in this Cycle. A Mature Soul would never serve a Zinfandel with lobster. An Old Soul would not hesitate a moment, if Zinfandel happened to be his favorite wine.

Old Souls are casual cooks; they use recipes as guidelines rather than the gospel. They tend to use spices and herbs freely, and will cut mold from cheese, and rotten spots in fruits.

Animals:

Infant Souls are often bitten by dogs who have no previous history of biting, simply because of their inordinate fear.

Baby Souls do not like longhaired cats as a general rule.

Young Souls often own status pets, such as ocelots and Lhasa Apsos.

The pets belonging to Mature Souls will most often reflect their owner's personalities. Many winners of obedience trials belong to Mature Souls.

Most shaggy dogs belong to Old Souls. Old Souls begin to relate to wild animals and often have an affinity for all living creatures.

Baby Souls and Infant Souls would not be caught dead on horseback. Young Souls ride the rodeo, Mature Souls ride to the hounds, Old Souls ride the trails. Most Allergies to animals are denials. [late August, 1973]

That is the end of the original revelation about Soul Ages. Further descriptions were given during the OMG and in subsequent groups, up to and including the present day. Much of this information has been published in Michaelian teachings books and on Michaelian teachings websites; an internet search for "Michael teachings" will find them for you.

What is not obvious from the brief descriptions given above is how the Ages conform to the Natural Sequence schema. Four Overleaf charts, showing the Ages and the other six Overleaf categories, were produced during the OMG itself, and a couple dozen other Overleaf charts have been produced since then. It so happens that I have written a book that documents this history and provides the correlation with the Natural Sequence schema, namely *A History of the Overleaf Chart*. A table near the end of this chapter shows that correlation, along with the other teachings about Age that are reviewed in this chapter.

As stated above, throughout this book I use the word *Worldview* to refer to that inborn psychological maturity factor that is called *Soul Age* in various teachings about reincarnation. The next subsection of this section on the Michaelian teachings provides a brief description of the seven *Worldviews*. It is a very brief summary of the lengthy descriptions found throughout the Michaelian teachings sources. My preferred names for the *Ages* are not always the same as those given to the *OMG* and via subsequent Michaelian sources.

The Seven Soul Ages/Worldviews

Broadly speaking, a person's "*Worldview*" is a measure of their psychological maturity. It determines the maturity of their perceptions, the depth of their personality, the focus of their interests, the nature of their ethics, the degree of their common sense, and the breadth of their understanding of the world and of their relationships. This is not unlike the maturation of people during their lives — hence the names of the *Ages*. In the explanation of each *Age*, the number in parentheses is the approximate percentage of the world population in that *Age*. The Dimensionality (1,2, 3, Pan) and the Dialectic Attributes (–Ordinal–, +Cardinal+, =Neutral=) of the *Age/Worldview* are also shown in parentheses.) These *Ages/Worldviews* do not generally manifest clearly until after middle age; the older the person, the more obvious the expression.

INFANT/PRIMITIVISM (–1D–)(10%): Whatever their intelligence, education, or social standing may be, Infant *Age* people are somewhat immature in their perceptions. This means they have a simplistic outlook on life, and they tend to live in the moment. Their understanding of the world and relationships is usually primitive. Their "clumsiness" in life, like that of a child, can either result in doing dumb things, or result in fear of doing much of anything. In any case, they are clannish and they stick to the familiar. A primary concern is for survival in a world that often bewilders them. Their virtue is in their lack of pretense, their uncomplicated lifestyle, their closeness to nature, and in their protectiveness toward children and others in need. Even so, their common sense is not very developed, and they are often themselves in need of guidance. The Positive Pole is +Preservation; they prefer to establish and maintain a comfortable status quo. The Negative Pole is –Security; they are fearful of real and imagined challenges and dangers. Hence, the name of this *Worldview* is *Primitivism*: resistance to change, and the establishment of comfortable routines.

CHILD/TRADITIONALISM (–2D–)(23%): Like Infant *Age* people, Child *Age* people are a minority of the population. Neither feels as if they are a part of the mainstream. The motto of the Child *Age* is "Do it right or not at all". They much prefer the few activities in which they are competent. They develop strong feelings about things early in life, and rarely depart from them later on. They tend to be "cliquish" (narrow in their friendships) because they feel uncomfortable with people who are not similar to themselves. Their primary virtue is guilelessness — they are not sophisticated enough to be artificial — and they readily display sincere emotion. They emphasize "family values", and they relate well to children and teenagers. If politically minded at all, they tend to be conservative, right-wing. If religious, they are usually fundamentalist and evangelical. In personal habits they tend to be clean and neat. A good name for the Positive Pole is +Propriety, the tendency to be moralistic and religious in a good way. A good name for the Negative Pole is –Conformity, the tendency to go along with the crowd for the sake of social cohesion. Hence, a good name for this *Worldview* is *Traditionalism*: 'running with the tribe', so to speak.

YOUNG/MATERIALISM (–3D–)(32%): There are more Young people than of any other *Age*, so they dominate the events of the world. This also makes them the most "normal" of people. If religious, they are most comfortable in a mainstream religion. If political, they prefer the middle of the road, or perhaps they lean to the right. They see technology and industry as more important than the environment — their focus is on the company or the nation rather than on the clique or the world. In manner they are cosmopolitan and formal, and their taste is for glamorous and fashionable things. Their main interest is materialistic achievement, so success in their careers is very important to them. Look for them in business attire and sports bars. They are also competitive by nature — their motto is "Do it my way". The Positive Pole is +Production, the tendency among other things to proliferate their stuff. The Negative Pole is –Exploitation, the tendency to use up resources in the quest for stuff. Hence, the name of this *Worldview* is *Materialism*: this world and this one life is all there is.

MATURE/COLLECTIVISM (=PD=)(24%): In this category are most of the "avant-garde", the leading edge of culture. Mature people are ahead of the majority, the younger *Age* people, and there are enough of them to make a real difference in the world. Mature people are responsible for most of the originality and discovery that occurs in every field. Their perspective is global and they are concerned with environmental

issues. If political, they lean toward the left — liberalism, socialism, humanism, egalitarianism. If religious, they are not dogmatic, with a tendency to experiment with unorthodox teachings. They lead lives of introspection and intuition, all the while searching for understanding — look for them in libraries and book stores. They value knowledge and relationships very much. The Positive Pole is +Consensus, the urge to bring everyone and everything together for the greater good. The Negative Pole is –Ambiguity: they are overly concerned that everyone get along to the point of compromise and acquiescence. Hence, the name of this Worldview is Collectivism: we are all in this together so let's get along as best we can.

SENIOR/HOLISM (+3D+)(11%): Like members of the other “minority” Ages, Senior Age people constitute a “fringe element” or subculture in society, outside the mainstream. Not unlike senior people, people in the Senior Age act as if they have “seen it all”. This makes them casual and easygoing, if not world-weary and bored. At any rate, they are mellow about everything — their motto is “Do what you want”. They do not put forth much effort, but their general competence in life gets them by. Rarely do they have a strong career ambition. If religious, they tend toward philosophy, metaphysics, Buddhism, and mysticism. They rarely have interest in politics beyond pacifism and a laissez-faire policy. In relationships, they just enjoy “hanging out” with their friends. The Positive Pole is +Wisdom; the Negative Pole is –Ideology. Hence, the name of this Worldview is Holism: we are all components of a universal system and it is wise to fit in with its pattern.

ELDER/TRANSPERSONALISM (+2D+)(<1%): These souls are very rare but can be very influential when it comes to inspiring spiritual growth and social change. The most notable examples include Ikhnaton, Zoroaster, Socrates, Muhammed, and Gandhi. Bodhisattvas, gurus, and other high teachers might also fit in this category. The Positive Pole is +Liberation and the Negative Pole is –Catharsis. Those terms pretty much spell out the impact these souls can have on social values that are due for major improvements. Hence, the name of this Worldview is Transpersonalism: “We can make this a better world; I will show you the way”.

ANCIENT/MESSIANISM (+1D+)(<1%): These souls are even more rare than Elders, and their impact can be even stronger. Krishna, Gautama, Lao-Tzu, and Jesus — founders of the world's major religions — are the most notable examples. In some spiritual traditions, these perfected souls are regarded as Avatars of deities. Other spiritual masters and catalytic revolutionaries might also fit in this category. The Positive Pole is +Revolution and the Negative Pole is –Provocation. They work to reform individual governance at the deepest level, and they cannot be ignored. Hence, the name of this Worldview of Messianism: “We can make this a better world; I will show you the way.”

The Seven Levels or Zones

Each Age is divided in seven so-called “Levels”, with the alternative name of “Zones” to go with the alternative name for the seven Ages of “Worldview”. Level/Zone and Age/Worldview together make up the Maturation Dimension of the personality. The Maturation Dimension is a sequence, with each Age/Worldview containing the seven Levels/Zones, making forty nine stages of psychological maturity. Every person is at one of these stages. The Level/Zone gives an overall theme or emphasis or undercurrent to the lives and perceptions of the people in them.

FIRST/RESOLUTION (-1D-): The theme of people at the First Level is to focus on physical activities and endeavors, with the intention of bringing them to completion. People in +Institution establish and accomplish their tasks with efficient energy. These exploits are usually materialistic in nature, such as finance, government, or athletics. They avoid distraction to focus their intention and fulfill their aims. People in –Regulation make rules for everything, and this keeps them at the elementary stage of development. They are single-minded as they tread their life path. –Regulation is driven by the fear of starting something the end of which they cannot foresee. This is the fear called performance anxiety — “can I do the job or not?” People in either Pole apply themselves to their projects with diligence.

SECOND/IMMANENCE (-2D-): The theme of people at the Second Level is to focus on their value system. They are interested in the basic groundwork, the fundamental issues of adjusting to the demands of social life. Their inspiration is to apply their values in a down-to-earth way. People in +Affiliation find the other people that are valuable to them and that they can bond with in a healthy way. They are solidly grounded in whatever they feel, and they build a quality life thereon. However, people who are in –Indoctrination are often stuck in the rut of whatever value system has been inculcated into them by their peers. The Negative Pole of –Indoctrination is driven by the fear of drifting off the strait and narrow path. People in either Pole

constantly seek enduring values, to keep their lives on the righteous path. People in either Pole limit themselves and their activities, and lead an uncomplicated lifestyle.

THIRD/SEPARATION (-3D-): The theme of people at the Third Level is to experience uniqueness and specificity. They try to understand how things relate to each other in specific ways so they can manipulate it to their unique satisfaction. Their pursuits are generally intellectual and materialistic. People in +Individuation become increasingly true to themselves as they shed whatever falseness they might have accrued when they were defenseless against incompatible influences. They embrace their unique and special identity, and make the most use of it, even within the context of the culture and society that is not congruent with them. However, people in the Negative Pole of –Alienation are not able to find their true self so as to make the best of whatever that is; they are trapped in and hindered by what they regard as their strangeness. People in either Pole go through life in their own egoic way, whether in a healthy direction or an unhealthy direction.

FOURTH/EXPERIENCE (=PD=): The theme of people at the Fourth Level is to assimilate information. People at this Level learn about many areas of life experience. They are often involved in scholastic, historical, or scientific endeavors. People in +Consolidation gather data and form a unified body of knowledge. They are not content with theories. The facts must be substantial. People in –Achievement are complacently coasting through life on the momentum of past accomplishments. The worry that drives –Achievement is a fear of “upsetting the apple cart”, or a fear of undoing what has already been done, or a fear of going down the wrong path. People in either Pole are studious, with a detached objectivity about them.

FIFTH/UNIFICATION (+3D+): The theme of people at the Fifth Level is to experience grace and beauty. They tend to be wise and loving in all of their dealings. There is concern for doing the decent thing with conviction because they see that we are all in this together. They live with consideration for the benefit of others, and for finding the greatest good for the most people. People in +Holism are always broadening and widening their belief system to be all-inclusive. They want to see the big beautiful picture, the universal generalized principles. People in –Ideology gather bits and pieces of wisdom from here and there, but do not put it into a big picture or coherent belief system. They gather and blend material from their life experiences, but they often mix it illegitimately, making an incomplete or distorted picture. –Ideology is driven by a fear of incongruity, which is seen as an ugly scattering of energy. People in either Pole are philosophically inclined, with perhaps a flare for the dramatic if not the tragic. They collect whatever they find fits their picture of a beautiful reality.

SIXTH/TRANSCENDENCE (+2D+): The theme of people at the Sixth Level is to experience psychological intimacy, moral virtue, spirituality or religiosity, ethics, and excellence in whatever their concerns may be. The person’s consciousness is naturally elevated to the nobler, higher aspects of life. People in +Exaltation have an other-worldly consciousness that looks for the blessing in everything, and tries to help other people be their best. People in –Exaggeration also have noble aspirations and intentions, but they are distorted, subverted, or perverted by such things as self-righteousness, grandiosity, and fanaticism. –Exaggeration is driven by a fear of being ordinary. People in either Pole are sensitive, intense, and high-minded players in the symphony of life. This is the most difficult Level.

SEVENTH/ACTIVATION (+1D+): The theme of people at the Seventh Level is to make things happen. They have a lot of projects in the works. They are always starting something, managing something, doing something, or going somewhere. They pursue their activities and interests with gusto and energy. People in +Causation are active and energetic in gaining competence. They master the subjects of their choice, and then oftentimes teach them to others, doubly making it part of themselves. People who are in the Negative Pole of –Agitation are, of course, spinning in a whirlwind of energy that does not go anywhere or do much beyond heating up the environment. –Agitation is driven by a fear of rules and regulations. People in either Pole like to keep busy, perhaps to the point of being “workaholics”.

The Process/Aspect System Chart

At this point in the discussion of Age/Worldview, it might be helpful for you to review the Process/Aspect System matrix table that was first introduced in the Introduction in Part One of this *Cosmogony* book. Besides the row of the table that shows the Ages/Worldviews and the Levels/Zones is the row above them that shows the Centers; that is another septenary that often finds resonance with other instantiations of the Natural

Sequence schema. Above that is yet another septenary, Role, that often finds resonance with other instantiations of the Natural Sequence schema.

Table II-8a — THE PROCESS/ASPECT SYSTEM MATRIX — “Time Structure”								
A T T R I B U T E S	RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
	DIALECTIC	– ORDINAL –			= NEUTRAL =	+ CARDINAL +		
	AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
	DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
	DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
PROCESS →		TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
ASPECT ↓								
+ C A R D I N A L +	MODE FORWARD ACTION +1-D+	+Persistence PERSEVERANCE –Immutability	+Restraint REPRESSION –Inhibition	+Deliberation CAUTION –Phobia	+Clarity OBSERVATION –Surveillance	+Authority POWER –Oppression	+Enthusiasm PASSION –Extremism	+Dynamism AGGRESSION –Belligerence
	ROLE UPWARD INSPIRATION +2-D+	+Persuasion WARRIOR –Coercion	+Service SERVER –Bondage	+Creation ARTISAN –Artifice	+Knowledge SCHOLAR –Conjecture	+Exhibition SAGE –Oration	+Compassion PRIEST –Zeal	+Mastery KING –Tyranny
	CENTER INWARD EXPRESSION +3-D+	+Endurance MOTION –Activity	+Sensibility EMOTION –Sentimentality	+Thought INTELLECT –Reason	+Intuition IMPULSE –Instinct	+Integration CONCEPT –Fantasy	+Empathy SYMPATHY –Sensitivity	+Vitality EXCITATION –Arousal
= N E U T R A L =	SOUL AGE WORLDVIEW COMPLEX ASSIMILAT’N =P-D=	+Preservation INFANT PRIMITIVISM –Security	+Propriety CHILD TRADITION’S M –Conformity	+Production YOUNG MATERIALISM –Exploitation	+Consensus MATURE COLLECTIVISM –Ambiguity	+Wisdom SENIOR HOLISM –Speculation	+Liberation ELDER TRANSPERSON’ –Catharsis	+Revolution ANCIENT MESSIANISM –Provocation
	LEVEL ZONE COMPLEX ASSIMILAT’N =P-D=	+Institution FIRST RESOLUTION –Regulation	+Affiliation SECOND IMMANENCE –Indoctrination	+Individuation THIRD SEPARATION –Alienation	+Consolidation FOURTH EXPERIENCE –Achievement	+Philosophy FIFTH UNIFICATION –Ideology	+Ascension SIXTH TRANSCEND’C –Exaggeration	+Causation SEVENTH ACTIVATION –Agitation
– O R D I N A L –	ATTITUDE OUTWARD EXPRESSION –3-D–	+Contradiction CYNIC –Denigration	+Tranquility STOIC –Resignation	+Investigation SKEPTIC –Suspicion	+Practicality PRAGMATIST –Dogma	+Coalescence IDEALIST –Naivety	+Aspiration SPIRITUALIST –Superstition	+Perception REALIST –Supposition
	SHADOW DOWNWARD INSPIRATION –2-D–	+Selflessness MARTYRDOM –Defeatism	+Humility LOWLINESS –Abasement	+Sacrifice RENUNCIAT’N –Self-hatred	+Determination STUBBORN’ESS –Obstinacy	+Egotism GREED –Voracity	+Pride ARROGANCE –Vanity	+Audacity IMPATIENCE –Intolerance
	GOAL BACKWARD ACTION –1-D–	+Dedication SUBMISSION –Subservience	+Evaluation REDUCTION –Withdrawal	+Distinction REJECTION –Prejudice	+Suspension EQUILIBRIUM –Inertia	+Inclusion ACCEPTANCE –Ingratiation	+Development GROWTH –Confusion	+Leadership DOMINANCE –Dictatorship

The Michaelian teachings provides the most thorough by far description of seven Ages/Worldviews, but there are at least three other teachings that preceded it, and there might be other predecessor teachings that I have not yet discovered. And then there are teachings subsequent to the Michaelian teachings, and also independent of the Michaelian teachings, that have somewhat to say about Ages/Worldviews. These teachings are summarized in the next few sections.

Kabbalah

In a previous chapter, Chapter II-5, “The Seven Planes”, I introduced the reader to my understanding of the correlation of the *olamot* (singular *olam*), aka “worlds”, of the Jewish Kabbalah with the so-called “planes” of other esoteric cosmologies. Therein it is demonstrated that the *olamot* and the planes followed the Natural Sequence schema. In this section of this chapter, I discuss yet another aspect of the Kabbalistic teaching. Reincarnation is one of the central teachings of the Kabbalah, and it so happens that Kabbalists have formulated a structured framework for this aspect of their teaching. It is the oldest such structured teaching about Ages that I have found so far in my research on this topic. Some of the ideas were espoused in a document called the *Zohar*, but the date of its authorship is disputed; it could have been as early as the 2nd Century CE, or at the latest it was the 13th Century CE; you can read about that in Wikipedia: <https://en.wikipedia.org/wiki/Zohar>. Whatever the time of its formulation, in this section of this chapter we see that it also follows the Natural Sequence schema.

Following is a quotation extracted from the book *Kabbalah for Dummies* [KFD], authored by Arthur Kurzweil and published in 2006. In the quotation, the *italicized* words are Hebrew words transliterated into the Roman alphabet. Underlined words within the quotations are my emphasis, to call attention to correlates with features of the Process/Aspect System matrix. Also included are some explanatory words or phrases in [brackets], and I have inserted some commentary, interspersed between blocks of quoted text. Some of this discussion might be hard to follow, so a summarizing table, Table 1Ea, is included near the end of this section.

The quotation extracted from *Kabbalah for Dummies* begins:

Kabbalists conceive of the soul as having five levels. Each level has a name and represents aspects of the divine soul in man. The five levels of the soul are:

1. *Nefesh*: The lowest and most basic aspect of the soul. Sometimes, the word “*nefesh*” is used more generally to refer to the soul. *Nefesh* animates existence and gives the human body its ability to move, its life force, and its ability to reproduce. The level of the soul called *nefesh* corresponds to the world of action. People living on the level of *nefesh* share it with animals. These people simply move, breathe, and are alive.

The level of the soul described above correlates with Ordinal Action, and more specifically the Motion Center, of the Process/Aspect System matrix.

2. *Ruach*: The second level of the soul. *Ruach* is often translated as spirit. The level of the soul called *ruach* corresponds to the world of formation and emotions. People living on the level of *ruach* not only are alive but also experience the range of human emotions including love, compassion, humility, and awe.

The level of the soul described above correlates with Ordinal Inspiration, and more specifically the Emotion Center, of the Process/Aspect System matrix.

3. *Neshama*: The third level of the soul. The word “*neshama*” is sometimes used informally to refer to the soul in general, but *neshama* really refers to the higher soul, corresponding to the world of creation and ideas. People living on the level of *neshama* think, meditate on God, and reach for an intellectual grasp of the world and the Divine.

The level of the soul described above correlates with Ordinal Expression, and more specifically the Intellect Center, of the Process/Aspect System matrix.

4. *Chaya*: The fourth level of the soul. The level called *chaya* corresponds to that which goes on in the spiritual world of emanation. People living on the level of *chaya* pierce through the worlds of emotion and ideas and enter spiritual realms that are almost impossible to describe. They begin to grasp spiritual reality and see that they’re far more than bodies that are born, live, and die.

The level of the soul described above correlates with Neutral Assimilation, and more specifically the Impulse Center, of the Process/Aspect System matrix.

5. *Yechida*: The fifth level of the soul. This level is called the most inward point of the divine spark. Kabbalists see *yechida* as beyond all the four worlds ... and the actual point in which the soul and the Divine make contact. People living on the level of *yechida* have reached the point of contact between the soul and God.

The level of the soul described above correlates with Cardinal Expression, and more specifically the Concept Center, of the Process/Aspect System matrix.

What's the point of all these levels? Well, the point of the levels is the point of life, and the point of life, according to Kabbalah, is to realize one's spiritual potential and ultimately connect with the Divine within oneself. [KFD, pp. 99–100]

These descriptions do not present an understanding of the levels or aspects of soul in terms of the development of the soul over the course of reincarnations; that idea is presented further on in *KFD*. The understanding presented here is that all of these levels of the soul exist in us simultaneously, but that we manifest and emphasize them at various times in our lives. This notion is made clearer further on in *KFD*. These *KFD* descriptions could also be compared to the Life-Stages discussed in Part Five, "Developmental Psychology" and the descriptions in Part Six, "Stages of Enlightenment".

Of course, there is a fuller description of these levels of soul in that book, and in other sources. For instance, some years ago, while looking through the library of a friend whom I was visiting, I found a book by a Rabbi about Jewish views of soul, afterlife, and reincarnation: *Does the Soul Survive? A Jewish Journey to Belief in Afterlife, Past Lives, and Living with Purpose (DTTS)*, by Rabbi Elie Kaplan Spitz. Rabbi Spitz's sources were mostly from traditional Jewish teachings and from Jewish mystics. I later purchased my own copy. Following is the verbatim quote, with my explanatory and correlative comments in [brackets] as usual. It is a lengthy quote, and you will see in it stages that can be applied to various scales of personal experience. Hebrew words are italicized, and underlined words provide correlations with components of the Process/Aspect System matrix.

The soul is composed of nested, complementary qualities. The *Zohar* [a primary text of Kabbalah] describes three dimensions of soul — *nefesh*, *ruach*, and *neshamah* (the same three words for breath) — and correlates them with facets of inner human existence [like the Centers]. *Nefesh* is linked to *assiyah*, the physical world [plane] of action [Ordinal Action = Motion Center = Physical Plane]; *ruach* is in the domain of *yetzirah*, the world [plane] of feelings [Ordinal Inspiration = Emotion Center = Astral Plane]; *neshamah* is in the world [plane] of *beriyah*, thoughts [Ordinal Expression = Intellect Center = Mental Plane]; the next realm of creation is *atzilut*, divine transcendence identified with intuition [Neutral Assimilation = Impulse Center = Akashic Plane], and later linked by Isaac Luria [mystic Jewish expositor of Kabbalah] with the highest levels of soul, *chayah* and *yechidah*. On a more cosmic level it describes them as separate realms of creation [like the planes]. Understanding Judaism's approach to soul requires an examination of these three dimensions of soul as described in the *Zohar*.

As I said at the beginning of this section, a correlation of the Kabbalistic notion of planes was made with other esoteric teachings in Chapter II-5 above, "The Seven Planes"; here the Kabbalistic notion of levels of the soul are correlated with those planes.

[#1] Soul on the most primary level of human existence is called *nefesh*, representing the realm of action and physical pleasure. Our bodies are the foundation of our lives and we are fundamentally physical beings. With our bodies we act in the world.

The level of the soul described above correlates with Ordinal Action, and more specifically the Motion Center, of the Process/Aspect System matrix.

[#2] At the next level, *nefesh* supports and connects with *ruach*, the realm of feelings, which enables personality and the expression of love. Animals, too, have a body and feelings and thus have soul, but one that is limited to the lower dimensions of soul possibility.

The level of the soul described above correlates with Ordinal Inspiration, and more specifically the Emotion Center, of the Process/Aspect System matrix.

[#3] With *neshamah*, the third level of soul, we evidence uniquely human capacities. The *neshamah* is identified with analytic thought, the quest for meaning, and transcendence. Only humans ask (so we surmise), "What is the significance of my life?" This capacity for self-reflection and awareness is our link to God and is identified as the breath of life (*nishmat chayim*) that God uniquely breathed into Adam (Genesis 2:7). In traditional [Jewish] mystical writings, soul is often called by the term *neshamah* because it is that part of the personality most identified with self-identity and transpersonal relationships. As we will see later, *neshamah* is also that dimension of soul most identified with soul survival and reincarnation.

The level of the soul described above correlates with Ordinal Expression, and more specifically the Intellect Center, of the Process/Aspect System matrix.

Isaac Luria (Egypt–Israel, 1534–1572) was the most influential teacher of Jewish mysticism, with the possible exception of the author of the *Zohar*, Moses de Leon (Spain, d. 1305). He identified two more realms of soul — *chayah* and *yechidah*, which are often [but not always] grouped together as a fourth dimension of creation. These two higher spheres [planes] are accessed by intuition [#4 = Impulse Center] or disciplined imagination [#5 = Concept Center] and might be called “spirit,” as distinguished from soul, because of their intrinsic link to the Divine.... For Luria the three lower facets of soul were identified with the personality of the individual. The upper two (spirit) were extensions of God and hence universal.

This paragraph makes it more obvious than the quotation from *KFD* that the fourth level of the soul and the fourth plane are about “intuition”, which is my name for the Positive Pole of the Impulse Center, and that the fifth level of the soul and the fifth plane is about “imagination”, which is descriptive of the function of the Concept Center.

In Hasidism [a sect/movement in Renaissance Judaism] the three lower levels of soul were given a more psycho-spiritual, developmental emphasis. The Maggid of Mezeritch (Rabbi Dov Baer, d. 1772), the chief disciple of the founder of Hasidism, the Ba’al Shem Tov (1698–1760), taught in the eighteenth century that the levels of soul were acquired in stages:

“When a man is born he has only an animal soul, the *nefesh*. When he overcomes the Evil Urge (physical compulsions such as the craving for food or sex) the person is given *ruach*. The entire world of angels is then in his domain. If the person is even more worthy (and he learns to master his emotions, such as anger) he is given a *neshamah*, corresponding to the Divine throne. This means that his every intent and thought creates a throne for God. When a person of this level thinks about his love of God, he is placed in the Universe of Love.... Such a person must never remove his thoughts from God, even for an instant, for God Himself rests in his thoughts.”

In this Hasidic description soul development moves in stages and is a lifelong pursuit. How we live our lives and our level of awareness determine which rungs of soul are most profoundly engaged. [*DTSS*, pp. 23–25]

In this Hasidic interpretation of the levels of soul, there are shades of developmental psychology as embodied in the Life-Stages discussed Chapter II-8 and in Part V, and of the stages on a spiritual path as with Gurdjieff’s Level of Being discussed in Chapter II-3. There is not yet the idea of Ages via reincarnation.

The story told in Kabbalah tradition continues:

There are five levels of soul, or five rungs on purification of the soul. These levels in ascending order are *nefesh*, *ruach*, *neshamah*, *chayah*, and *yechida* (see Chapter 3 [of *DTSS*]). The two highest levels are so closely identified with God that they are universal in character and are not subject to reincarnation. Elevating our sparks through the lower three levels is our life work, and our status in the process reflects different degrees of spiritual maturity. Recall that *nefesh* is the physical level of being. This animal dimension of self is shaped by physical deeds. *Ruach* is the personal self, which contains the energy that animates us and is identified with our emotional life. *Neshamah* is the transpersonal self that is shaped by our capacity of thought and enables us to reach beyond ourselves in uniquely human ways. Beyond the influence of the soul sparks, a person has a primal capacity of consciousness and freedom of will that enable the process of soul repair. [*DTSS*, p. 85]

So far this is reminiscent of the Gurdjieffian teaching with his Levels of Being discussed in Chapter II-3, a version of the spiritual path during a lifetime, not the journey of the soul across many lifetimes.

The three lowest levels obviously correspond to the Ordinal Centers of the Process/Aspect System matrix: Motion, Emotion, and Intellect. It also corresponds to the three Ordinal planes of various esoteric teachings: Physical, Astral, Mental. The two higher levels of soul, the fourth and fifth levels, *chaya* and *yechida*, are described as having to do with intuition and imagination respectively, so they are to be correlated with the Impulse and Concept Centers respectively, and to the Akashic Plane and the fifth plane (by whatever name it gets called in various teachings), respectively. The correlation of these five stages of “soul” or “spiritual” development with five Ages that, as we will see further on, can be named: Infant, Child, Young, Mature, and Senior respectively. Further on, somewhat will be said about two other soul stages according to Kabbalah.

So what about advancing Soul Age via reincarnation? At this point in the book, *DTSS* seems to shift the description from soul development during a lifetime to Soul Age advancement via the process of reincarnation, as follows:

Luria said that in any one lifetime our soul sparks are only purified to move up one of the rungs of the purification ladder.... Each rung is also three-dimensional, hologram-like, containing the three aspects of the soul: physical, emotional, and intellectual.... Reincarnation offers two opportunities for soul repair. First, reincarnation enables a soul spark that has completed its work on one rung to begin its purification on the next level. Second, reincarnation provides an additional chance to repair a mistake that prevented the soul spark from moving upward in a previous incarnation. Luria said that a soul spark had only three lifetimes in which to rise up each soul rung. Repair of soul sparks is only achieved by the current deeds of the living. [DTSS, pp. 85–86]

This reminds me of a statement in the Michaelian teachings that it generally takes an average of three lifetimes to complete one Level within each Age; perhaps this is what Luria mystically intuited. Thus, the “rungs” of the ladder can be compared to the Levels within the Ages, the Ages themselves, and the planes — all of these stages of development apply to the journey of the soul, over increasingly larger septenarian cycles of time.

Before continuing this story as told in DTSS, a new term must be defined:

Adam HaRishon — “The first Adam”. In Lurianic Kabbalah, a reference to the Adam of the Bible, who suffered a spiritual fall in the Garden of Eden for violating God’s command. The process of falling dispersed spiritual sparks in all directions. Adam’s descendants possess spiritual sparks generated from different body parts of *Adam HaRishon*. Our task is to elevate the dispersed sparks back to the level of Adam, thereby reconstituting the wholeness of God’s original creation.

My understanding of this statement in terms of Michaelian teachings soulology is to say that *Adam HaRishon* correlates with the humanoid Oversoul, the unified being that is the precursor of the so-called “casting” process, the breakdown of the Oversoul into individual so-called “fragments” for the purpose of reincarnation. The “body parts” of Adam HaRishon are like the Cadre Group, Cadre, Entity, Side, Greater Cadence, Cadence, and Fragment spoken of in Michaelian teachings literature. The “sparks” in Kabbalah are pretty much like the sparks spoken of in Michaelian teachings literature; they are like the UUID (Universal Unique IDentifier) of the soul.

Now here is where the DTSS narrative gets even more relevant to the Age perspective:

Luria offers a path other than reincarnation for a soul to return to the human plane. A soul from a previous life may return as a temporary visiting soul, in Hebrew an *ibbur* [plural *ibburim*]. An *ibbur* will choose to inhabit a person whose foundational sparks are derived from the same body part of *Adam HaRishon* as his or her own. The visiting soul may gain the merit of a specific *mitzvah* performed by the host body that is needed to complete the *ibbur*’s soul. When the mission is completed, the visiting soul returns to his or her source in the spirit realm. [DTSS, p. 86]

There are three ideas here to which I want to call attention: 1) There is a dominant soul in each incarnation, but more than one member of one’s soul family can inhabit the same body as a subordinate soul, an *ibbur*; 2) the completion of necessary life experiences (*mitzvah*) accomplished by the dominant soul can benefit the subordinate soul; 3) the arrangement is mutually beneficial because the subordinate Fragment provides inspiration and other assistance to the dominant Fragment; more is said about this phenomenon below.

There is one other type of soul mentioned in Kabbalistic sources that seems relevant to the topic of Age in this chapter.

The visiting soul of a *tzaddik* (a spiritually complete person) is a second type of *ibbur* identified by Luria. The *tzaddik* is selfless and can return a thousand times. This is comparable to the Mahayana Buddhist concept of a *bodhisattva*. The *bodhisattva* is an enlightened being who is exempt from the laws of reincarnation and returns to the world to commiserate with others and to help them. A *tzaddik-ibbur* provides muse-like inspiration, aiding the host to elevate his or her soul, which facilitates the return of holy sparks to the body of *Adam HaRishon*. [DTSS, p. 86]

Further on in this chapter, the *bodhisattva* is postulated to be equivalent to the so-called “Transcendental Soul” of the Michaelian teachings. Kabbalists believe that Isaac Luria was a *tzaddik*, and in an enlarged definition of a Transcendental Soul, I would agree with them, based on descriptions of his psychic abilities.

So, if there is the functional equivalent of the Michaelian teachings’ Transcendental Soul in Kabbalah, is there a functional equivalent of the Michaelian teachings’ Infinite Soul? Yes, it seems to me that there is. So far as I have been able to discern in my investigations, it is *Mashiach*, based on descriptions such as found at the following internet website: ><https://en.wikipedia.org/wiki/Messiah><. It is a bit of a stretch from the description of the Messiah to the notion of the Avatar in oriental religions, a full embodiment of divinity in a human, but

it is the closest that I have found in Kabbalah. According to that Wikipedia article on Messiah, ideas similar to messianism are found in Hermeticism, Gnosticism, Christianity, and even in Greek philosophy. I leave it to the reader to research this further on the internet, starting with that Wikipedia entry, which provides many leads.

For your convenience, following is the table showing the correlation of the soul stages of Kabbalah with components of the Michaelian teachings, including Age:

Table II-8b — KABBALAH CORRELATIONS with MICHAELIAN TEACHINGS re SOUL AGE							
DIALECTIC	ORDINAL			NEUTRAL	CARDINAL		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
PLANE	Physical	Astral	Mental	Akashic	Truth	Love	Energy
OLAM	<i>Assiyah</i> “Action”	<i>Yetzirah</i> “Formation”	<i>Beriyah</i> “Creation”	<i>Atzilut</i> “Emanation”	<i>Adam Kadmon</i> “Primordial Man”	<i>Ohr Ein Sof</i> “Infinite Light”	<i>Ein Sof</i> “Infinite”
SOUL AGE	Infant	Child	Young	Mature	Senior	Elder	Ancient
CENTER	Motion	Emotion	Intellect	Impulse	Concept	Sympathy	Excitation
GILGUL	<i>Nefesh</i> “Life Force”	<i>Ruach</i> “Spirit”	<i>Neshama</i> “Soul”	<i>Chaya</i> “Living”	<i>Yechida</i> “Singular”	<i>Tzaddik</i> “Righteous”	<i>Mashiach</i> “Anointed”

My comments on this table are as follows:

- DIALECTIC: The first row shows the Dialectic Attributes, a structural feature of the Natural Sequence schema.
- AXIAL: The second row shows the Axial Attributes, a structural feature of the Natural Sequence schema. Combine the Dialectic Attributes with the Axial Attributes and we get the Septenarian Attributes.
- PLANE: Names for the planes are various, depending on the source. The third row shows names for the planes that seem relevant to this discussion; refer to Chapter II-5 above, “The Seven Planes”, for more information, and for my rationale for the choice of these words.
- OLAM: The fourth row shows the Hebrew names of the seven planes, so far as I have been able to discern in reading about Kabbalah on various Wikipedia websites and in a couple of books; refer to Chapter II-6, “The Seven Planes”, for more information. The English meaning of the Hebrew words is included.
- SOUL AGE: The fifth row shows the names of the Soul Ages as I prefer them.
- CENTER: The sixth row shows the names of the Centers as I prefer them. I show them in this table because the descriptions of the stages of the soul’s development in the previously quoted books make the correlation obvious.
- GILGUL: The seventh row shows the Hebrew names of the stages of the soul’s development, and their English translations. *Gilgul* is the Hebrew word for reincarnation (“cycle, wheel”). In Kabbalistic thinking, these are both stages of the soul’s psycho-social-spiritual development during a lifetime (called “Life-Stages” in this *Cosmogony* book), and the stages of the soul’s development during many lifetimes (called Soul Age in various sources reviewed in this *Cosmogony* book).

Various Wikipedia articles cover many aspects of the Kabbalistic teaching on cosmology and cosmogony; for this chapter I have extracted just a small portion of what is available.

Theosophy

The modern incarnation of Theosophy appeared via the Russian mystic Helena Blavatsky in the last half of the Nineteenth Century; a branch of Theosophy was channeled by Alice Bailey in the first half of the Twentieth Century. Wikipedia has wikis on them and their inspired and channeled teachings, and many other internet resources are available, as well as books galore. Because reincarnation is one of the central tenets of

Theosophy, one might reasonably expect Theosophy to say something about Soul Ages, and indeed that is the case.

This section examines the work of two Theosophists who had somewhat to say about the ages of the soul. The first is E. Norman Pearson.

E. Norman Pearson

The book *Space, Time and Self* [STS], by E. Norman Pearson, was published by The Theosophical Publishing House in 1957. It appears to be a systematic compendium of Theosophical doctrines, a thorough cosmology of their concepts. The book has much to say about reincarnation.

In the Introduction, on page 8, we find this:

To unfold these Divine powers is the purpose for which we live. So, the Divine Monad is the Ultimate Reality within each one of us. It must be “born” into separate existence, individualized in a human form and experience stages of growth which correspond to [1] infancy, [2] childhood, [3] adolescence, and [4] maturity, using bodies of the various orders of matter as vehicles of consciousness in the worlds in which it lives. [STS, p. 8]

Four stages are mentioned here, but they are not formally named, and therefore they are not capitalized: “infancy, childhood, adolescence, maturity”. The words chosen by Pearson declare that the soul maturation process during reincarnations is similar to the physical maturation process during a single lifetime. In Part Five, “Developmental Psychology”, these stages of maturation during a lifetime are described at length. In some of the sources reviewed further on, the words chosen are formal, and they also declare that there is a correspondence of soul maturation during reincarnation to psychological maturation during a lifetime.

In other chapters of his book, Pearson discusses in some detail the four ‘bodies’ that reside on the four ‘planes’ alluded to in the quoted passage. I have somewhat to say about those in my own books as they relate to Age; Chapter II-10 is devoted to “Subtle Bodies”, and Chapter II-5 to “The Seven Planes”. This passage from Pearson only hints at what is made explicit elsewhere in his book, namely, that there is a correspondence or correlation — a similarity — between 1) stages of development; 2) ‘bodies’ in which that development takes place, and 3) the reality systems (‘planes’) where the experience takes place.

Further on in the book STS, in the chapter on reincarnation, in Figure 69 on page 183, titled “The Evolution of the Soul”, a caption says, “Through many incarnations the soul unfolds like a flower.” Five stages are graphically shown and labeled: “primitive — ordinary — civilized — advanced — spiritual.” I do not capitalize these words because they do not appear to be names given to distinct stages. The text below the Figure is as follows:

Thus, through many incarnations, man grows in spiritual stature, always unfolding from within the latent powers infolded in the beginning. In Figure 69 we have one more illustration of the manner in which reincarnation harmonizes with all nature’s activities. Climbing the ladder of evolution, man begins in the primitive state, advances to the ordinary, and on to the civilized, advanced, and spiritual states. These outer appearances are, of course, reflections in the material forms of the growth of the Soul. This growth can be compared with the opening of a flower. In Figure 69 we see each of these human stages placed beneath a similar stage in the flower’s development from a small bud to the full bloom in all its beauty.

An internet search on those five names collectively did not reveal any other Theosophical sources that mention them. Therefore it would appear they are not official or formal names such as were given to five Ages in other sources. Nowhere in the text of the book are characteristics of those five categories provided, nor are they explicitly correlated with any other aspect of the Theosophical cosmology, which is septenarian. Throughout Pearson’s book, specific and distinct characteristics are attributed to the seven stages of the Theosophical conception of the septenary, but not to these five stages of soul development. To me this seems an odd omission or oversight.

A very prominent channel in the Theosophical movement had a lot more to say about Age than Pearson did; that is Alice Bailey.

Alice Bailey

There is another book, this one in the Neo-Theosophical library, that provides descriptions — but not names — of those stages of soul development. The book is *Esoteric Psychology*, Vol. 2 (1942), by Alice Bailey. The books were dictated to her by “DK”. On pages 202 to 207, Bailey also used the metaphor of the flower to describe the development of souls, but gives seven stages rather than five as given by Pearson. Then, after giving seven

stages of the flowering of the lotus, Bailey proceeds to describe ten stages of soul development, rather than five as given by Pearson or seven as given in other sources. This discrepancy in the number of stages makes it difficult to correlate sources, but I make that attempt in my comments within and between the quotations that follow.

... our premises and conclusions [about soul development] can be stated in the following propositions:

1. Every human being, in or out of incarnation, is a "fragment of divinity," and an outpost of the divine consciousness, functioning in time and space for purposes of expression.
2. All these souls, selves, or human beings are found, as we have seen, on one or other of the seven emanations [Rays] of spiritual energy, issuing forth from God at the beginning of an era of creative activity. They return to their emanating Source when that particular cycle is brought to a close.
3. In the interim between emanation and reabsorption, these souls pass through various experiences until such time as they can "shine forth in all their exactitude of truth."
4. They are called, as has been stated, in *A Treatise on Cosmic Fire* (see page 855):
 1. Lotuses of revelation [Cardinal Action]
 2. Lotuses with perfume [and color?] [Cardinal Inspiration]
 3. Radiant lotuses [Cardinal Expression]
 4. Lotuses wherein the flower is on the point of opening [Neutral Assimilation]
 5. Lotuses of closed and sealed condition [anti-radiant] [Ordinal Expression]
 6. The colorless [and odorless?] lotuses [Ordinal Inspiration]
 7. Lotuses in bud [Ordinal Action]

Notice that the numbering, one through seven, starts at the mature end of the development and ends at the primitive end of the development. That method of numbering is the opposite of that found in non-Theosophical sources, but it is typical of some other instantiations of the septenarian cosmology of Theosophy.

Also, a thoughtful reading indicates that a reversal of the sequence is detectable in terms of the Ordinal and Cardinal stages, pivoting on #4 — this is a feature of the Natural Sequence schema.

The quotation continues; the underlined words are my emphasis:

5. These souls, cycling through various forms of life in the long evolutionary process, arrive eventually at full, self-conscious existence. By this we mean that they are self-determined, self-conditioned, and self-aware. They are also conscious of and responsive to their environment.
6. Once this conscious awareness is achieved, then progress becomes more rapid. It should be borne in mind that many human beings are not thus aware. The groupings which arise out of this awareness (limiting our ideas entirely to those within the radius of the human family) can be expressed as follows:
 1. The souls who live but whose consciousness sleeps. These are the dormant human beings whose intelligence is of such a low order, and their awareness of themselves and of life is so dim and nebulous, that only the lowest forms of human existence come into this category. Racially, nationally, and tribally they do not exist as pure types, but occasionally such a person emerges in the slums of our great cities. They are like a "throw back" and never appear among what are called the natural savages, or the peasantry.

This description appears to fit with severely retarded and/or brain-damaged humans, feral people living entirely in their Physiology and Motion Centers, an animalistic state almost entirely devoid of understanding of what it is to be a human in the world. Consequently, I do not ascribe a Soul Age to these humans.

The description of the next two stages seems to me to fit best with the Level of Being that Gurdjieff referred to as Man Number One and equated with the Motion Center, and that I refer to as the Infant Soul Age and Primitivism Worldview. Perhaps the distinction made by Bailey is the difference between early-Level and late-Level Infant Souls:

2. The souls who are simply aware of physical plane life and of sensation. These people are slow, inert, inarticulate, bewildered by their environment, but they are not bewildered, as are the more advanced and emotional types, by events. They have no sense of time or of purpose; they can seldom be trained along any mental line, and they very rarely exhibit skill in any direction. They can dig and carry, under direction; they eat, sleep and procreate, following the natural instincts of the animal body. Emotionally, however, they are asleep, and mentally they are totally unawakened. These too are relatively rare, though several thousands of them can be found upon our planet. They can be recognized through their complete incapacity to respond to emotional and mental training and culture.

3. The souls who are beginning to integrate and who are emotionally and psychically alive. In them, of course, the animal nature is awake and the desire nature is becoming rampant. These people are to be found in all races to a small extent.... These are child souls, and though the mental equipment is there and some of them can be trained to use it, the preponderance of the life emphasis is entirely upon physical activity as it is motivated by the desire for satisfaction of some kind, and by a shallow “wish-life” or desire nature, almost entirely oriented towards the physical life....

The description of the next two stages seems to me to correlate best with the Level of Being that Gurdjieff referred to as Man Number Two and equated with the Emotion Center, and that I refer to as the Child Soul Age and Traditionalism Worldview. Perhaps the distinction made by Bailey is the difference between early-Level and late-Level Child Souls:

4. The souls who are primarily emotional. The mind nature is not functioning strongly, and only rarely does it swing into activity, and the physical body is slipping steadily into the realm of the unconscious. In every race and nation there are millions of such souls in existence....

5. Those souls who can now be classed as intelligent human beings, capable of mental application, if trained, and showing that they can think when need arises. They are still, nevertheless, predominantly emotional. They constitute the bulk of modern humanity at this time. They are the average citizens of our modern world — good, well-intentioned, capable of intense emotional activity, with the feeling nature almost over-developed, and oscillating between the life of the senses [previous stage] and that of the mind [following stage]. They swing between the poles of experience. Their lives are spent in an astral [plane, which correlates with the Emotional Center] turmoil, but they have steadily increasing interludes wherein the mind can momentarily make itself felt, and thus at need effect important decisions. These are the nice good people, who are, nevertheless, largely controlled by the mass consciousness, because they are relatively unthinking. They can be regimented and standardized with facility by orthodox religion and government and are the “sheep” of the human family.

In the Michaelian teachings, the predominant Soul Age on the planet at this time in history is the next one, not the previous one.

The description of the next stage seems to me to correlate best with the Level of Being that Gurdjieff referred to as Man Number Three and equated with the Intellect Center, and that I refer to as the Young Soul Age and the Materialism Worldview:

6. The souls who think, and who are minds. These are steadily increasing in number and gaining in power as our educational processes and our scientific discoveries bring results, and expand human awareness. They constitute the cream of the human family, and are the people who are achieving success in some department of human life. They are writers, artists, thinkers in various fields of human knowledge and aspiration, politicians, religious leaders, scientists, skilled workers and artisans, and all those who, though in the front rank, yet take ideas and propositions and work with them for the ultimate benefit of the human family. They are the world aspirants, and those who are beginning to get the ideal of service into their consciousness.

The description of the next stage seems to me to correlate best with the Level of Being that Gurdjieff referred to as Man Number Four and equated with Balanced Man, and that I refer to as the Impulse Center, and that I refer to as the Mature Soul Age and the Collectivism Worldview:

7. Those souls whose sense of awareness on the physical plane is now of such an order that they can pass on to the Probationary Path. They are the mystics, conscious of duality, torn between the pairs of opposites, but who are yet unable to rest until they are polarized in the soul. These are the sensitive, struggling people, who long for release from failure and from existence in the world today. Their mind natures are alive and active but they cannot yet control them as they should and the higher illumination remains as yet a joyous hope and final possibility.

The description of the next stage seems to me to correlate best with the Concept Center (a departure from the Gurdjieffian teaching), and that I refer to as the Senior Soul Age and the Holism Worldview:

8. Souls whose intelligence and love nature is becoming so awakened and integrated that they can begin to tread the Path of Discipleship. They are the practical mystics, or the occultists, of modern times.

The description of the next stage is not fully recognizable as correlating with the Level of Being that Gurdjieff equated with the Higher Emotional Center, and what in the orthodox Michaelian teachings is referred to as the Transcendental Soul or the Astral Plane phase of the soul's development. However, a few students of the Michaelian teachings suggest that there are two Soul Ages beyond the Old Soul that manifest on the Physical Plane. The basic idea is that the sixth Soul Age in the Michaelian teachings has a Cardinal Inspiration — ‘Priest-ish’ — quality to it. The meaning of the phrase, “integrated personality” in the quotation below figures

prominently in my explanation of the Sixth Age in other sections of this chapter, where Transcendental Souls are hypothesized to be “composites” of souls in a “family” of souls.

9. The souls who are initiated into the mysteries of the kingdom of God. These are souls who are not only conscious of their vehicles of expression, the integrated personality, and conscious also of themselves as souls, but they know, past all controversy, that there is no such thing as “my soul and your soul,” but simply “the Soul”. They know this not only as a mental proposition, and as a sensed reality, but also as a fact in their own consciousness.

The description of the next stage is somewhat, but not totally, recognizable as what in the orthodox Michaelian teachings is referred to as the Infinite Soul and as correlating with the Excitation Center. However, a few Michaelian teachings students suggest that there are two Soul Ages beyond the Old Soul that manifest on the Physical Plane. The basic idea is that the seventh Soul Age in the Michaelian teachings scheme has a Cardinal Action — ‘Kingish’ — quality to it, and the underlined word “Masters” is compatible with that correlation.

10. The souls who have achieved release from all the limitations [therefore “infinite”] of the form nature and who dwell eternally in the consciousness of the One Soul, withdrawn from identification with any aspiration of the form life, no matter how highly developed. They can and do use the [human] form at will for the purposes of the general good. These are the Masters of Life, the perfected adepts.

Higher than this we need not go, except by inference. A detailed analysis is not, however, in order, owing to the limitations of men’s minds. The above is only a wide generalization, and the various groupings shade into each other in a bewildering way. The varieties of intermediate types are myriad, but this analysis will serve as a skeleton structure upon which to build. [Alice Bailey, *Esoteric Psychology*, Volume 2 (1942), pp. 202–207]

My suggestion is that the Michaelian teachings improved on these descriptions considerably. Furthermore, the Michaelian teachings added some other personality traits (which became the Process/Aspect System matrix in my reformulation) that can obscure the Soul Ages, and make them appear “bewildering” to someone who does not know about the additional factors.

Comments on Soul Ages in Theosophy

1. The Theosophical metaphor for the evolution of the soul is of a flower unfolding, from the bud stage and through several stages of maturity. It is as if the fullness of the soul as it exists on the third plane, *outside of time* as we know it, is being gradually revealed on the Physical Plane during successive incarnations *inside of time*.
2. Bailey/DK acknowledges that the description of soul development stages is rendered ambiguous by many factors. However, my thesis is that by understanding the logic, mathematics, and physics underlying the Tao’s Template ontology one can gain a much more definitive and distinct description of the Soul Ages in their pure form. Other Parts and chapters and sections and subsections of this *Cosmogony* book disambiguate previous metaphysical teachings; in my opinion the Tao’s Template ontology and its derivative the Natural Sequence schema is the best “skeleton structure” upon which to build a cosmology.
3. The fact that there are ten stages in Bailey’s soul age classification also makes correlation with the septenarian schema of Soul Ages more challenging. I did what I could, but readers are encouraged to study and think for themselves.
4. Note that Bailey’s stages of soul development obviously follow the Natural Sequence schema in the lower quad, corresponding to, 0) Physiology Center, 1) Motion Center, 2) Emotion Center, and 3) Intellect Center. This is the same as in the Gurdjieffian teachings. It is also fairly obvious that Bailey’s stage 7, with its description of the poles, is referring to the Neutral Stage of the Natural Sequence schema. It is also fairly obvious that Bailey’s stages follows the Natural Sequence schema in their higher triad.
5. Regarding the Theosophical notion of Rays, it surprises me that Bailey did not correlate these stages of soul development with the seven Rays, because they are one of the key components of the Theosophical cosmology. Why ten stages rather than seven? What was the source of information about the first three primitive stages? Why break the “emotional” stage into two categories? Would further study of Neo-Theosophy reveal the reasons for these departures from the cosmology of sevenness? Whatever the answers to those questions may be, it is perhaps the reason that the correlation between stages and Rays was not made by Bailey.

6. More was said about the septenarian aspects of the Theosophical cosmology in Chapter II-2 of this *Cosmogony* book.

There is another esoteric teacher who has a lot to say about Soul Age, and he is discussed in the next section. Besides Kabbalah and Alice Bailey, he is the only other source that I have discovered so far that preceded the Michaelian teachings that goes into detail about the characteristics of each of seven Soul Ages.

Meher Baba

When I did an internet search for the phrase “reincarnation soul age” I got hundreds of hits. Virtually all of them are either Michaelian teachings websites, or websites that have adopted and adapted information from the Michaelian teachings. However, I found a website dedicated to the teaching of a fellow named Meher Baba: ><http://www.theartofancientwisdom.com><. Wikipedia has an article on him, and there is much more information freely available on the internet via one’s favorite search engine. He was an Indian (south Asian) guru who lived from 1894 to 1969. He dictated a book called *God Speaks*, and many of his miscellaneous essays were collected by his followers and published in a book called *Discourses*.

Meher Baba’s book *God Speaks* was first published in 1955, second edition in 1973, so it was long after Kabbalah, after Theosophy and Neo-Theosophy and before the Michaelian teachings, reviewed in previous sections. Meher Baba had a detailed teaching about seven ages of the soul’s evolution on the Physical Plane, and these are summarized on this website: ><http://www.theartofancientwisdom.com/avatar/><. In the next few pages I quote portions of that website (in this typeface). As usual, I intersperse my own commentary among the quoted passages. Note that what are called “soul ages” in the Michaelian teachings and levels of the soul in the Kabbalah are referred to as “planes of consciousness” by Meher Baba.

Your Soul Ages by Moving Through the Planes of Consciousness

Meher Baba ... teaches that the human soul exists on different planes of consciousness which determines the soul’s age.

At each plane, each soul has different purposes and different life issues they deal with.

Souls that haven’t earned the right to involution [journey back to Tao] begin on the zero plane (see chart above under the ‘evolution’ section where the soul goes through multiple cycles of reincarnation until it is ready to begin its journey of involution).

Once involution begins, there are two stages, the journey inward begins on the outer planes where one creates a lot of work and manifests their energy on the physical world and the second stage is the domain of the mind where they work with energy on the inner planes.

Baba’s use of the words “involution” and “evolution” is the opposite of the way I use them in my books. That is to say, I regard involution as the fragmentation of the Tao, and evolution as the reintegration of the Tao. (This is just perhaps merely a semantic distinction, but on the other hand, I can also see how the Taijitu Tango Principle applies to this situation in that the fragmentation of Tao is evolution/involution and the reintegration of Tao is involution/evolution, depending on one’s point of view, whether from the maximum transcendent Tao that includes all else versus the minimum immanent Tao that excludes all else.)

Involution has 7 Stages.

At the beginning of each plane, the soul is ‘finding their sea legs’ managing the energy of that plane and finding their soul’s purpose on that plane.

The “beginning of each plane” is what the Natural Sequence schema refers to as the first three stages of each septenarian cycle.

In the middle of each plane, the soul is an embodiment of the ‘full power’ of each plane and has the potential to do great work on that plane because they are equipped for it.

In the Natural Sequence schema, the middle stage of each septenarian cycle is said to be ‘Neutral’.

At the end of each plane, the soul has completed most of their karma on that plane and is ‘finishing off’ whatever work they have on that plane so they will start preparing for the work on the next plane.

In the Natural Sequence schema, the “end of each plane” is referred to as the last three stages. More is said about the early, middle, and late stages in the next few paragraphs.

The first to the third planes of consciousness [are] all about doing work in the outer planes — which is navigating and conquering the physical world. [Infant, Child, and Young Ages per Michaelian teachings terminology]

The fourth plane is the archway or the doorway to the inner planes and enables one to access both powers of the outer planes with the inner planes. [Mature Age in Michaelian teachings terminology]

Once they hit the fifth and sixth plane, they reach in the domain of the mind which is the inner planes (more on the mental realm and managing energies of the inner planes). [Cardinal Ages in Michaelian teachings terminology]

The fifth plane of consciousness was referred to as the “Adept” Level of Being according to Gurdjieff, an earlier contemporary of Meher Baba; refer to Chapter VI-2. The sixth plane appears to be equivalent to Gurdjieff’s Sixth Level of Being, otherwise known as “subjective consciousness”. Meher Baba might have known about Gurdjieff, but even if that was not the case, both had their spiritual roots in Sufism, the mystical branch of Islam. Apparently some Sufis teach reincarnation and some do not, according to this website: ><https://www.reincarnation-research.com/islam/><.

Back to Meher Baba:

When they finally reach the seventh plane, they become ‘God-Realized’ and they see God as no longer separate from themselves.

The seventh plane appears to be equivalent to Gurdjieff’s seventh Level of Being, which was described by him as “objective consciousness”.

At the end of the seventh plane, they can choose to become a perfect master — to incarnate back on earth to be of service to mankind.

In other oriental spiritual teachings, souls who reincarnate to be of service to humanity are referred to as “Bodhisattvas”. In the Michaelian teachings, only five ages are said to be required to complete the reincarnation cycle; the last two ages are for Transcendental Souls (TS) and Infinite Souls (IS). The descriptions of the TS and the IS in the Michaelian teachings match those of “Bodhisattvas” and “Avatars”. More is said about all this in Chapter II-4, “The Michaelian Teachings”.

Understanding the Life Issues of Each Plane

Depending on where the soul is on the plane and whether they are at the beginning, middle or the end, life issues tend to differ. A person on a higher plane is not ‘better’ than another person [on a] lower plane. In fact, the person who is on a higher plane is actually carrying more ‘spiritual rocks in their backpack’ and they have more work to do on the higher planes. That is why some people tend to operate on a lower plane because it is easier to manage the energy on a lower plane. Souls may also receive guidance from a higher plane. In other words, older souls have more spiritual burdens compared to younger souls and embracing the spiritual path is a very commendable task — not for the faint-hearted. (Some souls may also choose not to do spiritual work for the entire lifetime so they could actually be a high plane person but [are] not actively doing spiritual work, but are evolving spiritually on their own pace.)

Here are the life issues specifically on how each plane functions:

Zero Plane — The Plane of Superstition, Existence, Security, Coping, and Learning to be Human

A soul on the zero plane who hasn’t earned the right for involution is human in every sense of the word.

What is here named “involution” (back to the Tao), I prefer to name “evolution”. Elsewhere on this website, “evolution” is the term used for the development of consciousness from mineral to vegetable to animal in the *outer* world; the term “involution” is the term applied to the development of consciousness when it turns back to being *inward*. It is all just semantics; so far as I can tell, the description of the process of return to the Source is the same as in the Michaelian teachings and Kabbalah and Theosophy.

They are unconscious of spiritual growth, unaware of higher consciousness and are thus not on the path. They may treat spirituality with a sense of superstition. Over 80% of the population on earth [is] on various levels of the zero plane.

Michaelian teachings students will know that this is not the way that the Michaelian teachings presents the situation. First of all, there is no “Zero” Age; and second of all, in the Michaelian teachings 100% of the population is in the first five Soul Ages. My reconciliation of the two teachings is that “80%” refers to those who are mid-Level Mature and younger, because that Age/Level is the turning point between the “unconscious” and the “conscious” phases of the Soul Ages in Michaelian teachings terms — and the percentage is accurate in that case. Mid-Level Mature is where involution reverses direction and turns to evolution, in Michaelian teachings terms.

They have the tendency to focus on their immediate needs, they are largely unaware of the interconnectedness of the collective consciousness. Ruled by primitive needs and immediate desires, they have the tendency to follow the crowd. Living on the zero plane can both be simple or confusing as they are spiritually innocent and asleep to their true nature.

That description is not inaccurate for the Ages younger than mid-Level Mature.

A person at the beginning of the zero plane (or even earlier — the sub-zero plane) lives in an even more opaque and primitive desire and will find it hard to live in modern society. The journey up the zero plane is very, very large, therefore it is not to be underestimated — the great lengths a soul goes through to earn the right [to] get into the first plane. A person at the end of the zero plane is known as ‘the seeker’ and is almost ready to begin their long journey into involution. The high side of being on this plane is that a soul is not burdened by the spiritual weight of the higher planes (the higher a person’s plane gets, the more ‘spiritual rocks’ they are carrying in their backpack).

My understanding of this paragraph in Michaelian teachings terms is that experiences before mid-Level Mature are more about *earning* karma, and post mid-Level Mature experiences are about *burning* karma, which could reasonably be described as ‘spiritual burdens’.

The low side of this plane is that almost everything can be turned into a superstition.

In the Michaelian teachings it is said that the Firstborn Soul is at once the closest to the Tao and also the furthest. At this primitive stage, ‘superstition’ is the appropriate way to describe their spirituality. The ‘low side’ and the ‘high side’ of ‘planes’ can perhaps be understood in Michaelian teachings terms as the early Levels and the late Levels of the Soul Ages, or understood as the Negative Poles and Positive Poles of Soul Ages.

The point to be emphasized in comparing Meher Baba’s “zero plane” with the Michaelian teachings is that reconciliation of the two is possible, but problematic. The reconciliation of the two regarding the numbered planes/Soul Ages is much more straightforward.

First Plane — The Plane of the Survivor: Preservation, Stability, Grounding, and Fear [Infant Soul Age]

The following entire description of the First Plane is very congruent with the Michaelian teachings description of the Infant Soul. The underlined words (my emphasis) are key words that remind one of the description of the Soul Age in other sources.

A soul on the first plane has just earned the right for involution [and] is at the beginning of their journey up the planes. Bear in mind that even earning the right to be on the first plane is very huge for the soul indeed. They are ruled by base instincts and have a lot of anxieties about survival.

Notice the connection here between the First Plane/Infant Soul and being ruled by instincts. As documented in Chapter II-3, Gurdjieff referred to his so-called “Man Number 1” as being “Instinctive-Moving Man”, primarily operating in the Physiology and Motion Centers.

People on the first plane have the tendency to focus on self, the immediate environment, the bare essentials. Like the zero plane, they are ruled by fear but they know that there is more to that fear than just merely existing. Some might find advanced or spiritual concepts difficult to grasp. Living unconsciously on the first plane can lead towards hoarding, materialism, or greed. Those that are on the path are deeply connected to the lands as with many shamans, sound healers and native American spiritual tribes.

The high side [Positive Pole and/or late Levels?] of being on this plane is that a soul can serve as a protector and preserver and is deeply grounded on the land. A lot of animal guides and protectors also operate on the first plane. The low side [Negative Pole and/or early Levels?] of this plane is that one can be deeply fearful and live like a survivor.

Starting with the description of the First Plane, there is a description of a “high side” and “low side” of the plane. Without too much of a stretch, one could compare this notion with the so-called “Negative/Positive Pole” and/or the “early/late Levels” of the Soul Ages.

Second Plane — The Plane of the Feudalist: Sexuality, Desire, Emotions, and Guilt [Child Soul Age]

The following entire description of the Second Plane is very congruent with the Michaelian teachings description of the Baby/Child Soul.

A soul on the second plane is in the realm of mysticism, religion and highly psychic. They are ruled by emotions and lean towards physical glamour, self gratification, intuitive beauty and magic.

Notice the connection here between the Second Plane/Child Soul and being ruled by emotions. Recall from Chapter II-3 that Gurdjieff referred to Man Number 2 as being “Emotional Man”, primarily operating in the Emotional Center.

The plane of the seductress, sexuality, and emotions rules this realm and many of the feudal practices like Bushido or organized religion, dogma, yogi powers, and rigid structures. A lot of psychics are on this plane and they receive powerful guidance from source.

The high side [Positive Pole and/or late Levels?] of being on this plane is that they are highly devoted to their beliefs or the cause they are seeking. The low side [Negative Pole and/or early Levels?] of this plane is that everything can be turned into a rigid dogma — and anything can be turned into a dogma, be it fundamentalistic religion, spiritual beliefs, groups, or even sports teams.

Third Plane — The Plane of the Conqueror: Will Power, Purpose, Energy, and Shame [Young Soul Age]

The following entire description of the Third Plane is very congruent with the Michaelian teachings description of the Young Soul.

A soul on the third plane is already a very advanced soul. The focus is on the mental realm and is very powerful at using willpower and domination to conquer the material world.

Notice the connection here between the Third Plane/Young Soul and being ruled by intellect. Recall from a **Chapter II-3** that Gurdjieff referred to Man Number 3 as “Intellectual Man”, primarily operating in the Intellectual Center. This means that the first three “planes of consciousness” follow the Natural Sequence schema, same as the planes of existence: Physical, Astral, Mental.

Their goal on the third plane is to learn power, and they are focused on being empowered, having a lot of accomplishments, [to] serve and rule through exerting their will. They are the empire builders and often take charge using their influence, success, fame and power. Many powerful healers are on this plane as well.

The high side [Positive Pole and/or late Levels?] of being on this plane is that a soul is really empowered to serve and empower others and can become great leaders in the realm of the material world. The low side [Negative Pole and/or early Levels?] of this plane is that they can become tyrannical and operate with a win-lose (I win, you lose) mentality.

Fourth Plane — The Plane of the Empathizer: Love, Sharing, Balance, and Grief [Mature Soul Age]

The following entire description of the Fourth Plane is very congruent with the Michaelian teachings description of the Mature Soul.

A soul on the fourth plane is on the archway — the *doorway* between the physical planes (planes 1–3) and the mental planes (planes 5–7). They are at the epitome of physical (manifestation) power and they also have access to the higher realms of the mental planes and are poised to do great work in the world. They also create a lot of good karma. However, with great power, comes great responsibility. A soul on this level is burdened by both great power and grief. This is the plane of service to mankind, kindness, focusing on higher purpose as well as finding the need to balance instincts with compassion, power and spiritual glamour and showing light while facing the dark night of the soul.

Notice the connection here between the Fourth Plane/Mature Soul and being interested in ‘balance’. Recall from Chapter II-3 that Gurdjieff referred to Man Number 4 as “Balanced Man”.

The high side [Positive Pole and/or late Levels?] of being on this plane is that a soul possesses great power and [such] compassion for the world that they will move and shake the world. Many of the humanitarians are on this plane. They are also at the plane where they have full access to the divine. The low side [Negative Pole and/or early Levels?] of this plane is that they can be overwhelmed with grief or abuse their power and fall from grace.

Fifth Plane — The Plane of the Telepath: Creativity, Communication, Healing, and Lies [Old Soul Age]

The following entire description of the Fifth Plane is very congruent with the Michaelian teachings description of the Old Soul. We also see similarities to the Higher Intellectual Center and the Sage Role here. In the Gurdjieffian teachings, the Sexual Center is at the fifth Level of Being, but that does not fit here. What does fit is that Gurdjieff places the ‘Adept’ at this stage.

A soul that reaches the fifth plane ‘safely’ resets and moves into the mental planes.

Think of the mental planes like the all powerful Wizard of Oz operating from behind the curtains (in contrast to the good/bad witches with great power on the physical world). The focus of the mental planes is on inner work and from this point onward is focused on finishing karma. They are telepaths on this plane in the sense that they can telepathically ‘transmit’ their ideas and have people understand their grand thoughts but after they are no

longer present, the people will forget what they learned. The abilities on this plane consist of systems, patterns, models, knowing truth, finding the greater truth and their minds move towards synthesizing many models including spiritual models. They need to speak and be heard for their message is strong. They are agents of purity — busting through false constructs and systems that are no longer serving the world.

The high side [Positive Pole and/or late Levels?] of being on this plane is that a soul assumes a creative identity and is able to manipulate thought forms. The low side [Negative Pole and/or early Levels?] of this plane is that they can be meddlers in other people's lives — often causing a lot of trouble and find too many lies in life until everything seems to become an illusion.

Sixth Plane — The Plane of the Regulator: Clairvoyance, Imagination, Intuition, and Illusion

In this description we see similarities to the Sympathy Center and the Priest Role. At this point in the development, there is a departure from the Michaelian teachings in that this does not appear to match the description of a Transcendental Soul, nor does it fit the description of a Bodhisattva. However, the description here fits well with Gurdjieff's term for this stage: "subjectively conscious", and it closely resembles the description of the penultimate Soul Age as found in Alice Bailey's writings, reviewed in the previous section.

A soul on the sixth plane is a really, really old soul who has assumed the archetypal entity of not only manipulating thoughts [the fifth plane] but manipulating [higher] emotions as well. At this level of the inner planes, they serve as the catalysts and they start finding God in everything but themselves. They see the divine everywhere. They have great healing powers and are highly emotional on this plane and are likely to be prone to extremes. They are great guides, visionaries, healers, and overseers in the world operating from behind the scenes.

The high side [Positive Pole and/or late Levels?] of being on this plane is that a soul is highly intuitive, sensitive, and possesses great clairvoyant power and imagination. The low side [Negative Pole and/or early Levels?] of this plane is that it can be very volatile and they might see everything as an illusion.

Seventh Plane — The Plane of the Enlightened: Understanding, Wisdom, and Spiritual Mastery

In the following description we see similarities to the Excitation Center and the King Role. At this point in the development, there is a departure from the Michaelian teachings in that this does not appear to match the description of an Infinite Soul; it more closely resembles the description of the ultimate Soul Age as found in Alice Bailey's writings, reviewed in the previous section. The description here fits more closely with Gurdjieff's term for this stage: an "objectively conscious" individual. And the description has some similarities to the Transcendental Soul in the Michaelian teachings, or the Bodhisattva in some Oriental esoteric traditions.

Once a soul reaches the 7th plane, they become God-realized. They no longer experience God as apart from themselves but become one with their identity with God. They achieve the perfect state of oneness, and reach the highest spiritual plane. It is the plane of great wisdom. Once God-realized, the soul becomes divinely absorbed with divine service, sees new realizations and is ruled by divine laws. Great wisdom and understanding will be passed down to others on their journey up the planes as the seventh plane soul serves as a divine guide to those on the path through higher service. The seventh plane is very, very large — larger than all the bottom (0–6) planes combined until they reach the final destination of a Perfect Master or an ascended master.

Nothing is said about the "high side" and the "low side" of the Seventh Plane incarnation, so perhaps it is not seen as subject to that polarity. This interpretation is consistent with other esoteric mystical teachings: the seventh plane is regarded as monadic, or non-dual; there is no light side or dark side to it, no high side or low side.

It would require more search than I am willing to do at this time to discover if Meher Baba was influenced by two of his predecessors, Gurdjieff and Alice Bailey, whose lives overlapped his and who both died about twenty years before he did. There is enough similarity to say that they are all describing the same phenomenon, Soul Age, but there are also enough dissimilarities to indicate that there was perhaps no direct copying between or among any of them. This means that Meher Baba either got his teaching from the same source as Gurdjieff, namely Sufism, or that he "channeled" the information afresh, as Alice Bailey did. Or it could have been a mixture of both methods. The Michaelian teachings appeared a few years after Meher Baba died.

After the Michaelian teaching were first published in the late 1970s, several other sources of information about Soul Ages were published. The next half dozen sections are dedicated to them.

Laeh Maggie Garfield and Seven Mansions

In Shepherd Hoodwin's book about the Michaelian teachings, *The Journey of Your Soul* (1995), page 211, he mentions a book that mentions seven Soul Ages:

Laeh Maggie Garfield, in her book *How the Universe Works*, suggests a scheme of seven soul ages that are experienced by everyone on the physical plane: *infant, toddler, teenage, adult, mature, old, and volunteer*. Garfield does not mention the source of her ideas. Her explanations differ from Michael's in various ways, but in general, her approach is similar. She seems to arrive at seven physical-plane soul ages by dividing Michael's *mature soul cycle* into *adult* and *mature*. Her designation *volunteer soul* would be described by Michael as a "*seventh-level old soul transcendental*," who has no remaining karma and could cycle off, but reincarnates mainly to be helpful to others. Her terms *toddler* and *teenage* are fundamentally equivalent to Michael's terms *baby* and *young*. She describes each soul age, and the seven levels of each soul age, as correlating with the chakra in the same numerical position.

Garfield's book was first published in 1991 by Celestial Arts, Berkeley, California. The subtitle is *Pathways to Enlightenment*. Garfield refers to each of the seven Ages as Mansions, and each of the seven levels as Stories in the Mansion, for a total of 49 Stories, the same as in the Michaelian teachings — if one were to accept the notion that the Sixth and Seventh Ages have seven Levels. Following are some key words extracted from pages 47 to 53. Extensive additional material can be found in the book, of course, but the following is a decent introduction.

[1 = Ordinal Action] INFANT SOULS — "The Mansion of Survival" — Root Chakra — to learn survival and other aspects of physical life: Loving, uninhibited, defenseless, helpless, self-centered, temperamental, surrendered, innocent, placid, demanding, changeable, unpredictable, unduly open to or fearful of people, guileless, makes eye contact and tells blunt truth but needs to be told what to do.

[2 = Ordinal Inspiration] TODDLER/CHILD SOULS — "The Mansion of Emotion:" — Sacral Chakra — Emotional balance, self-reliance: Uncontainable, alternately cooperative and uncooperative, tiring, energetic, fun, oppressive, envious, greedy, curious, affectionate, selfish, selectively loyal and/or loving, perceptive, possessive, honest, charming, exploring, needs boundaries, not leaders, narrow-minded, intolerant, wants to be helpful, work best as followers.

[3 = Ordinal Expression] TEENAGE SOULS — "The Mansion of Power:" — Solar [plexus] Chakra — Power, control: Challenging, idealistic, inconsiderate, maturing, ambitious, insightful, jealous, freedom-loving, ambivalent, rebellious, loving, fearful of differences, sexually preoccupied, con-artists, overly active or repressed, power hungry, seducible, inventive, helpful, dreamers, easily taken in by material world, obnoxious, wide emotional swings, cruel, humorous, supportive, conformists, iconoclasts.

[4 = Neutral Assimilation] ADULT SOULS — "The Mansion of Love" — Heart Chakra — To love, have compassion: Seekers, adventurers, accepting, envious, generous, diplomatic, hides true self, caring, judgmental, controlling, conforming, explorers inwardly and outwardly, creative, competent, infrequent strivers, self-sufficient, hard working.

[5 = Cardinal Expression] MATURE SOULS — "The Mansion of Sound" — Throat Chakra — Communication: Reliable, serene, likes rules, sincere, honest, faithful, compassionate, doesn't impose their will on your life, adore good things in life (won't obtain them by killing or manipulation), adaptable, flexible, can fight constructively, open-minded, sense of proportion, listens to others, helpful, has integrity, backbone of society, sensitive, insightful, rational.

[6 = Cardinal Inspiration] OLD SOULS — "The Mansion of Knowledge" — Brow Chakra (third eye) — telepathic skills, intention, control through thoughts: Mellow, non-judgmental, accepting, caring, not status-conscious, giving and generous, wise, tolerant, strong, enduring, spiritual rather than religious, compassionate, self-knowledgeable, farsighted visionaries, break all rules without infringing on others.

[7 = Cardinal Action] VOLUNTEER SOULS — "The Mansion of Wisdom" — Crown Chakra — To enlighten other human beings — mystical, master builder, total competence, unlimited understanding.

Comments on Garfield's "Mansions"

As is my custom, I provide some summary comments on the material in the section.

1. The differences between Garfield's names and descriptions and other sources and descriptions indicate that the former did not borrow from the latter; she is an independent source. In fact, there are

statements in the book that Garfield received her information via inspiration, from shamanic journeying, and from mystical insights and such.

2. It is interesting to me to read what an independent source has to say about a subject that is covered in numerous other sources documented in this chapter. Garfield's description of each Mansion has many similarities to what we find in other sources, but of course there are some differences; researchers might put some descriptive words in different categories from where Garfield puts them, and *vice versa*. This is in keeping with my point, made elsewhere in this chapter, that such descriptions of Ages are necessarily stereotypical and archetypal, and that the reality of how any particular person manifests their Age is ambiguous, and therefore it is difficult to put specific people and specific descriptions in a particular box.
3. Notice that I added the Septenarian Attributes in brackets along with the ranking number. I cannot help but think that if Garfield had been aware of — and better yet had full knowledge of — the structure and meaning of the Natural Sequence schema, with the way the Septenarian Attributes are arranged and delineated, she would have a more definitive, less ambiguous, understanding of each Mansion.
4. Despite the ambiguities, based on a careful reading of Garfield's complete description in her book of each Mansion, I tend to agree with Hoodwin that what the Michaelian teachings refers to as the Mature Soul Age is two categories in Garfield. That is, what she names Adult and Mature Mansions are what the Michaelian teachings names early-Level Mature and late-Level Mature Souls respectively. It is all a matter of semantics: sometimes the same name is applied to different categories, and sometimes the same categories get different names. What should govern the descriptions, in my opinion, is the Septenarian Attributes; they provide the pure abstract archetypes of which the Soul Ages are an instantiation.
5. Garfield correlates her version of the seven Ages with the seven primary chakras, newest to oldest Age in the same sequence as the chakras from bottom to top. Refer to Chapter II-X "The Seven Chakras" and you will see that I have an understanding that differs slightly from Garfield. There you will find evidence and argument that the chakras follow the Natural Sequence in this way: 0) Root Chakra = Physiology; 1) Gonad Chakra = Ordinal Action; 2) Navel Chakra = Ordinal Inspiration, 3) Plexus Chakra = Ordinal Expression, 4) Heart Chakra = Neutral Assimilation, 5) Throat Chakra = Cardinal Expression, 6) Brow Chakra = Cardinal Inspiration, 7) Crown Chakra = Cardinal Action. This propensity to correlate various metaphysical teachings is typical of many spiritual students; my offerings in that realm are found in this *Cosmogony* book.
6. Garfield's description of the Mansions and their correspondence with chakras also leads to the comparison with Gurdjieff, where he correlates his Levels of Being with the Centers — chakras and Centers being a common target for correlation. Refer to [other chapters](#) in this Part of this *Cosmogony* book where Gurdjieff and Centers and chakras are discussed in detail.
7. Garfield's description of the seventh Mansion, Volunteer, is very much like the characterization of Bodhisattvas in Eastern mystical traditions. These are souls who incarnate, not because they must in order to burn karmic ribbons or finish the Physical Plane 'curriculum', but because of compassion for humanity, as high teachers, guiding lights, way-showers, and such. Something like Bodhisattvas appears in other descriptions of the Sixth and Seventh Ages, so naturally this type of soul is discussed at length in other sections of this chapter.
8. That Garfield made the Seventh Age the Bodhisattva age, rather than the Sixth Age as normally understood in the orthodox Michaelian teachings, is what Meher Baba did in his description of the seven Ages; refer to a previous section. Neither Garfield nor Baba had a place in their septenaries for the Avatar, aka the Infinite Soul; that manifestation was 'off the chart', so to speak, and I tend to concur, unless one stretches definitions considerably; refer to subsequent sections of this chapter.
9. Garfield says that there are seven Stories within each of the seven Mansions. This is equivalent to the Michaelian teaching concept of seven Levels within each Age.

Garfield is not as well known in the esoteric community as the next source of information is.

Michael Newton and Seven Stages

A few years after Garfield published her book derived from mystical inspiration, another author's book was published, with information derived from inter-life hypnotic regression; that is the subject of this section. As it so happens, it also describes seven categories of soul advancement in the process of reincarnation. I find it interesting and validating that apparently independent sources come to similar conclusions.

Michael Newton, Ph.D., was a psychotherapist who lived and worked during the latter part of the Twentieth Century. He used hypnotherapy in his practice. He inadvertently discovered that he could make contact with the alleged soul of his clients and thereby regress them beyond their childhood and into their between-lives state. He subsequently wrote three books: *Journey of Souls*, and *Destiny of Souls* for the general public, and *Life Between Lives* for professional hypnotherapists. (Case studies written by his students have been published in *Memories of the Afterlife* and *Wisdom of Souls*.) From those sessions, Newton discovered that souls have a spectrum of maturity, from new souls to old souls.

Below is a table that I found on the internet, adapted and redrawn from a slideshow and talk that a guy named Douglas Kinney gave at a meeting of the Baltimore branch of the Institute of Noetic Sciences (IONS) in about the year 2011.

Table II-8c — NEWTON'S MODEL for SOUL DEVELOPMENT LEVELS and CORE COLORS				
LEVEL	LEARNING STAGE	ENERGY CONSCIOUSNESS	POPULATION	GUIDE STATUS
I	Beginner	White (bright and homogeneous)	42%	none
II	Lower Intermediate	Off-white (reddish shades, ultimately turning into traces of yellow)	31%	none
III	Intermediate	Yellow (solid with no traces of white)	17%	none
IV	Upper Intermediate	Dark Yellow (deep gold, ultimately turning into traces of blue)	9%	Junior
V	Advanced	Light Blue (with no traces of yellow, ultimately turning into traces of purple)	1%	Senior
VI	Highly Advanced	Dark Bluish Purple/Violet (surrounded by radiant light)*	0%	Master
*VII	Old Ones	Deep Purple (surrounded by radiant light)	0%	Overseer

Source: Michael Newton, *Journey of Souls*, p. 103.

*Linda Backman, *Bringing Your Soul to Light* (2009) had more experiences with advanced souls.

Following are my comments on this table:

- FIRST COLUMN: Note that there are seven stages, the same as for the other Soul Age schemas reviewed in this chapter. I did not see any indication in Newton's books that he was told that there are actually seven distinct stages; it appears he just found it convenient to categorize soul maturity using this number. His approach to his investigations seems empirical: "how can I sensibly organize what I am hearing from my clients?"
- SECOND COLUMN: Note that the names given to the stages are not like the names given by others that use the metaphor of chronological age: "Infant, Child", and so on. Instead, the metaphor is more like a course of instruction in school: Beginner, Intermediate, Advanced. Newton seems to have a scholarly inclination, and if that is accurate, then I think that the school metaphor would come naturally to him. It is easy enough to equate Beginner with Infant, Lower Intermediate with Baby, Intermediate with Young, Upper Intermediate with Mature, and Advanced with Old. The names Highly Advanced and Old Ones do not correlate with Transcendental and Infinite of the Michaelian teaching, but they are somewhat compatible with the names and descriptions proposed by Garfield (see previous section) for the Sixth and Seventh Ages. Newton's metaphorical 'curriculum' naming convention seems less potentially pejorative to me than "Infant, Child" and so on. The 'lesson plan' for each 'class' is not provided in Newton's books. I find it disappointing that Newton provided no

qualitative description of what exactly or approximately the soul is learning at each stage. Therefore, I cannot justify correlating Newton's schema with the Septenarian Attributes of the Natural Sequence schema.

- **THIRD COLUMN:** Note that there are colors associated with each soul stage, which in the books is said to be the color of the aura, energy, or emanation of the soul. Note that the color scheme does not fit exactly with the color spectrum given in other teachings. Although red is near the immature end and violet is at the mature end, the colors do not pass from red to orange to yellow to green to blue to indigo to violet as they do in the case of chakras, for instance. The fact that there are gradations of color within some of the stages indicates that Newton was aware that there are gradations of advancement within each stage, which is reminiscent of statements in other sources that there are sub-Ages.
- **FOURTH COLUMN:** Note that the population percentage of each stage is nothing like the percentage given in the Michaelian teachings. Instead of the decreasing percentage shown on this table, in the Michaelian teachings there is a "bell curve" distribution: Infant = 10%, Baby = 23%, Young = 32%, Mature = 24%, Old = 11%. The discrepancy between Newton and the Michaels is perhaps explained by the fact that Newton's figures came from his client population, a self-selected group of people who needed counseling, hence probably younger souls. Newton said he rarely worked with advanced souls, but one of his students, Linda Backman, did work with advanced souls per the asterisk note on the slide. She has also written some books, which build on the foundational work of Newton.
- **FIFTH COLUMN:** Newton found that souls, when they had learned enough to arrive at the fourth stage, become qualified to begin guiding less-advanced souls. They do this as spirit guides to incarnate personalities, and/or between-life guides. This accelerates and expands their own learning. It makes sense to me that Newton's fourth stage equates with the Mature Soul, the stage when souls really begin to assume responsibility for the well-being of their fellow humans and the planet. It is said that in the sixth and seventh stages, the Master and Overseer stages, the soul almost never needs to, or has little desire to, reincarnate. This is at least vaguely similar to what is said about souls in the last two stages in some of the other sources discussed in this chapter.

In the Newton books, there are no definitive descriptions of each stage of soul learning like the extensive definitive descriptions of the characteristics of each Age in other sources. There is only said to be an improvement in understanding of life, a gaining of knowledge in 'classroom' earth, and a shift in the nature of the 'coursework' from beginner to intermediate to advanced.

Another Chart that I found on the internet tabulated Newton's stages in a more expanded way:
><https://drakebearstephen.files.wordpress.com/2014/01/soullevelnewton1.jpg><.

Table II-8d — NEWTON’S CLASSIFICATION MODEL with COLORS			
#	LEVEL	COLOR	SOUL AGE?
1	Level I: Beginner	White	Infant
2	Level I: Beginner	Off-white Gray / Grayish with tints of Pink	
3	Level II: Lower Intermediate	White and Reddish Pink	Child
4	Level II: Lower Intermediate	Light Orange Yellow with tints of White	
5	Level III: Intermediate	Yellow	Young
6	Level III and IV	Deep Gold / Gold with tints of Green	
7	Level IV: Upper Intermediate	Green or Brownish Green	Mature
8	Level V: Advanced	Light Blue; Light Blue with Gold; Green or Brown	
9	Level V and VI	Deep Blue	Old
10	Level VI: Highly Advanced	Deep Blue with tints of Purple	
11	Higher Levels	Purple	Transcendental

In this table, the first three columns are from the website, and I added the fourth column to show how I understand the table, though it could be argued differently. To me it appears that this table shows the early (Ordinal) and late (Cardinal) Levels of each Age. This distinction between Ordinal and Cardinal Levels of an Age reminds me of Spiral Dynamics, which is reviewed in Part Five, in Chapter V-11. The color scheme, and the Roman numeral scheme, provide some ambiguity, but then there is often difficulty in discerning whether or not to categorize people in the late Levels of one Age versus the early Levels of the next Age. Just as the colors in the rainbow blend into each other, so they do in the spectrum of Age, as near as we can tell empirically, whatever the case may be actually.

So, overall, Newton’s discoveries via hypnotherapy are a pretty solid independent confirmation of the other sources about the advancement of the soul during incarnations. According to Newton, the stories that his many, many clients told painted a consistent picture.

There is yet another source to discuss in this chapter, but it is not an independent source; it is a distillation of information from various unnamed sources.

Lee Bladon and Five Degrees of Consciousness

Lee Bladon’s website *Esoteric Science* contains the distillation of his spiritual philosophy. His teaching reminds me somewhat of Theosophy, but reading his site it becomes obvious that he has borrowed from many spiritual teachings, and come up with his own unique synthesis: ><https://www.esotericscience.org/><. Theosophy and the works of Henry Laurency are mentioned as the primary sources.

One of the subjects he covers is reincarnation, and within that subject he covers the maturation process of the soul. He refers to the wholeness of the soul as the “greater causal body” (which he also refers to as the “monad”), and says it divides itself into “lower” causal bodies — the mental, the emotional, and the etheric bodies — for the purpose of incarnation into the physical body. These “bodies” are also mentioned by Gurdjieff and Theosophy; refer to Chapter II-10, “Subtle Bodies”. There you will read more about the correlation of Bodies with Ages and with Planes.

Bladon divides the evolution of souls into five categories, which he calls Primitive, Civilized, Developed, Humanistic, and Enlightened. He proposes that in the process of spiritual development, the incarnate personality becomes progressively more conscious of these higher aspects of soul, which reside in the higher “worlds”, aka “planes”. For a complete explanation, the reader must read the entire web page found at:

><https://www.esotericscience.org/article13a.htm><. For a graphical representation of that concept, refer to the table below, adapted from that web page.

Table II-8e — BLADON’S DEGREES of CONSCIOUSNESS in the SUBTLE WORLDS					
	PRIMITIVE	CIVILIZED	DEVELOPED	HUMANISTIC	ENLIGHTENED
CAUSAL WORLD	Unconscious	Unconscious	Unconscious	Semi-conscious	Conscious
MENTAL WORLD	Unconscious	Semi-conscious	Semi-conscious	Conscious	Conscious
EMOTIONAL WORLD	Semi-conscious	Conscious	Conscious	Conscious	Conscious
PHYSICAL-ETHERIC WORLD	Conscious	Conscious	Conscious	Conscious	Conscious

The basic premise shown in this table is that the high-causal monad first empties itself for the purpose of incarnation, then develops back into its fullness during successive incarnations. In the Primitive stage, it is only conscious of the Physical World; progressing to the Civilized stage it becomes conscious of the Emotional World; progressing to the Humanistic stage it becomes conscious of the Mental world; progressing to the Enlightened stage it becomes conscious of the Causal World. This notion is very similar to Gurdjieffian and Theosophical conceptualizations. The basic point is that the evolution of the soul is the revelation of successively wider and higher levels of consciousness. To put this in Michaelian terms, realization or enlightenment is like removing Physical Plane Overleaves, then Astral Plane overlays, then Causal Plane overlays, to finally reveal the Oneness out of which the manyness emerges.

In the table above, there is no difference between the Civilized and Developed stages in terms of consciousness. This might have been a mistake, and in any case it does not make sense to me, and I would like to see seven stages to go along with all the other septenaries, so I improvised the table below to see what that would look like, expanding on the idea of expanding consciousness introduced by Bladon. (Bladon lists seven “planes” in another web page: ><https://esotericscience.org/article10a.htm><.) The table adds some “Worlds” that Bladon shows in other tables, and expands the stages of the development of consciousness to seven.

TABLE II-8f — WITTMAYER'S DEGREES of CONSCIOUSNESS in the SUBTLE WORLDS							
DIALECTIC	ORDINAL			NEUTRAL	CARDINAL		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
NAT SEQ RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
SOUL AGE	INFANT	CHILD	YOUNG	MATURE	SENIOR	ELDER	ANCIENT
STAGE	PRIMITIVE	"SOCIALIZED"	CIVILIZED	DEVELOPED	HUMANISTIC	"ADVANCED"	ENLIGHTENED
AKASHIC WORLD	Unconscious	Unconscious	Unconscious	Unconscious	Unconscious	Semi-conscious	Conscious
CAUSAL WORLD (3rd plane)	Unconscious	Unconscious	Unconscious	Unconscious	Semi-conscious	Conscious	Conscious
MENTAL WORLD	Unconscious	Unconscious	Unconscious	Semi-conscious	Conscious	Conscious	Conscious
ASTRAL WORLD (2nd plane)	Unconscious	Unconscious	Semi-conscious	Conscious	Conscious	Conscious	Conscious
EMOTIONAL WORLD	Unconscious	Semi-conscious	Conscious	Conscious	Conscious	Conscious	Conscious
ETHERIC WORLD (1st plane)	Semi-conscious	Conscious	Conscious	Conscious	Conscious	Conscious	Conscious
PHYSICAL WORLD	Conscious	Conscious	Conscious	Conscious	Conscious	Conscious	Conscious

My comments on this table are as follows.

- DIALECTIC ATTRIBUTES: In this table, in the first row below the title bar, the names of the Dialectic Attributes are shown.
- AXIAL ATTRIBUTES: In this table, in the second row below the title bar, the names of the Axial Attributes are shown. Combine the Dialectic and Axial Attributes and we have the Septenarian Attributes.
- NATURAL SEQUENCE RANK: In this table, in the third row below the title bar, the numerical ranking of the septenarian sequence is shown
- SOUL AGE: In this table, in the fourth row below the title bar, the names of the Ages are the ones that I prefer.
- STAGE: In the fifth row down from the title bar, I add a couple of names (in "quotation marks") to the names that Bladon used, to make seven stages instead of Bladon's five.
- WORLDS: In this table, the names of the seven Worlds, in the leftmost column, are created by dividing the Planes into lower (Ordinal) and upper (Cardinal) Worlds. Thus, the Physical and Etheric Worlds are the first plane (Action), the Emotional and Astral Worlds are the second plane (Inspiration), the Mental and Causal Worlds are the third plane (Expression), and the Akashic World is the lower half of the Fourth Plane (Assimilation). This arrangement brings Bladon's principle of increasing consciousness in higher worlds more into alignment with a scheme that I prefer and explain throughout this *Cosmogony* book.

One salient quote from his website is the following; notice the use of the word "body", a word that is typical in esoteric lore for the composites of souls on planes beyond the Physical:

To the monad, each incarnation is like a day's work. Leaving the physical-etheric body behind can be compared to taking off our overcoat, leaving the emotional body behind is like taking off our clothing, and leaving the mental body behind is like taking off our underwear. We return to our causal body (soul) completely naked to sleep for a while before awakening the next morning to get dressed again for another day's work. We begin each

new incarnation by putting on our underwear (mental body), our clothes (emotional body) and our overcoat (physical-etheric body).

That description sounds a lot like Overleaves or “overlays to Essence” in the Michaelian teachings. Note that Bladon uses a word here, “monad”, that is also used in the Michaelian teachings, but in a different context. In Bladon’s cosmology, the monad is the undivided soul or Self, prior to differentiation. What Bladon calls “monad”, in the OMG was referred to as the ‘upper causal Body’, aka the Transcendental Soul, which in the OMG transcriptions and in *MFM* is said to reside on the upper Causal (third) Plane. This idea will figure into my analysis and synthesis toward the end of this chapter. My preference is to equate Bladon’s “monad” with the Michaelian teachings’ “Essence” in its ultimate manifestation, rather than the Transcendental Soul, but there are interesting similarities. That is, ultimately, all souls are Fragments of one Essence. In the next chapter, “Casting Concerns”, I refer to the undifferentiated monad as the Oversoul.

Following are my comments on Bladon’s scheme:

1. Bladon does not reveal his sources, but it looks a lot like Theosophy to me, which is the only widely-known source that I know of that has a teaching on Age; the Kabbalah, the Michaelian teachings, and Garfield are not as widely known.
2. Bladon’s “worlds” are obviously the equivalent of what other esotericists refer to as “planes”, but some other esotericists also refer to planes as worlds. The lowest is the Physical-Etheric, next up in the table is the Emotional, aka Astral, next up in the table is the Mental. In some sources, each plane has seven subdivisions, or levels, and the same is the case with Bladon in some of his other tables. The reader might not be aware that the three higher levels of the Physical Plane are typically referred to as the Etheric levels in Theosophy and elsewhere; hence Bladon’s hyphenated label, Physical-Etheric. Some esotericists refer to the three highest levels of the Mental (Third) Plane as the “causal” levels, including Bladon. That is, in Bladon’s schema, the three highest levels of the Third Plane are referred to as Causal, whereas the four lower levels are labeled Mental.
3. One might think that Bladon’s five stages are equivalent to the Michaelian teachings’ five Ages. Thus: Primitive = Infant, Civilized = Baby, Developed = Young, Humanistic = Mature, Enlightened = Old. However, in the text that accompanied the table, Bladon’s description of the Enlightened stage, his fifth stage, does not fit the Old Soul description; it fits better with the Transcendental and/or Infinite Ages of the Michaelian teachings, and/or the Bodhisattva Age of other sources.
4. Bladon’s use of the words “semi-conscious” and “conscious” reminds me of some of the things that Gurdjieff said about the two highest Levels of Being, namely that the sixth was “subjectively conscious”, and the seventh was “objectively conscious”. That fits with the way I revised Bladon’s original table.
5. Another way to perhaps understand Bladon’s use of the word “semi-conscious” is to equate the next stage above one as one’s “higher self”, or as the residence of one’s “soul”, of which one is not normally fully aware. Except in the last stage, “Enlightenment”, where one is fully “conscious” — where one is fully a unitary “Monad”, to use Bladon’s term, and there is no “semi-conscious” aspect of being.
6. The basic idea of Bladon’s tabulation is that, as a soul advances through the Ages, progressively more of the consciousness that resides in the highest Self becomes available to the incarnation. There is thus a correlation between the Age of an incarnate soul and its amount of access to consciousness on the planes beyond the Physical.
7. Translating some of the things that Bladon says into Michaelian teachings terminology, we could say that the Infinite Soul fragments itself into the Transcendental Soul at its highest level, which in turn Fragments itself into Astral Bodies which Michaelian teachings calls Entities, which in turn Fragment themselves into incarnations that satisfy the need to experience all of life in all seven Ages. The consciousness of the so-called “Oversoul” is too great to normally fit into a human, so it must be stepped down and/or broken down into fragments in order to function on the Physical Plane in a human body.
8. According to Bladon’s reincarnation cosmology, the “soul” is the high third plane body (what other sources refer to as the Oversoul), which is unfragmented. Bladon says that the older the Age, the more the personality while incarnate has access to successively higher planes. Bladon does not say this, but I suggest this phenomenon is thus because the incarnate personality actually has more of its kindred

souls inhabiting and animating the incarnation, per the notion of an *ibbur* discussed in the section about Kabbalah.

The following two sources also regard the stages as a progression in the soul's maturation process.

Tessa Lynne and Seven Levels of Progression

Tessa Lynne is a psychotherapist who was counseling a person with Multiple Personality Disorder (MPD), otherwise known as Dissociative Identity Disorder (DID). Various personalities showed up as she was expecting, but then one of the personalities showed up that happened to be the so-called "spirit guide" of the primary soul of the client. Over a long period of time it told her about what it is like in the spirit world, in the afterlife, and with regard to reincarnation. The story is recounted in her book *The Invisible Choir*. You can read samples of it on the Amazon web page for this book.

I found out about this in the following quotation from a >quora.com< comment in April 2018. The question was asked:

"Do you believe in the spiritual 'theory' that says that souls have ages like 'young souls', 'mature souls', 'old souls', or is it pure nonsense?" There was a reference to Barry McGuinness's Michaelian teachings site in the United Kingdom: ><http://personalityspirituality.net/articles/the-michael-teachings/reincarnation-the-35-steps><.

Tessa Lynne gave this answer to the question:

I believe what I was told on this topic by my spirit world sources.* Their explanation differs from what the link suggests. While spirits (souls) do progress from young to mature, their progress is not reflected in their human selves to the extent described in the article. What I was told by my sources differs most strongly in how young spirits are described.

There are seven levels of progression before a spirit attains the level of Master. Those at the first two are referred to as junior or young spirits but it reflects their level of knowledge rather than their "age". Because the influence of a person's spirit is likely to be overshadowed by the personality and behavior of their human self, a young spirit cannot be easily identified by their human characteristics.

Though termed a "young" spirit, the equivalent in human terms of a spirit in their first lifetime would be a young adult rather than a child or teen, and certainly not an infant or baby. Before a spirit attaches to a human life for the first time, they will have existed in the spirit world for several to many decades and will have undergone a progressive, structured process of instruction that often includes shadowing one or more lifetimes. They will be guided to begin with easier lifetimes and then will be watched over and further guided by their mentors.

The other designations given in the article are not "pure nonsense" but they err in suggesting that spiritual progression is highly correlated with the stages of human development. Another error is in the claim that the lessons of each lifetime correlate with specific human needs or accomplishments. Lessons are more intricate than that. Most are presented over a wide range of lifetimes under increasingly difficult circumstances.

*My sources are two spirits who spoke to me through another person (directly, not channeled). I have written of my experience, and more of what my sources revealed to me, in *The Invisible Choir*.

In the book itself, the spirit guide was quoted as follows:

There are seven levels of status before the Master level. Those at the first two levels are considered junior spirits; five more levels reflect increases in knowledge and ability. Each level requires proficiency in a number of competencies.

Beyond this, in that book there is not much that was said about what in other sources is called Soul Age. There was no description of the nature or characteristics of each of the seven levels.

So, this source confirms what we have seen in numerous other sources: there are seven Ages of the soul on the Physical Plane. But this source did not like the specific characterizations of the seven Ages provided by a particular student of the Michaelian teachings, saying that what actually happens is a lot looser than that. My own observation is that it is indeed difficult to discern a person's Age, because Age is obscured by many other personality factors of the Process/Aspect System matrix as enumerated in various sections of this chapter of this *Cosmology* book.

There is one more source that I have encountered that has somewhat to say about this subject.

The John Christopher Daniels Channeling

There is another source for us to examine in this chapter, in this section, which is independent of the other sources documented in this chapter, so far as I can tell. If I had found more, I would have included them here.

The following quotation is from the book, *Incarnation and Reincarnation*, compiled and edited by Roy C. Smith, published in 1975. The book consists of extracts of a body of channeled information that its students call the “Loehr-Daniels readings”, accompanied by some commentary by the editor. The channeled personality gave itself the name “Dr. John Christopher Daniels”, and it had this to say about Soul Age and its part in the reincarnation scheme:

Q.— Now the next question Bob would ask is: Are you and those working with you in giving these readings, are you at a higher state of development, a higher intelligence level, than the earth plane in general?

A.— Yes.

Q.— If so, how far advanced, or how many levels higher?

A.— Well, I could not give that to you in a number. It is a state of advancement. We are not completely out of earth circulation. I have been in earth-living. I have not been in it for some time, but I am returning to it. In the age of the soul as we give it in terms of one being a “young soul,” a soul [1] “just beginning earth life,” or a soul [2] “well started” or [3] “at the midpoint,” [4] “well along,” or [5] “nearing the end,” one would say [6] I have completed earth-living, returning to earth-living by choice for service, not from any karmic pull or desire of self.

Q.— One of the older brothers among the human family?

A.— Yes, that is a good way to express it.

Q.— Not someone who is in the seventh plane of the seventh realm of the seventh heaven or something?

A.— No. I belong to the human family of souls.

This book as a whole, not just in the quoted text, provides information that is remarkably similar to other sources in its presentation about incarnation and reincarnation. It looks to me as if the source of the information is what the Michaelian teachings refer to as a Transcendental Soul, and that this TS is anticipating its reincarnation. This looks to me like evidence that after five Soul Ages, “karmic pulls” are not part of the impetus for reincarnation; rather, the call of “choice for service” is. The reader is reminded that this is a theme documented in several places in this chapter as a description of a “volunteer” or a Bodhisattva.

Tabulation of Soul Age Teachings

For your convenience, as a conclusion for this Chapter, I provide the following table showing the various teachings about Soul Age that are reviewed in the chapter. The Attributes of the Natural Sequence schema are shown in the first six rows, three teachings that preceded the Michaelian teachings are shown in the next four rows, the Michaelian teachings are shown in the next two rows, then five teachings that succeeded the Michaelian teaching are shown in the next four rows.

Table II-8g — TEACHINGS ABOUT SOUL AGE								
A T T R I B U T E S	RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
	DIALECTIC	– ORDINAL –			= NEUTRAL =	+ CARDINAL +		
	AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
	DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
	DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
	PROCESS →	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
	ASPECT ↓							
P R E D E C E S S O R S	KABBALAH GILGUL	<i>Nefesh</i> “Life Force”	<i>Ruach</i> “Spirit”	<i>Neshama</i> “Soul”	<i>Chaya</i> “Living”	<i>Yechida</i> “Singular”	<i>Tzaddik</i> “Righteous”	<i>Mashiach</i> “Anointed”
	THEOSOPHY PEARSON	Infancy Primitive	Childhood Ordinary	Adolescence Civilized	Maturity Advanced	Spiritual	—	—
	THEOSOPHY BAILEY	Physical Sensations Instinctive	Emotional Orthodox Standardized	Thinking Mental Scientific	Sensitive, struggling, torn between poles	Integrated Loving Disciple Practical Mystic	Initiated Mystic Integrated Personality	Infinite Master Adept
	MEHER BABA	Instinctive Survivor	Emotional Feudalist	Mental Conqueror	Balanced Empathize	Systematic Telepath	Intuitive Regulator	Enlightened Master
M I C H A E L I A N	SOUL AGE WORLDVIEW COMPLEX ASSIMILAT’N =P-D=	+Preservation INFANT PRIMITIVISM –Security	+Propriety CHILD TRADITION’S –Conformity	+Production YOUNG MATERIALISM –Exploitation	+Consensus MATURE COLLECTIVISM –Ambiguity	+Wisdom SENIOR HOLISM –Speculation	+Liberation ELDER TRANSPERSON’ –Catharsis	+Revolution ANCIENT MESSIANISM –Provocation
	LEVEL ZONE COMPLEX ASSIMILAT’N =P-D=	+Institution FIRST RESOLUTION –Regulation	+Affiliation SECOND IMMANENCE –Indoctrination	+Individuation THIRD SEPARATION –Alienation	+Consolidation FOURTH EXPERIENCE –Achievement	+Philosophy FIFTH UNIFICATION –Ideology	+Ascension SIXTH TRANSCEND’C –Exaggeration	+Causation SEVENTH ACTIVATION –Agitation
S U C C E S S O R S	GARFIELD MANSIONS	Infant Soul SURVIVAL	Child Soul EMOTION	Teenage Soul POWER	Adult Soul LOVE	Mature Soul SOUND	Old Soul KNOWLEDGE	Volunteer Soul WISDOM
	NEWTON STAGES	BEGINNER	LOWER INTERMEDIATE	INTERMEDIATE	UPPER INTERMEDIATE	ADVANCED	HIGHLY ADVANCED	OLD ONES
	BLADON DEGREES	ETHERIC PHYSICAL	ASTRAL EMOTIONAL	CAUSAL MENTAL	AKASHIC	—	—	—
	LYNN LEVELS	JUNIOR	JUNIOR	FIVE	MORE	LEVELS	OF	COMPETENCE
	DANIELS	BEGINNER	WELL STARTED	MIDPOINT	WELL ALONG	NEARING END	VOLUNTEER	

In my opinion, these various independent sources on the subject of Soul Age provide additional evidence for the validity of the Natural Sequence schema.





Chapter II-9

① THE SEVEN CHAKRAS

It is common knowledge among students of esoterica that the chakras are described as “energy centers” within the physical body, and that there are seven major chakras. The subject of chakras is also intimately connected with the Centers of the Process/Aspect System matrix, which are discussed in Chapters II-3 on the Gurdjieffian teachings and Chapter II-4 on the Michaelian teachings, so the discussion in this chapter is very much appropriate for this book about the Natural Sequence schema, a septenary within the Process/Aspect System.

The chakra system did not fall fully formed out of the sky; it has been a process, which has taken thousands of years. Surely one of the most authoritative and scholarly chronicles of the development of the chakra system is the book *Rainbow Body — A History of the Western Chakra System from Blavatsky to Brennan*. It was authored by Theosophist Kurt Leland, it was published in 2016, and it is about 500 pages long. The last hundred pages are end notes and appendixes and bibliography; those are the hallmarks of a very scholarly work indeed. The subtitle says it covers the years from Blavatsky to Brennan, which is about 120 years from about 1875 to about 1995. There were a couple dozen players during those decades. There were westerners who adopted and adapted the Eastern chakra system to suit different purposes. Some were channels, some were intuitives, some were healers, some saw or felt ‘energy’, some consolidated the work of others, some took the system in new directions. The *Rainbow Body* book also has a long chapter on the history of the chakra system as understood and taught in the orient, where the system originated.

I can barely give you a feel for the process of development of the modern chakra system. There has been disagreement and diversions along the way, but you can see in that book, and to a lesser extent in this chapter, that there has been an overall convergence, as the sources borrowed from teachings beyond the original chakra system and then integrated those ideas into their version of the chakra system. In my turn, I propose to dis-ambiguate the chakra system with the help of the Natural Sequence schema. This will presumably demonstrate that the chakra system is a particular instantiation of the Natural Sequence schema, thus taking its place among the dozens of other instantiations of the Natural Sequence that are reviewed in this book. The chakra system has been a “work in progress” for thousands of years.

Historical Development of the Chakra Concept

The task before us is to examine the internet resources and see if the Natural Sequence or some other pattern holds for the chakras. It appears to be a vast body of both knowledge and speculation, and my investigation does not pretend to be exhaustive, but here is what I have come up with so far. I have looked at many websites. I have not researched the subject enough to know what is considered “authoritative” or “authentic”. I have noticed less correlation with the Natural Sequence in the descriptions that seem closer to the original oriental writings, and more correlation with the Natural Sequence in modern descriptions, which seem to trace to Theosophy. For instance:

The earliest known mention of chakras is found in the later Upanishads, including specifically the Brahma Upanishad and the Yogatattva Upanishad. These vedic models were adapted in Tibetan Buddhism as Vajrayana theory, and in the Tantric Shakta theory of chakras. It is the shakta theory of seven main chakras that most people in the West adhere to, either knowingly or unknowingly, largely thanks to a translation of two Indian texts, the *Sat-Cakra-Nirupana*, and the *Padaka-Pancaka*, by Sir John Woodroffe, alias Arthur Avalon, in a book entitled *The Serpent Power*. This book is extremely detailed and complex, and later the ideas were developed into what is [the] predominant western view of the Chakras by the Theosophists, and largely the controversial (in theosophical

circles) C. W. Leadbeater in his book *The Chakras*, which are in large part his own meditations and insights on the matter. That said, many present-day Indian gurus that incorporate chakras within their systems of philosophy do not seem to radically disagree with the western view of chakras, at least on the key points, and both these eastern and western views have developed from the Shakta Tantra school. There are various other models of chakras in other traditions, notably in Chinese medicine, and also in Tibetan Buddhism. Even in Jewish kabbalah, the different Sephiroth are sometimes associated with parts of the body. In Islamic Sufism, Lataif-e-Sitta (Six Subtleties) are considered as psychospiritual “organs” or faculties of sensory and suprasensory perception, activation of which makes a man complete. Attempts are made to try and reconcile the systems with each other, and notably there are some successes, even between such diverged traditions as Shakta Tantra, Sufism, and Kabbalism, where chakras, Lataif and Sephiroth can seemingly represent the same archetypal spiritual concepts. In Surat Shabda Yoga, initiation by an Outer Living Satguru (Sat — true, Guru — teacher) is required and involves reconnecting soul to the Shabda and stationing the Inner Shabda Master (the Radiant Form of the Master) at the third eye chakra. Chakrology is a neologism sometimes employed by Alternative Medicine practitioners or esoteric philosophers for the study of chakras.

There are many different chakrologies, some of them based on ancient Indian Hindu Tantric esoteric traditions, New Age interpretations, or Western occult analyses, as well as ancient Greek and Christian references. Croatian esoteric philosopher and physicist Arvan Harvat notes that it would be very difficult to develop a unified coherent chakra science that would integrate all the elements of the various present chakrologies.

[><http://www.crystalinks.com/chakras.html>< — retrieved 24 October 2023]

The Theosophists seem to be the source of the modern “New Age” conception of the chakra system. I have somewhat to say about them — and the Kabbalists and the Sufis and the Hindus — in other chapters. The septenary is central to their teaching as it is in various esoteric teachings.

The chakra system has been the metaphorical ‘kitchen sink’ of esotericism for a very long time. By that I mean, it was the ‘go to’ place to put stuff that correlates with other stuff in a base-seven schema: colors, healing gems, endocrine glands, planes, personality typologies, levels of consciousness, and so on. My suggestion is that the Natural Sequence schema serves that same purpose and does it much better; it is an attempt to “develop a unified coherent science that would integrate all of the elements” of various esoteric and exoteric sciences, including the chakra system. If one were to review various internet websites, one would see that they give descriptions that seem rather ambiguous when compared to the Natural Sequence schema, but one can easily discern components of the Natural Sequence schema if one knows what to look for. Because of this rampant ambiguity and disagreement among various teachings about the chakras, my confidence in the whole chakra system is low. My evidence for and belief in the Natural Sequence schema does not rise or fall with it. However, I want you to know that I am not being unreasonable or biased when I say that the chakras follow the Natural Sequence — in the minds of a lot of teachers at least, if not in nature.

Recall that the Natural Sequence schema has these elements:

- The Natural Sequence is a septenary — it has seven elements or stages.
- There is a neutral zone in the middle between two triads. In the Natural Sequence schema, the Neutral stage is called “Assimilation”.
- The triads consist of an Ordinal group and a Cardinal group, Ordinal being the first triad.
- The Ordinal and Cardinal triads are the mirror image of each other.
- The triads are a sequence of ‘dimensionality’. In the Ordinal triad the sequence is 1-D Action, 2-D Inspiration, and 3-D Expression; in the Cardinal triad the sequence is the reverse of this.
- Thus, the pattern is: 1) Ordinal Action, 2) Ordinal Inspiration, 3) Ordinal Expression, 4) Neutral Assimilation, 5) Cardinal Expression, 6) Cardinal Inspiration, 7) Cardinal Action.

The correlation of the chakras correlates with some of the components of the Natural Sequence schema and Process/Aspect System matrix as follows. Note that the Centers are the most obvious and relevant correlation:

1st Chakra = Ordinal Action (Termination Process, Resolution Level) = **Motion Center** = Warrior

2nd Chakra = Ordinal Inspiration (Involution Process, Immanence Level) = **Emotion Center** = Server

3rd Chakra = Ordinal Expression (Analysis Process, Diversification Level) = **Intellect Center** = Artisan

4th Chakra = Neutral Assimilation (Assimilation Process, Composition Level) = **Impulse Center** = Scholar

5th Chakra = Cardinal Expression (Synthesis Process, Unification Level) = **Concept Center** = Sage

6th Chakra = Cardinal Inspiration (Evolution Process, Transcendence Level) = **Sympathy Center** = Priest

7th Chakra = Cardinal Action (Origination Process, Activation Level) = **Excitation Center** = King

The justifications for those correlations of chakras with components of the Natural Sequence schema are documented in the following sections.

Chakras per Wikipedia

The following quotation and tabulation originally came from the Wikipedia article on chakras a few years before this chapter was finalized, but it has since been removed.

The Rainbow Theory of Chakras: After Woodroffe and Leadbeater, the next most influential person regarding the chakras is Christopher Hills, a spiritual philosopher and researcher who set up his own university, the University of Trees. In a very thick book, *Nuclear Evolution*, published in the early 1970s, Hills suggests that each of the chakras corresponds to one of the seven colors of the spectrum. He then associates each chakra and color with a particular personality type. A great deal of his book is devoted to explaining each of these personality types in detail. His typology is quite fascinating, and certainly equal in profundity to the personality typology of comparable systems of character analysis, such as Carl Jung and Humanistic Astrology. The basic scheme is as follows:

Table II-9a — The SEVEN CHAKRAS per WIKIPEDIA ARTICLE					
COLOR	SANSKRIT	POSITION	TYPE	PERSONALITY	RANK
VIOLET	Sahasrara	Crown	primordial imagination	Imagination; shame and wonder	SEVENTH
INDIGO	Ajna	Forehead	intuitive — visionary	Intuition; sensitivity, envy, admiration	SIXTH
BLUE	Vishuddha	Throat	Contemplative — nostalgic	Mental concepts; authority, reverence	FIFTH
GREEN	Anahata	Heart	security or self-centered	Vital force; possession, jealousy, power	FOURTH
YELLOW	Manipura	Solar plexus	intellectual	Thinking; intellect, change	THIRD
ORANGE	Swadhistana	Splenic plexus	social — gregarious	Social; ambition	SECOND
RED	Muladhara	Genitals	physical — sensation	Sensation; sex, fear, anger	FIRST

My comments on this table are as follows:

- **COLOR:** The first column shows the colors that are typically assigned to the chakras in modern times. This is a convenient contrivance, invented in modern times as part of a general trend over the decades to correlate various esoteric systems with the chakras, even though the colors themselves have no intrinsic connection to the chakras. What meaning there is is that Red is low ‘vibration’ and Violet is high ‘vibration’; the idea is that there is a progression along the spectrum from low to high during an alleged enlightenment process. Chapter VI-3, “The Ra Material”, in Part Six has somewhat to say about this.
- **SANSKRIT:** The second column shows the Sanskrit names for the chakras. They go by different names in other languages, of course.
- **POSITION:** The chakras are located at specific positions on the physical body. There is some disagreement from source to source about some of the locations of the lower three chakras. There is more information about that in Table II-9b further on.
- **TYPE and PERSONALITY:** The fourth and fifth columns provide some characteristics of the seven chakras. There is more information about that in Table II-9b further on.

- RANK: The sixth column shows the rank order sequence of chakras. Chakras are often referred to by their rank alone. Notice the sequence is from ‘first’ to ‘seventh’, starting at the bottom row of this table and going up. Undoubtedly they are listed this way because this is where they are on the body, from bottom to top. This column was not shown on the Wikipedia page, but it is here because it is such a common way of identifying chakras.
- The seventh column shows another typical descriptive designation for two triads of chakras: “higher” and “lower”, separated by the fourth chakra in between the higher and the lower triads. This column was not shown on the Wikipedia page, but I show it here because it is such a common way of identifying chakras. More will be said about this further on, because this pattern makes it clear that the chakra system is yet another instantiation of the Natural Sequence schema, not just a random collection of septenarian components.

A review of internet websites that discuss the chakras reveals that the above understanding of the chakras, their associated color and attributes, has a wide acceptance. It is fairly obvious, even from this brief presentation, that the chakras follow the Natural Sequence.

The *Rainbow Body* book has about two dozen tables showing the chakras — and correlations to numerous other factors such as colors and glands and planes and gems and so on — according to a couple dozen sources that documented their understanding of the subject over the 20th Century. There was a lot of disagreement among the various sources about a number of those correlations. On the other hand, as the century progressed, there was an obvious convergence on a particular pattern, similar to the pattern shown in the Wikipedia table in the previous section. The absence of consistency over the decades tells me that there is no absolute, revealed truth about the chakra system. On yet another hand, the presence of convergence tells me that there is a truth upon which to converge; and if not a truth, then at least a consensus. It so happens that the consensus has converged on the Natural Sequence. To demonstrate this, I provide two tables from the *Rainbow Body* book, shown below, redrawn by me.

The first table is redrawn from Leland’s Table 22. It is derived from the work of Christopher Hills in his book *Nuclear Evolution: Discovery of the Rainbow Body* (1968, 1977). He is noteworthy enough in the history of New Age thinking during the Twentieth Century to have a long Wikipedia article written about him and his many accomplishments: >https://en.wikipedia.org/wiki/Christopher_Hills<. Based only on what is found in this table, it seems likely that Hills was aware of some of the precursors to the Natural Sequence schema that are documented in other chapters of this *Cosmogony* book. This table is typical of the two dozen or so tables found in the *Rainbow Body* book. Some table creators chose to correlate some other items with other chakras, but you get the idea. This one happens to show a number of personality traits, which makes for an easy correlation with the Centers, which are personality traits. The six columns on the left are the same as shown on Table 22 in the *Rainbow Body* book; the four columns on the right were added by me so that the reader can easily see how some components of the Process/Aspect System matrix correlate with the six columns on the left.

Table II-9b — CHAKRAS ACCORDING TO CHRIS HILLS (1977)						PROCESS/ASPECT SYSTEM			
Chakra	Color	Personality	Consciousness	Orientation	Time Sense	Center	Role	Axial	Dialectic
Crown	Violet	Imaginative	Cosmic	Divine Order	Timelessness	Excitation	King	Action	Cardinal
Third Eye	Indigo	Intuitive	Future	Future	Present as future	Sympathy	Priest	Inspiration	
Throat	Blue	Idealistic	Conceptual	Memory	Fixer of time	Concept	Sage	Expression	
Heart	Green	Acquisitive	Security	Security	Chronological time	Impulse	Scholar	Assimilation	Neutral
Solar Plexus	Yellow	Intellectual	Analytical	Thinking	Planning for future	Intellect	Artisan	Expression	Ordinal
Splenic	Orange	Social	Group	People	Present applied to future	Emotion	Server	Inspiration	
Genital	Red	Sensation	Physical	Action	Immediate moment	Motion	Warrior	Action	

Comments on the table are as follows:

- **CHAKRA:** The first column shows the standard names (locations) of the chakras. There is disagreement among various sources about the names (and locations) of the lower three chakras. For instance, some alternative names and locations to those given here are Root, Sacral, and Navel. It makes the most sense to me that the Root chakra is the Zeroth chakra and corresponds to the Instinctive Center as Gurdjieff understood it = the Physiology Center; refer to [Chapter II-3](#), “The Gurdjieffian Teachings”. The Genital Chakra is also called the Sacral chakra, and I understand this to correspond to the Moving Center and Warrior Role. The Splenic chakra is also called the Navel Chakra, and this makes sense when corresponded with the Emotional Center and the Server Role. Some sources do not mention the Solar Plexus Chakra, but it makes sense to me to include this nerve bundle and correlate it with the Intellectual Center and the Artisan Role.
- **COLOR:** The second column shows the seven rainbow colors commonly associated with the chakras shown in the first column. In sources earlier than this, generally speaking, the older the table, the less agreement with this lineup. Sources have mostly converged on this association of colors with chakras. The chakras do not actually have colors, or if they do, there is no agreement among the clairvoyant sources. Therefore, it is just a convenience to code the chakras with colors with the lowest-vibration, red, at the lowest chakra and the highest vibration, violet, with the highest chakra.
- **PERSONALITY:** Compare the names of the Personality traits given by Hills with the Centers and Roles of the Process/Aspect System matrix shown in the seventh and eighth columns. The correlation fits well enough; rearranging the Centers/Roles in any other way would not produce a better fit.
- **CONSCIOUSNESS:** Compare the names of the Consciousness traits given by Hills with the Centers and Roles in the seventh and eighth columns. The correlation fits well enough; rearranging the Centers/Roles in any other way would not produce a better fit.
- **ORIENTATION:** Compare the names of the Orientation traits given by Hills with the Centers and Roles in the seventh and eighth columns. The correlation fits well enough; rearranging the Centers/Roles in any other way would not produce a better fit.
- **TIME SENSE:** These sort of make sense to me when comparing them with Process/Aspect System matrix components, but it would probably help you to fully understand what he was getting at if you were to read Hills’s book.

- **CENTER:** Because the Centers of the Process/Aspect System matrix are often correlated with the chakras, they are shown in the seventh column.

There is little doubt in my mind that in the Hills chakra schema, the chakras can be seen to follow the Natural Sequence schema.

The following table is a redrawing and combining of Table 23 (Western) and Table 24 (Bruyere) in the *Rainbow Body* book. Leland titled it “The Western Chakra System” because it was a summary of some things that are shown in other tables in his book, derived from various sources. The three columns on the right side of this table show some components of the Process/Aspect System matrix, for the convenience of the reader, showing the correlation with the seven columns on the left. Once again, it is fairly obvious that the chakras follow the Natural Sequence schema.

Table II-9c — THE WESTERN CHAKRA SYSTEM (ca. 1990)						Bruyere	PROCESS/ASPECT SYSTEM		
Numbers	Names	Locations	Glands	Colors	Qualities	Planes	Center	Axial/Role	Dialectic
Seventh	Crown	Anterior fontanel	Pineal or pituitary	Violet	Enlightenment	Divine	Excitation	Action King	Cardinal
Sixth	Brow Third Eye	Cavernous plexus	Pituitary or pineal	Indigo	Intuition Imagination	Monadic	Sympathy	Inspiration Priest	
Fifth	Throat	Laryngeal plexus	Thyroid	Blue	Communication	Nirvanic	Concept	Expression Sage	
Fourth	Heart	Cardiac plexus	Thymus	Green	Love Compassion	Buddhic	Impulse	Assimilation Scholar	Neutral
Third	Plexus Navel	Solar plexus	Pancreas Spleen	Yellow	Will Power	Mental	Intellect	Expression Artisan	Ordinal
Second	Genital Sacral	Prostate/ vagina	Gonads Adrenals	Orange	Sexuality Sensuality	Astral Emotional	Emotion	Inspiration Server	
First	Root	Sacral plexus	Adrenals Gonads	Red	Survival Grounding	Physical Etheric	Motion	Action Warrior	

My comments on the table are as follows:

- **NUMBERS:** The first column shows the rank of the chakras from First at the low end of the body to Seventh at the high end of the body. This is standard operating procedure. The reason to rank them this way is because the chakras represent developmental stages from lowest to highest in terms of progression or evolution of consciousness.
- **NAMES:** The second column shows the standard names of the chakras. These locations have not changed much over the hundred-year-plus history of the chakra system in the west. Various sources locate the Second and Third chakras in slightly different positions on the body, and this is reflected in the double names in this column. In other words, the Western chakra system is inconsistent, ambiguous, and/or confused.
- **LOCATIONS:** The third column recapitulates the location of the chakras as shown in the second column, but with different nomenclature. In other words, the Western chakra system is inconsistent, ambiguous, and/or confused.
- **GLANDS:** The fourth column shows endocrine glands that are near the location of the chakras. It is common in the chakra lore to associate endocrine glands with chakras, but one can see from this table that the correlation of chakra with gland is disputable; it is not an exact science. In other words, the Western chakra system is inconsistent, ambiguous, and/or confused.

- **COLORS:** The fifth row shows the rainbow colors that the esotericists have converged on over the 20th Century. These colors are a conventional convenience, not an actuality.
- **QUALITIES:** The sixth row shows the personality traits or endeavors ascribed to each chakra. Upon comparison, the accuracy of the correlation of this column with the Centers and the Roles of the Process/Aspect System matrix shown in the seventh and eighth columns should be obvious.
- **PLANES:** The names of the planes are from Theosophy, and were borrowed verbatim from Table 24 of the *Rainbow Body* book, which summarized the work of a clairvoyant named Rosalyn Bruyere who lived in the middle of the 20th Century. The names of the Cardinal planes differ from those given in Chapter II-6 above, “The Seven Planes”, but this is of no significance.
- **PROCESS/ASPECT SYSTEM:** Because the numbers and names and locations of the chakras below the heart chakra vary from Western source to Western source, as shown in the table, it is impossible to correlate the Centers with them the way I understand them; refer to the next section for an explanation of my reconciliation.

There is little doubt in my mind that in the Western Chakra System as shown in this table, the chakras can be seen to follow the Natural Sequence schema. Notice that among the tables, the higher chakras are not as well-defined or distinguished from one another as the lower chakras. Perhaps this is because experiences of their qualities and characteristics are more ambiguous and less accessible than the experiences of the lower chakras.

The number of tables could be multiplied from other sources, both from the *Rainbow Body* book and innumerable internet websites, but I deem this to be adequate to make the point that the sequence of chakras is consistent with the Natural Sequence schema, except that the chakra system needs a tweak, which I have provided in the next section.

Lower Chakras and Centers

Comparing the tables shown in the previous sections, we note that there is disagreement among the sources about the names and locations of the lower chakras. (The higher chakras, Heart to Crown, do not have this discrepancy among various sources.) What to do? My goal is to find a sensible correlation of the chakras with the Centers of the Process/Aspect System matrix without doing excessive violence to either system. My tentative solution, my working hypothesis, my rationale, is as follows.

1. I make the “Root” chakra, also named the “Sacral” chakra — located at the base of the spine — the zeroth Center and zeroth chakra. This makes it correlate with the Instinctive Center as originally understood in the Gurdjieffian teaching; that is, as the Physiology Center. This idea is discussed in Chapter II-3, “The Gurdjieffian Teachings”. The Physiology Center has nothing to do with personality, as the other chakras/Centers do.
2. I make the “Genital” chakra — which some chakra systems regard as the first or second chakra — to be the “first” chakra in my enumeration. This correlates with the Moving Center of the Gurdjieffian teaching and the Michaelian teaching, which I prefer to call the Motion Center. To the extent that sexuality is part of this Center (as in Gurdjieff; see that chapter), the first chakra/Center serves the animal, bodily, reproductive function driven by hormones for the perpetuation of the species. The location of the gonads differs between human males and females, and this might have contributed to the confusion in regard to the location of this chakra in the various sources, regarding whether the Genital chakra is the first or second chakra.
3. I make the “Navel” or “Spleen” chakra, to be the second chakra, and have it correspond to the Emotional Center of the Gurdjieffian teachings and the Michaelian teachings, which I prefer to call the Emotion Center. This makes sense to me as the umbilicus is nurturing in a way that the Emotion Center, and the corresponding Server Role, of the Process/Aspect System matrix, are nurturing by nature. Also, some kinds of negative emotions are often felt at this location, as indicated by the phrase “butterflies in the stomach”. All of the tables show the second chakra as having to do with “social” concerns, which is also the function of Servers in societies.
4. All three of the tables shown above characterize the third chakra as being mental, but some sources omit the “Solar Plexus” chakra. I prefer not to overlook it, because the autonomic nervous system complex at this location on the body is brain-like, and this makes it a reasonable correspondent with

the Intellectual Center of the Gurdjieffian and the Michaelian teachings, which I prefer to call the Intellect Center, which corresponds to the Artisan Role of the Process/Aspect System matrix.

I really believe that the ambiguity problem is with the chakra system, and that the Natural Sequence schema and the Process/Aspect System matrix should be used to disambiguate the chakra system. I suggest that the development of the chakra system, over the last century and a half since Blavatsky, has been converging on the Natural Sequence schema, and my plan is to do whatever I can to nudge it further in that direction.

Heretofore I have glossed over some features of the structure of the chakra system in terms of the Natural Sequence schema, but the next section examines that in more detail.

Symmetrical Chakras

An interesting coincidence is that during a week many years ago when I was researching the chakras on the internet, I was watching a video-taped lecture by Joseph Campbell, a comparative mythologist, on a local education channel on cable TV. Campbell was explaining the chakras and their meaning. He said and he diagrammed that the three lower chakras were a mirror image of the three higher chakras, centered on the middle chakra, the heart chakra. This confirmed other indications that the chakras are yet another instantiation of the symmetrical Natural Sequence schema.

I do not know where Campbell got this information, but with further research I found some examples that the heart chakra is the bridge between higher and lower chakras:

This [fourth chakra] is the first level beyond 3-dimensional matter. Here we have the bridge between the dimensions of matter and the dimensions of spirit. Although we may refer to the “lower chakras” as being concerned with mankind, and the “upper chakras” as being concerned with spirituality and God, each chakra is no less important than the other. For instance, the first chakra has a number of frequencies (all with the Red vibration), ranging from very low to very high. The goal is to rise above a chakra’s lower frequencies into its higher ones. [<http://www.magickalmind.com/chakras.htm> — retrieved 09 November 2023]

[The heart chakra symbol shows] ... a downward-pointing triangle interlaced with an upward-pointing triangle, forming a six-pointed star or hexagram. The intersecting triangles ... symbolize the union of seemingly opposite principles or types of energies, such as male and female, spirit and matter. The star that they form evokes the harmonious joining of forces and highlights the function of the heart chakra as a center of integration and connection. The fourth chakra connects the lower and upper chakras. In other words, the heart chakra acts as a center of integration of earthly matters and higher aspirations. Far from seeing these energies as separate, the experience of the heart integrates them effortlessly and harmoniously. [<https://www.chakras.info/heart-chakra/> — retrieved 11 April 2024]

Of course, the “lower” triad of chakras have Ordinal Attributes in the Natural Sequence schema terminology, and the “higher” triad of chakras have Cardinal Attributes in the Natural Sequence schema terminology, and the “bridge” between the triads is referred to as Neutral Assimilation in the Natural Sequence schema terminology.

Correlation of Chakras with Other Septenaries

As stated previously, during the history of esoteric cosmologies, the chakra system has been compared to various other esoteric cosmologies such as those used in the Kabbalah and by the Sufis. It has also been used as a template for numerous other septenaries. This fact has leaked out of the esoteric community into the academic community, such as in this case:

This essay resulted from an attempt to find a Greek system of “energy centers” corresponding to the chakras of Eastern philosophy. Such a correspondence would help illuminate Greek mysticism and reveal some of the foundations of the Western Magical Tradition. This goal might seem to be a shallow exercise in analogies, but there are reasons to expect a substantial correspondence. First, the Eastern and Greek systems evolved out of a common Indo-European culture, so one would expect genetic correspondences; these connections were likely maintained over the millennia, since we know the Middle East mediated continual cultural transfer with both the West and East. Second, there is a certain degree of objectivity in the system of chakras, as reflected in the physical body, which would lead to correspondences even in the absence of cultural contact. The consequence of these two factors is a significant uniformity in ideas about the Spirit and its connection to the Body across the Eurasian continent, and even beyond, as documented, for example, in Onians’s *Origins of European Thought*.

No.	English	Greek	Latin	Function	Chakra	No.
I	Crown	Koruphe	Vertex	Illumination	Sahasrara	7
II	Brain	Enkephalos	Cerebrum	Intellection	Ajna	6
III	Neck	Trachelos	Collum	Purification	Visuddha	5
IV	Heart/Lungs	Phrenes	Cor	Affection	Anahata	4
V	Belly	Gaster	Abdomen	Appetition	Manipura	3
VI	Gonads	Gonades	Genitalia	Procreation	Svadhithana	2
VII	Sacrum	Hieron	Osteon	Basic Life	Muladhara	1

[><http://www.cs.utk.edu/~mclennan/BA/JO-TEP.html#I>< — this link is now dead]

[[If I encounter other such correlations, I should insert the documentation here.]]

Concluding Remarks on Chakras

I regard this straight line ascension/progression of kundalini and the raising of consciousness up through the chakras as just another one of many examples of development per the Natural Sequence, however obscured it might be by ambiguities and variations in descriptions. The Natural Sequence gives it meaning because it makes the chakra teaching consistent with all the other septenarian Natural Sequence developments that I point out. This consistency appeals to me.

Some esotericists teach that there is an eighth chakra, just above the top of the head, representing the etheric or astral body; this is not shown on any of the tables in this chapter, nor is it discussed in this chapter or other chapters in this book.

There is an enormous amount of information readily available on the internet, and in numerous books, with which one can verify what is said in this brief chapter. Of course you are welcome to verify these descriptions by reading books or pointing your Internet browser search engine to “chakra”.





Chapter II-10

① SUBTLE BODIES

Numerous esoteric belief, value, and behavior systems teach that there are “bodies” other than the “physical” body. These go by various names, such as “emotional” body and “mental” body, and “spiritual” body. So what is this all about? Where did this extension of the use of the word “body” to non-physical bodies come from? As it so happens, the notion goes back to ancient times, and it is still very much present in modern times. Typically, in the esoteric literature, these are referred to as “subtle bodies”, and they are often portrayed visually as successively larger layers of the human aura outside the skin of the physical body. It should be no surprise to readers of this *Cosmogony* book to learn that the holarchy of subtle bodies follows the Natural Sequence schema, and that it is easily correlated with the so-called “Centers” of the Process/Aspect System matrix.

Subtle Bodies per Wikipedia

To begin with, note that the idea of so-called “subtle” bodies is prevalent in numerous spiritual traditions:

According to the traditional teachings of Yoga and various esoteric, occult, and mystical teachings, human beings are constituted not only by a [#1] gross physical form but by a series of energetic psycho-spiritual subtle bodies each of increasing subtlety and metaphysical significance. Derived principally from the Indian spiritual tradition where they were originally conceived as sheaths covering the immortal soul, these concepts spread throughout the West in the late nineteenth century through the Theosophical movement. Subtle body is more specifically a term for the [#2] pranic, [#3] mental, and [#4] consciousness bodies considered collectively (see *Sūkṣma śarīra*). The concept of one or more subtle bodies in human beings is a common philosophical element in diverse spiritual traditions. [http://en.wikipedia.org/wiki/Subtle_body]

It is not too soon in the presentation of this chapter to note that there is a sequential holarchy of subtle bodies that can be numbered as an aid to correlating with the Natural Sequence schema.

The date of retrieval of that quotation was a decade or two previous to the following, which is an updated version from Wikipedia. It is a more thorough introduction to the topic.

INTRODUCTION

A subtle body is a “quasi material” aspect of the human body, being neither solely physical nor solely spiritual, according to various esoteric, occult, and mystical teachings. This contrasts with the mind–body dualism that has dominated Western thought. The subtle body is important in the Taoism of China and Dharmic religions such as Hinduism, Buddhism, and Jainism, mainly in the branches which focus on tantra and yoga, where it is known as the *Sūkṣma-śarīra*.... However, while mostly associated with Asian cultures, non-dualistic approaches to the mind and body are found in many parts of the world.

The issue of the origin of similar notions in various cultures is not addressed in this article. That is to say, did these similar ideas arise spontaneously via mystical insight as proposed by Perennialism, which is the idea that many cultures converge on common core truths (https://en.wikipedia.org/wiki/Perennial_philosophy), or were they the result of a syncretism, a borrowing of ideas spread by intermingling of people in their travels (<https://en.wikipedia.org/wiki/Syncretism>). Even if the widespread presence of the idea of subtle bodies over so much space and so much time has been fostered by Perennialism and syncretism, it speaks to the utility of the idea, if not the validity. My assertion is that its universality lends credence to the validity of the Natural Sequence schema.

Subtle body concepts and practices can be identified as early as 2nd century BCE in Taoist texts found in the Mawangdui tombs. It was evidently present in Indian thought as early as the 4th to 1st century BCE when the *Taittiriya Upanishad* described the Panchakoshas, a series of five interpenetrating sheaths of the body. A fully formed subtle body theory did not develop in India until the tantric movement that affected all its religions in the Middle Ages. In Indo-Tibetan Buddhism, the correlation of the subtle body to the physical body is viewed differently according to school, lineage, and scholar, but for completion stage in yoga, it is visualized within the body. The subtle body consists of focal points, often called chakras, connected by channels, often called nadis, that convey subtle breath, often called prana. Through breathing and other exercises, a practitioner may direct the subtle breath to achieve supernormal powers, immortality, or liberation.

Refer to **Chapter II-9**, “The Seven Chakras”, to read the documentation about how that septenary is an instantiation of the Natural Sequence schema. The point to be emphasized here is that the various realms of nature have from ancient times been thought to be instantiations of the same fundamental pattern, which I am calling the Natural Sequence schema.

Subtle body in the Western tradition is called the body of light. The concept derives from the philosophy of Plato: the word ‘astral’ means ‘of the stars’; thus the astral plane consists of the Seven Heavens of the classical planets. Neoplatonists Porphyry and Proclus elaborated on Plato’s description of the starry nature of the human psyche. Throughout the Renaissance, philosophers and alchemists, healers including Paracelsus and his students, and natural scientists such as John Dee, continued to discuss the nature of the astral world intermediate between earth and the divine. The concept of the astral body or body of light was adopted by 19th and 20th-century ceremonial magicians.

Refer to **Chapter II-5**, “The Seven Planes”, for more about that particular septenary. There you can read that the next more subtle plane than the so-called “Physical Plane” is the so-called “Astral Plane”. In that chapter you can also read that the Planes and the sub-Planes are said to follow the Natural Sequence schema. Here again, as stated everywhere in this *Cosmogony* book, various phenomena in various domains are thought to be instantiations of the same basic pattern, which I claim is the Natural Sequence schema.

The Theosophy movement was the first to translate the Sanskrit term as ‘subtle body’, although their use of the term is quite different from Indic usage as they synthesize Western and Eastern traditions. This makes the term problematic for modern scholars, especially as the Theosophist view often influences New Age and holistic medicine perspectives. Western scientists have started to explore the subtle body concept in research on meditation.

This *Cosmogony* book is yet another in a long line of syncretistic works, efforts to “synthesize traditions”.

ASIAN RELIGIONS

The Yogic, Tantric and other systems of Hinduism, Vajrayana Buddhism, as well as Chinese Taoist alchemy contain theories of subtle physiology with focal points (chakras, acupuncture points) connected by a series of channels (nadis, meridians) that convey subtle breath (prana, vayu, ch’i, ki, lung). These invisible channels and points are understood to determine the characteristics of the visible physical form. By understanding and mastering the subtlest levels of reality one gains mastery over the physical realm. Through breathing and other exercises, the practitioner aims to manipulate and direct the flow of subtle breath, to achieve supernormal powers (siddhis) and attain higher states of consciousness, immortality, or liberation.

In this *Cosmogony* book, Part Four, “Stages of Enlightenment”, is dedicated to the documentation of those spiritual endeavors directed to “attain higher states of consciousness”.

Four states of consciousness were mentioned in the first quotation above; Hinduism lists five states:

Hinduism

Early concepts of the subtle body ... appeared in the *Upanishads*.... The *Taittiriya Upanishad* describes the theory of five koshas or sheaths, though these are not to be thought of as concentric layers, but interpenetrating at successive levels of subtlety:

That notion is the same as what I refer to as the “Holarchy Principle”, which states that each higher-later stage in the Natural Sequence schema includes (“interpenetrating”) but transcends (“successive”) the previous level(s) or stage(s).

- [#1] The anna-maya (“food body”, physical body, the grossest level), [= Ordinal Action, Motion Center]
- [#2] The prana-maya (body made of vital breath or prana), [= Ordinal Inspiration, Emotion Center]
- [#3] The mano-maya (body made of mind), [= Ordinal Expression, Intellect Center]

- [#4] The vijñana-maya (body made of consciousness), [= Neutral Assimilation, Impulse Center]
- [#5] The ananda-maya (bliss body, the subtlest level). [= conflation of Cardinal Attributes and Centers]

At the end of this chapter, I provide a table showing the correlation of these subtle bodies with other instantiations of the Natural Sequence schema mentioned in this section, including chakras and planes and Centers.

The classical Vedanta tradition developed the theory of the five bodies into the theory of the koshas “sheaths” or “coverings” which surround and obscure the self (atman). In classical Vedanta these are seen as obstacles to realization and traditions like Shankara’s Advaita Vedanta had little interest in working with the subtle body.

Wikipedia has an article on the koshas, aka sheaths, and that is reviewed in the next section of this chapter.

This Wikipedia article on subtle bodies continues with information from Tantra, Meher Baba, Buddhism, but the information does not include descriptions of the subtle bodies, so I omit it as irrelevant to my purpose of coordinating them with the Process/Aspect System matrix. The Wikipedia article then continues:

WESTERN SYNCRETIC TRADITION

Theosophy

In the 19th century, H. P. Blavatsky founded the esoteric religious system of Theosophy, which attempted to restate Hindu and Buddhist philosophy for the Western world. She adopted the phrase “subtle body” as the English equivalent of the Vedantic sūkṣmaśarīra, which in Adi Shankara’s writings was one of three bodies ([#1] physical, [#2] subtle, and [#3] causal)....

Post-theosophists

The later theosophical arrangement was taken up by Alice Bailey, and from there found its way into the New Age worldview and the human aura. Other authors treated the subtle body in varying ways. Max Heindel divided the subtle body into the [#1.5] Vital Body made of Ether; the [#2] Desire body, related to the Astral [aka Emotional] plane; and the [#3] Mental body. Barbara Brennan’s account of the subtle bodies in her books *Hands of Light* and *Light Emerging* refers to the subtle bodies as “layers” in the “Human Energy Field” or aura.

In Chapter II-6, “The Seven Planes”, you can read that the Cardinal sub-planes of the Physical Plane are called “Etheric”.

That there are different names for the various subtle bodies is to be expected considering the differences in language and cultural conceptualizations and domains of application. It is hoped that the revelation of the Natural Sequence schema, with its logical and mathematical underpinnings, will incline the various esoteric communities toward a coherent understanding.

Theosophy has a fondness for the septenarian cosmology, and those instantiations are reviewed in various places in this book. The same comment applies to the Gurdjieffian teaching:

Fourth Way

Subtle bodies are found in the “Fourth Way” teachings of Gurdjieff and Ouspensky, which claim that one can create a subtle body, and hence achieve post-mortem immortality, through spiritual or yogic exercises. The “soul” in these systems is not something one is born with, but developed through esoteric practice to acquire complete understanding and to perfect the self. According to the historian Bernice Rosenthal, “In Gurdjieff’s cosmology our nature is tripartite and is composed of the [#1] physical (planetary), [#2] emotional (astral) and [#3] mental (spiritual) bodies; in each person one of these three bodies ultimately achieves dominance.” The ultimate task of the fourth way teachings is to harmoniously develop the four bodies into a single way.

[>https://en.wikipedia.org/wiki/Subtle_body< — retrieved 21 July 2023]

Refer to Chapter II-3 for more about the septenaries of the Gurdjieffian teaching and their correlation with the Natural Sequence schema. More is said about Gurdjieff’s teaching about subtle bodies in a section further on.

Kosha (Sheath)

The Wikipedia article on the subtle bodies refers to an article on the so-called “koshas” or sheaths, so I provide this section to review that information.

INTRODUCTION

A kosha ... usually rendered “sheath”, is a covering of the Atman, or Self according to Vedantic philosophy. There are five koshas ... and they are often visualized as the layers of an onion in the subtle body.... It gives a detailed description of the dimensions of human personality or the dimensions of the Self.

Atman

The *Sruti* [a Hindu sacred scripture] declares that human birth, by divine grace, is meant to strive to know and understand the atman. The knowledge and understanding of the atman invariably results in *Jiwanmukti* i.e. *Moksha* or “Spiritual liberation”. Spiritual Liberation is of the nature of bliss in which there is complete negation of all sorrow, it does not arise by mere study of sastras, sacrifice to gods, performance of karmas and meditation on the divinities, these acts do not result in the knowledge of the unity of atman. Atman is Brahman who is of the nature of satyam, jnanam and anantam, and the knower of Brahman becomes Brahman. Knowledge is gained after renouncing attachment to all sense-objects and all actions, for one’s body, that harbors the mind that makes for bondage and is not the atman. The Atman is the substratum of the consciousness of “I”.

A couple of common metaphors for the enlightenment process are mentioned in that passage, ‘liberation’ as release from ‘bondage’, and ‘learning’ as moving from ignorance to experiential ‘knowledge’. In this *Cosmogony* book, **Part VI**, “Stages of Enlightenment”, is dedicated to the documentation of various spiritual traditions directed toward “attaining higher states of consciousness”. In terms of the theology behind the Natural Sequence schema, what is there called Brahman equates with the maximum One (what I refer to as the Immanent Tao, or often called All That Is) within which all is subjective (= the Yang/Cardinal pole of self-hood), and what is there called Atman is the minimum One (often called the “Spark”) from which all else is objective (= the Yin/Ordinal pole of self-hood). Note that both Brahman and Atman have a sense of defined self-hood, or “I-ness”. The driving force of both Brahman and Atman is to unify with with each other, to heal the primordial dichotomy; Brahman and Atman are ultimately assimilated in the Neutral zone, which is omnijjective or transjective — beyond the subjective/objective dichotomy. And then there is an undefined (having no self-hood) stage even ‘beyond’ (more ontologically primitive than) the Brahman/Atman in what I refer to as the Transcendent Tao.

Between Brahman and Atman is Anatman:

Anatman

Anatman means not-self or non-self. Anatman is everything that is not Atman. All objects of consciousness are called Anatman, including the mind and the ego [sense of self, or “I”].

The samsara is the vast turbulent ocean which is the embodiment of avidya and its effects that cannot be crossed without the aid of perfect wisdom; the samsara is the anatman. By non-realisation of the true nature of the atman, the atman is mistaken as the karana sarira ([#3] “causal body”), suksma sarira ([#2] “subtle body”) and sthula sarira ([#1] “gross body”) which bodies constitute the anatman. For a person who is unaware of the atman there is no other go except to do karmas intended for purification of the mind.

The sequence mentioned in that passage hints at the notion of Emanationism, which is discussed at length in Part I, **Chapter I-X**. Basically and briefly, in terms of Natural Sequence schema theology, the Immanent Tao mysteriously emanates from the ultimate undefined absolute Transcendent Tao, Cardinal (Yang, maximum) and Ordinal (Yin, minimum) poles emanate from the Immanent Tao, and a trichotomy emanates from each of those poles. Only the Ordinal trichotomy is mentioned in that passage, Causal Body, Subtle Body, and Gross Body.

Origins

The five sheaths summarized with the term Panchakosha are described in the Taittiriya Upanishad (2.1-5). From gross to fine they are:

- [#1] Annamaya kosha, “food” sheath (Anna) [= Ordinal Action]
- [#2] Pranamaya kosha, “energy” sheath (Prana) [= Ordinal Inspiration]
- [#3] Manomaya kosha “mind” sheath (Manas) [= Ordinal Expression]
- [#4] Vijñānamaya kosha, “discernment” or “Knowledge” sheath (Vigynana) [= Neutral Assimilation]
- [#5] Anandamaya kosha, “bliss” sheath (Ananda) [conflation of Cardinal sheaths]

According to Vedanta, the wise person, being aware of the subtle influences of the five elements within each kosha, ever discerns the Self amidst appearances.

From the English language translations of the koshas in “quotation” marks, the correlation of the five koshas with the seven divisions of the Process/Aspect System schema are fairly obvious, but the correlations are even more obvious in the fuller descriptions given in the Wikipedia article:

THE FIVE SHEATHS

... the five koshas ... are not to be thought of as concentric sheaths but as interpenetrating at different levels of subtlety, from the grossest to the subtlest.

That notion of “interpenetrating” is the same as what I refer to as the “Holarchy Principle”, which states that each higher-later stage in the Natural Sequence schema both includes and transcends the previous level(s) or stage(s).

Just as each of the five elements (earth, water, fire, air, and ether) appear in corresponding subtlety among each of the five senses so too the intellect cognizes ever subtler causes and effects at play through each of the five sheaths.

In ancient conceptualizations, the three common states of matter (solid, liquid, gas) are often correlated with what in the Process/Aspect System matrix are referred to as the three Ordinal realms of experience (behavioral, emotional, mental) and what in numerous cosmologies are referred to as the three Ordinal planes (physical, astral, mental); refer to Chapter II-6. Here again with the notion of the subtle bodies we see yet another instantiation of the Fractality Principle.

The atman [Self, Spark] is behind the Panchakoshas. The Sthula sarira is the Annamayakosha (food-ful, consisting of the [#1] gross body). The Sukshma sarira is made up of the Pranamayakosha (energy-ful, the [#2] subtle body), the Manomayakosha (instinctive, the [#3] perceptual body) and the Vigyanamayakosha (cognitive, the [#4] conscious body). The Karana sarira is the Anandamayakosha (blissful, the [#5] transcendental body). The Sruti insists upon elimination of these five sheaths of the sariras. The doctrine of Panchkoshas represents the hierarchy of human values.

As with many instantiations of the Process/Aspect System matrix in other teachings, it is helpful to the reader if I show the correlations between the two terminologies in terms of the Septenarian Attributes and the Centers:

[#1] Annamaya kosha [= Ordinal Action = Motion Center]

This is the sheath of the physical (body) self, the grossest of the five koshas, named from the fact that it is nourished by food. Living through this layer humans identify themselves with a mass of skin, flesh, fat, bones, and feces, while the human of discrimination knows oneself, the only reality that there is, as distinct from the body. The physical body is formed of the essence of food. Birth and death are the attributes of the Annamaya kosha.

[#2] Pranamaya kosha [= Ordinal Inspiration = Emotion Center]

Pranamaya means composed of prana, the vital principle, the force that vitalizes and holds together the body and the mind. It pervades the whole organism, its one physical manifestation is the breath. As long as this vital principle exists in the organisms, life continues. Coupled with the five organs of action it forms the vital sheath. In the Vivekachudamani it is a modification of vayu or air, it enters into and comes out of the body.

[#3] Manomaya kosha [= Ordinal Expression = Intellect Center]

Manomaya means composed of manas or mind. The mind, along with the five sensory organs, is said to constitute the manomaya kosha. The manomaya kosha, or “mind-sheath” is said more truly to approximate to personhood than annamaya kosha and pranamaya kosha. It is the cause of diversity, of I and mine. Adi Shankara likens it to clouds that are brought in by the wind and again driven away by the same agency. Similarly, man’s bondage is caused by the mind, and liberation, too, is caused by that alone.

[#4] Vijñānamaya kosha [= Neutral Assimilation = Impulse Center]

Vijñānamaya means composed of vijñāna, or intellect, the faculty which discriminates, determines or wills. Chattampi Swamikal defines vijñānamaya as the combination of intellect and the five sense organs. It is the sheath composed of more intellection, associated with the organs of perception. Sankara holds that the buddhi, with its modifications and the organs of knowledge, form the cause of man’s transmigration. This knowledge sheath, which seems to be followed by a reflection of the power of the cit, is a modification of prakrti. It is endowed with the function of knowledge and identifies itself with the body, organs etc.

[#5] Anandamaya kosha [conflation of Cardinal Attributes = Cardinal Centers]

Anandamaya means composed of ananda, or bliss; it is the subtlest of the five koshas. In the Upanishads the sheath is known also as the causal body. In deep sleep, when the mind and senses cease functioning, it still stands

between the finite world and the self. Anandamaya, or that which is composed of supreme bliss, is regarded as the innermost of all. The bliss sheath normally has its fullest play during deep sleep: while in the dreaming and wakeful states, it has only a partial manifestation. The blissful sheath (anandamaya kosha) is a reflection of the Atman which is truth, beauty, bliss absolute. [<https://en.wikipedia.org/wiki/Kosha>< — retrieved 26 July 2023]

The way that I reconcile the five koshas or sheaths with the seven divisions of the Process/Aspect System matrix is to suppose that the fifth kosha is a conflation of the three Cardinal divisions of the Process/Aspect System matrix. One rationale for this is that the qualitative differences between the three Cardinal divisions are so subtle that they are not easily distinguished. However, in that quotation, different words are used — “beauty, truth, bliss, absolute” — apparently without realizing that these terms are aptly and distinctly applied to the four non-Ordinal domains respectively, and that they can be paired with the Ordinal koshas in the opposite order.

Theosophy Teaching on Subtle Bodies

Theosophy borrowed much of its cosmology from oriental sources, so it should be no surprise that Theosophy had somewhat to say about subtle bodies. In Theosophy, there are four types of “subtle bodies” (rather than five as documented in the previous section), and they are associated with the lowest planes. The names in the sequence is: Physical, Astral, Mental, and Causal. This is documented on the internet at theosophy.wiki:

Modern scholars acknowledge that the term “subtle body” entered English usage first through the writings of H. P. Blavatsky, Annie Besant, and C. W. Leadbeater.

H. P. Blavatsky refers to three subtle bodies:

- Liṅga-śarīra — the Double or Astral body
- Māyāvi-Rūpa — the “Illusion-body”
- Kāraṇa-śarīra or Causal Body — the vehicle of the Ego.

The Linga Sharira is the invisible double of the Sthūla-śarīra or physical body. The Mayavi Rupa is not regarded as a permanent body in human beings but one created through the power of thought (kriyāśakti), that serves as a vehicle both of the manasic thought and the kamic passions and desires. The Causal Body is the vehicle for the higher Ego.

A further subtle body could be the Kāmarūpa, although in Blavatsky’s teachings this is not a body during life but becomes one after death in Kāmaloka.

Annie Besant and C. W. Leadbeater described the subtle bodies as follows:

- Etheric Double [of the Physical Plane]
- Emotional Body
- Mental Body
- Causal Body

The Etheric Double is the subtle counterpart of the [#1] physical body. The [#2] Emotional body, also called “Astral body” by them, is the vehicle for the emotions, both the lower or kamic, and the higher emotions. The [#3] Mental body is the vehicle of the lower mind, built with matter from the four lower subplanes of the mental plane. The [#4] Causal body is the vehicle of the Ego, and is made of matter from the three higher subplanes of the mental plane.

The Māyāvi-Rūpa could be added as a subtle body which is artificially created through the power of thought or kriyāśakti. [https://theosophy.wiki/en/Subtle_Bodies< — retrieved 28 September 2023]

That quotation is in keeping with the Fractalicity Principle, where seven planes each have seven sub-planes within them. It is also in keeping with the notion that there are three lower sub-planes and three higher sub-planes on either side of the central sub-plane, as can be seen in longer expositions in Theosophical literature:

>https://www.anandgholap.net/Man_And_His_Bodies-AB.htm< — a treatise by Annie Besant

Lengthy treatises on these subtle bodies, written by a Theosophist named A. E. Powell, are available at:

<http://hpb.narod.ru/EthericDouble.htm#>

<http://hpb.narod.ru/AstralBodyByPowell-A.htm#>

<http://hpb.narod.ru/AstralBodyByPowell-B.htm>

<http://hpb.narod.ru/MentalBodyA.htm#>

<https://theosophy.world/encyclopedia/causal-body>

<http://hpb.narod.ru/CausalBody1.htm#>

<http://hpb.narod.ru/CausalBody2.htm#>

Rosicrucian Teaching on Subtle Bodies

A brief introduction to Rosicrucianism is given in Chapter II-6, “The Seven Planes”, so there is no need to repeat that here. Besides having a teaching about the planes of the Cosmos, it so happens that Rosicrucianism also has somewhat to say about subtle bodies:

[#3] The Mental body functions like a mirror, reflecting the outer world and enabling the ego to transmit its commands as thought and word, and also to compel action.

The threefold body consists of;

- [#1] a Dense [physical] body, which is the visible instrument he uses here in this world to fetch and carry (the body we ordinarily think of as the whole man).
- [#1.5] a Vital [etheric] body, which is made of ether and pervades the visible body as ether permeates all other forms, except that human beings specialize a greater amount of the universal ether than other forms. The ethereal body is our instrument for specializing the vital energy of the sun and is seen by clairvoyant vision to extend about an inch and a half outside our visible body.
- [#2] a Desire [astral] body, which is our nature and this finer vehicle pervades both the vital and dense bodies (it is seen by clairvoyant vision to extend about 16 inches outside our visible body, which is located in the center of this ovoid cloud as the yolk is in the center of an egg).

[>https://en.wikipedia.org/wiki/Rosicrucian_Fellowship< — retrieved 14 May 2022]

The so-called “Dense” body of Rosicrucianism is in other teachings referred to as the physical body, which functions on the four lower sub-planes of the Physical Plane. The so-called “Vital” body of Rosicrucianism is in some other teachings referred to as the etheric body, which functions on the Cardinal sub-planes of the Physical Plane. The so-called “Desire” body of Rosicrucianism is in some other teachings referred to as the astral body, which functions on the Astral Plane. The so-called “Mental” body of Rosicrucianism has the same name in some other teachings, and it functions on the Mental Plane. Obviously, the Rosicrucian model is consistent with other models of the subtle bodies, and is consistent with the Ordinal triad of the Natural Sequence schema and Process/Aspect System matrix.

Gurdjieffian Teaching on Higher Bodies

It is known that Gurdjieff (refer to Chapter II-3) borrowed much of his teaching from oriental sources, so it should be no surprise that he also had somewhat to say about subtle bodies:

According to ancient teaching, traces of which may be found in many systems, old and new, a man who has attained the full development possible for man, a man in the full sense of the word, consists of four bodies.... These four bodies are defined in different teachings in various ways. The first is the physical body, in Christian terminology, the ‘carnal’ body; the second, in Christian terminology, is the ‘natural’ body; the third is the ‘spiritual’ body; and the fourth, in the terminology of esoteric Christianity, is the ‘divine’ body. In Theosophical terminology the first is the ‘physical’ body, the second is the ‘astral’, the third is the ‘mental’, and the fourth is the ‘causal’. In the terminology of certain Eastern teachings, the first body is the ‘carriage’ (body), the second body is the ‘horse’ (feelings, desires), the third is the ‘driver’ (mind), and the fourth the ‘master’ (I, consciousness, will). (P. D. Ouspensky, *In Search of the Miraculous*, p. 41)

This brief information on the four bodies is expanded significantly in the Wikipedia article on “The Fourth Way”, which is the name Gurdjieff gave to his teaching:

The Fourth Way acknowledges the existence of four possible bodies of man, composed of increasingly rarefied matter, interpenetrating one another.... The bodies are as follows:

- [#1, Ordinal Action, Motion Center] The Material Body (Normal Human Physical Body). This body is considered the seat of the lower five centers: intellectual, emotional, physical, instinctual, and sexual. The material body’s actions are purely automatic and depend completely on the influences coming from outside factors, and its perception is confined to observation in a “subjective” manner. When the material body dies, then it returns to the earth from which it came, and nothing of it remains.

The primitive Gurdjieffian notion of five ‘lower’ Centers was modified in the Michaelian teachings and further modified in the Process/Aspect System matrix as: instinctual > Physiology, physical > Motion, Emotion, Intellect, Impulse, Concept, Sympathy, sexual > Excitation; refer to [Chapter II-3](#) and [Chapter II-4](#).

- [#2, Ordinal Inspiration, Emotional Center] The Astral Body. This body is also sometimes called the Emotional body or the Kesdjan Body. This body, by itself is not subject to the laws of automation; that is to say, the astral body is capable of a degree of free will. Also, the perceptions of the astral body are capable of being of an objective nature in matters regarding one’s self. An astral body is considered a prerequisite to maintaining a state of “self-consciousness”...
- [#3, Ordinal Expression, Intellect Center] The Intellectual Body. This body, by itself is not subject to the laws of automation; that is to say, the intellectual body is capable of a degree of free will beyond that of the astral body. Also, the perceptions of the intellectual body are capable of being of an objective nature in matters regarding both one’s self, and things outside of one’s self. An intellectual body is considered a prerequisite to maintaining a state of “objective consciousness” which is the fourth possible state of man...
- [#4, Neutral and Cardinal Attributes and Centers] The Divine Body. Gurdjieff, in his writings, sometimes referred to this body as a “higher being body” or “highest being body.” Many aspects of this body are largely unclear. What is known is that this body is in no way subject to the laws of automation. It possesses complete free will. All perceptions of the divine body are in their very nature objective. A divine body can solidify a state of “objective consciousness” in a being which is entirely permanent... The fact that the divine body is not used as a “seat” of any functions of a higher nature (such as the higher emotional and higher intellectual centers) further demonstrates its drastic departure from anything else in the nature. [[http://en.wikipedia.org/wiki/Centers_\(Fourth_Way\)](http://en.wikipedia.org/wiki/Centers_(Fourth_Way)) < — retrieved 17 September 2023]

Gurdjieff’s teaching on the four bodies obviously corresponds in meaning to the subtle bodies documented in previous sections, even though the names are not always the same.

Tabulation of Subtle Bodies in Various Teachings

As usual, my assumption is that it would be helpful to the reader that I include a table at the end of a chapter, summarizing the information provided in the chapter, so here it is, complete with Septenarian Attributes:

Table II-10a — SUBTLE BODIES							
RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
DIALECTIC	–ORDINAL–			=NEUTRAL=	+CARDINAL+		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
PROCESS → ASPECT ↓	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
CENTER	MOTION	EMOTION	INTELLECT	IMPULSE	CONCEPT	SYMPATHY	EXCITATION
PLANE	PHYSICAL	ASTRAL	MENTAL	AKASHIC	—	—	—
HINDUISM VEDANTA	ANNA (“food”)	PRANA (“vital”)	MONO (“mind”)	VIJNANA (“Consciousn’s”)	ANANDA (“bliss”)		
THEOSOPHY	PHYSICAL & ETHERIC	ASTRAL (EMOTIONAL)	MENTAL	CAUSAL			
ROSICRUCIAN	DENSE & VITAL	DESIRE	MENTAL	—	—	—	—
GURDJIEFFIAN	MATERIAL	ASTRAL	INTELLECTUAL	DIVINE			

My comments on this table are as follows:

- ATTRIBUTES of the Natural Sequence schema and Process/Aspect System matrix are shown in the first six rows. These are explained in various places throughout this *Cosmogony* book.
- CENTER: the seventh row shows the names of the Centers Aspect of the Process/Aspect System matrix as I prefer them; these are described and explained in **Chapters II-3 and II-4**. The reason I include these names in this table is because the names and descriptions of the subtle bodies given by various teachings are either identical to, or reminiscent of, the names of the Centers. This fact aided me in correlating the subtle bodies with the Natural Sequence schema.
- PLANES: The eighth row shows the names of the planes as I prefer them; these are described and explained in Chapter II-6. In various teachings, the subtle bodies either reside on the corresponding plane, or the subtle bodies are an aura of the physical body that resonate energetically with the corresponding plane, or both. The reason I include these names in this table is because the names and descriptions of the subtle bodies given by various teachings are either identical to, or reminiscent of, the names of the planes. This fact aided me in correlating the subtle bodies with the Natural Sequence schema.
- Apparently there are no more than four bodies because there is no individuality on the Cardinal planes like there is on the Ordinal planes and perhaps the lower levels of the middle plane.

General Comments on Subtle Bodies

In some metaphysical systems, not only are the subtle bodies correlated with and related to Planes, but also to chakras. We look at chakras in Chapter II-9.

One might reasonably wonder how ancient and modern esotericists discerned these subtle bodies. The answer seems to be that these mystics were every bit as thorough in their search of the inner world via introspective observation as scientists are as thorough in their search of the outer world via extro-spective observation. This *Cosmogony* book documents the results of both esoteric and exoteric investigations.





Chapter II-11

① CONCLUSION TO PART TWO

My preference is to present information starting with the most general and ending with the specific topic under consideration. This forms a holarchy of explanation. Planes are near to being the most general relevant realm to the subject of this Part (Chapter II-6), such that other subjects in subsequent chapters can be considered as subsets (of subsets (of subsets (and so on))) of the planes. In this book, Attributes of the Natural Sequence schema are embodied in the largest scale, the entire Cosmos, the seven planes, and every subset of thereof, such as Rays (Chapter II-7) and Worldviews (Chapter II-8) and Chakras (Chapter II-9) and Subtle Bodies (Chapter II-10). That is the essence of what a holarchy is; each level in the holarchy recapitulates the levels above and below it. The Planes and Rays and Worldviews and Chakras and Subtle Bodies are all arranged per the Natural Sequence schema. Therefore, in this concluding chapter in this Part, it is appropriate to remind the reader of the structure of the Natural Sequence schema. The Natural Sequence schema is the fundamental holarchy all up and down the Cosmos, from smallest to largest, from shortest to longest, as shown in the following table.

Table II-11a — The NATURAL SEQUENCE from PLANES to PERSONALITY							
DIALECTIC	Ordinal			Neutral	Cardinal		
AXIAL	Action	Inspiration	Expression	Assimilation	Expression	Inspiration	Action
PROCESS	Termination	Involution	Analysis	Combination	Synthesis	Evolution	Origination
PLANE	Physical	Emotional	Mental	Beauty	Truth	Love	Energy
RAY PER THEOSOPHY	Ceremonial Order	Devotion	Concrete Knowledge	Harmony thru Conflict	Active Intelligence	Love-Wisdom	Will or Power
WORLDVIEW	Primitivism	Traditional'	Materialism	Collectivism	Holism	Transperson'	Messianism
CHAKRA	Pubic	Navel	Plexus	Heart	Throat	Brow	Crown
SUBTLE BODY	ANNA ("food")	PRANA ("vital")	MONO ("mind")	VIJNANA ("Consciousness")	ANANDA ("bliss")		
CENTER	Motion	Emotion	Intellect	Impulse	Concept	Sympathy	Excitation

My comments on this table are as follows:

1. DIALECTIC: The first row shows the names of the Dialectic Attributes. Refer to [Chapter I-X, "Attributes of the Natural Sequence"](#), in Part One of this book, for a thorough discussion.
2. AXIAL: The second row shows the names of the Axial Attributes. Refer to [Chapter I-X, "Attributes of the Natural Sequence"](#), in Part One of this book, for a thorough discussion. Adding together the name of a Dialectic Attribute (e.g. Cardinal) to the name of an Axial Attribute (e.g. Inspiration) makes a phrase that I refer to as a Septenarian Attribute (e.g. Cardinal Inspiration). The Septenarian Attributes are a feature of the Natural Sequence schema, and therefore they show up repeatedly in this book.

Notice that, in Terms of the Axial Attributes, the Cardinal Triad in the right side columns is the reverse order of the Ordinal triad in the left side columns, on either side of Neutral Assimilation. Thus, the triads are a mirror image of each other.

3. PROCESS: the third row shows the names of the seven Processes of the Process/Aspect System matrix. Refer to **Chapter I-X, “Derivation of the Natural Sequence”**, in Part One of this book, for a thorough discussion.
4. PLANE: The fourth row shows the names of the seven planes as I prefer to label them. Refer to the thorough discussion in Chapter II-6, “The Seven Planes”, for alternatives names from Kabbalah, Theosophy, Rosicrucianism, Aurobindo, Bladon, and the Michaelian teachings.
5. RAY: The fifth row shows the names of the seven Rays as Theosophy labels them. Refer to the thorough discussion in Chapter II-7, “The Seven Rays”.
6. WORLDVIEW: The sixth row shows my names for the seven Worldviews of the Process/Aspect System matrix as I prefer to label them. Refer to Chapter II-8, “The Seven Soul Ages/Worldviews” here in Part Two, for a thorough discussion.
7. CHAKRA: The seventh row shows my names for the seven Chakras as they are located on the physical body. Refer to Chapter II-9, “The Seven Chakras” here in Part Two, for a thorough discussion.
8. SUBTLE BODY: The eighth row shows the Hindu Vedanta names for the seven subtle bodies. Refer to Chapter II-10, “Subtle Bodies” here in Part Two, for a thorough discussion.
9. CENTER: The ninth row shows the names of the Centers as I prefer to label them. Refer to Chapter II-3, “The Gurdjieffian Teachings” and Chapter II-4, “The Michaelian Teachings” for a thorough discussion. The reason that they are included in this table is that their names provide a basic description of the qualities and characteristics of the corresponding Planes and Rays and Worldviews and Chakras and Subtle Bodies.





PART III — ANCIENT RELIGIONS AND PHILOSOPHIES



Chapter III-1

INTRODUCTION

[[This Part might have to wait until after I write The Synthesis book. Doing that will find the instances of the septenary contained in those teachings. I already know about the week and the jubilee from Judaism; the book of Revelation in the Christian Bible is full of sevens, and there is a septenary in Kabbalah. I know about a septenary in Hinduism. I believe there is a septenary in Gnosticism.]]

Make a distinction between syncretism (as mixing of unprincipled dogma-doctrines) versus perennialism (as extraction of fundamental principles common to religious traditions).

Religious Cosmology

That is the name of a Wikipedia article, worthy of quotation and commentary at the beginning of this Part

Religious cosmology is an explanation of the origin, evolution, and eventual fate of the universe from a religious perspective. This may include beliefs on origin in the form of a creation myth, subsequent evolution, current organizational form and nature, and eventual fate or destiny. There are various traditions in religion or religious mythology asserting how and why everything is the way it is and the significance of it all. Religious cosmologies describe the spatial lay-out of the universe in terms of the world in which people typically dwell as well as other dimensions, such as the seven dimensions of religion; these are ritual, experiential and emotional, narrative and mythical, doctrinal, ethical, social, and material.

Religious mythologies may include descriptions of an act or process of creation by a creator deity or a larger pantheon of deities, explanations of the transformation of chaos into order, or the assertion that existence is a matter of endless cyclical transformations. Religious cosmology differs from a strictly scientific cosmology informed by contemporary astronomy, physics, and similar fields, and may differ in conceptualizations of the world's physical structure and place in the universe, its creation, and forecasts or predictions on its future.

The scope of religious cosmology is more inclusive than a strictly scientific cosmology (physical cosmology and quantum cosmology) in that religious cosmology is not limited to experiential observation, testing of hypotheses, and proposals of theories; for example, religious cosmology may explain why everything is the way it is or seems to be the way it is and prescribing what humans should do in context. Variations in religious cosmology include those such as from India Buddhism, Hindu, and Jain; the religious beliefs of China, Chinese Buddhism, Taoism and Confucianism, Japan's Shintoism and the beliefs of the Abrahamic faiths, such as Judaism, Christianity, and

Islam. Religious cosmologies have often developed into the formal logics of metaphysical systems, such as Platonism, Neoplatonism, Gnosticism, Taoism, Kabbalah, Wuxing or the great chain of being.

Judaism and Christianity

The universe of the ancient Israelites was made up of a flat disc-shaped Earth floating on water, heaven above, underworld below. Humans inhabited Earth during life and the underworld after death, and the underworld was morally neutral; only in Hellenistic times (after c.330 BC) did Jews begin to adopt the Greek idea that it would be a place of punishment for misdeeds, and that the righteous would enjoy an afterlife in heaven. In this period too the older three-level cosmology was widely replaced by the Greek concept of a spherical Earth suspended in space at the center of a number of concentric heavens.

Ex nihilo

See also: Ex nihilo and Creationism

The belief that God created matter is called *creatio ex nihilo*. It is the accepted orthodoxy of most denominations of Judaism and Christianity. Most denominations of Christianity and Judaism believe that a single, uncreated God was responsible for the creation of the Cosmos.

Islam

Zakariya al-Qazwini says the Earth is flat and surrounded by mountains including Mount Qaf; it is supported by an ox standing on Bahamut in a cosmic ocean inside a bowl that sits on an angel or jinn.

Islam teaches that God created the universe, including Earth's physical environment and human beings. The highest goal is to visualize the Cosmos as a book of symbols for meditation and contemplation for spiritual upliftment or as a prison from which the human soul must escape to attain true freedom in the spiritual journey to God. Several citations from the Quran cosmologically note:

"And the heavens We constructed with strength, and indeed, We are [its] expander." (51:47) Sahih International

"Do not the unbelievers see that the heavens and the earth were joined together (as one unit of creation), before We clove them asunder? We made from water every living thing. Will they not then believe?" (21:30) Yusuf Ali translation

"The day that We roll up the heavens like a scroll rolled up for books (completed),- even as We produced the first creation, so shall We produce a new one: a promise We have undertaken: truly shall We fulfil it." (21:104) Yusuf Ali translation

Buddhism

In Buddhism, like other Indian religions, there is no ultimate beginning nor final end to the universe. It considers all existence as eternal, and believes there is no creator god. Buddhism views the universe as impermanent and always in flux. This cosmology is the foundation of its Samsara theory, that evolved over time the mechanistic details on how the wheel of mundane existence works over the endless cycles of rebirth and redeath. In early Buddhist traditions, Saṃsāra cosmology consisted of five realms through which wheel of existence recycled. This included hells (niraya), hungry ghosts (pretas), animals (tiryak), humans (manushya), and gods (devas, heavenly). In latter traditions, this list grew to a list of six realms of rebirth, adding demi-gods (asuras). The "hungry ghost, heavenly, hellish realms" respectively formulate the ritual, literary and moral spheres of many contemporary Buddhist traditions.

According to Akira Sadakata, the Buddhist cosmology is far more complex and uses extraordinarily larger numbers than those found in Vedic and post-Vedic Hindu traditions. It also shares many ideas and concepts, such as those about Mount Meru. The Buddhist thought holds that the six cosmological realms are interconnected, and everyone cycles life after life, through these realms, because of a combination of ignorance, desires and purposeful karma, or ethical and unethical actions.

Hindu

The Hindu cosmology, like the Buddhist and Jain cosmology, considers all existence as cyclic. With its ancient roots, Hindu texts propose and discuss numerous cosmological theories. Hindu culture accepts this diversity in cosmological ideas and has lacked a single mandatory view point even in its oldest known Vedic scripture, the Rigveda. Alternate theories include a universe cyclically created and destroyed by god, or goddess, or no creator at all, or a golden egg or womb (*Hiranyagarbha*), or self-created multitude of universes with enormous lengths and time scales. The Vedic literature includes a number of cosmology speculations, one of which questions the origin of the Cosmos and is called the *Nasadiya sukta*:

Neither being (sat) nor non-being was as yet. What was concealed?
And where? And in whose protection?...Who really knows?
Who can declare it? Whence was it born, and whence came this creation?
The devas (gods) were born later than this world's creation,
so who knows from where it came into existence? None can know from where
creation has arisen, and whether he has or has not produced it.
He who surveys it in the highest heavens,
He alone knows or perhaps He does not know. —Rig Veda 10. 129

Time is conceptualized as a cyclic Yuga with trillions of years. In some models, Mount Meru plays a central role. Beyond its creation, Hindu cosmology posits divergent theories on the structure of the universe, from being 3 lokas to 12 lokas (worlds) which play a part in its theories about rebirth, samsara and karma.

The complex cosmological speculations found in Hinduism and other Indian religions, states Bolton, is not unique and are also found in Greek, Roman, Irish, and Babylonian mythologies, where each age becomes more sinful and of suffering.

Jain

Jain cosmology considers the loka, or universe, as an uncreated entity, existing since infinity, having no beginning or an end. Jain texts describe the shape of the universe as similar to a man standing with legs apart and arm resting on his waist. This Universe, according to Jainism, is narrow at the top, broad at the middle and once again becomes broad at the bottom.

Mahāpurāṇa of Ācārya Jinasena is famous for this quote:

Some foolish men declare that a creator made the world. The doctrine that the world was created is ill advised and should be rejected. If God created the world, where was he before the creation? If you say he was transcendent then and needed no support, where is he now? How could God have made this world without any raw material? If you say that he made this first, and then the world, you are faced with an endless regression.

Chinese

There is a "primordial universe" *Wuji* (philosophy), and Hongjun Laozu, water or *qi* [= "Oneness" in TT]. It transformed into Taiji [= "Twoness" in TT] then multiplied into everything known as the *Wuxing* [= "Allness" in TT]. The Pangu legend tells a formless chaos coalesced into a cosmic egg [= the orderly Cosmos]. Pangu emerged (or woke up) and separated Yin from Yang with a swing of his giant axe, creating the Earth (murky Yin) and the Sky (clear Yang). To keep them separated, Pangu stood between them and pushed up the Sky. After Pangu died, he became everything.

Gnosticism

Gnostic teachings were contemporary with those of Neoplatonism. Gnosticism is an imprecise label, covering monistic [= "Oneness" in TT] as well as dualistic [= "Twoness" in TT] conceptions. Usually the higher worlds of Light, called the Pleroma or "fullness", are radically distinct from the lower world of Matter. The emanation of the Pleroma and its [seven] godheads (called Aeons) is described in detail in the various Gnostic tracts, as is the pre-creation crisis (a cosmic equivalent to the "fall" in Christian thought) from which the material world comes about, and the way that the divine spark can attain salvation. [https://en.wikipedia.org/wiki/Religious_cosmology — retrieved 29 October 2023]

Subsequent chapters in here in Part Three review the Hindu, Buddhist, Jain, Zoroastrian, and Gnostic cosmologies and cosmogonies in more detail.

Review of Greek terms

Pleroma (Koinē Greek: πλήρωμα, literally "fullness") generally refers to the totality of divine powers. It is used in Christian theological contexts, especially in Gnosticism. The term also appears in the Epistle to the Colossians,[1] which is traditionally attributed to Paul the Apostle.[2] The word is used 17 times in the New Testament.

In Gnosticism the use becomes yet more stereotyped and technical, though its applications are still very variable. The Gnostic writers appeal to the use in the NT (e.g. Iren I. iii. 4), and the word retains from it the sense of totality in contrast to the constituent parts; but the chief associations of pleroma in their systems are with Greek philosophy, and the main thought is that of a state of completeness in contrast to deficiency (hysterema, Iren. I.

xvi. 3; Hippol. vi. 31), or of the fullness of real existence in contrast to the empty void and unreality of mere phenomena (kenoma, Iren. I. iv. 1). Thus in Cerinthus it expressed the fulness of the Divine Life out of which the Divine Christ descended upon the man Jesus at his baptism, and into which He returned (Iren. I. xxvi. 1, III. xi. 1, xvi. 1). In the Valentinian system it stands in antithesis to the essential incomprehensible Godhead, as 'the circle of the Divine attributes,' the various means by which God reveals Himself: it is the totality of the thirty aeons or emanations which proceed from God, but are separated alike from Him and from the material universe. It is at times almost localized, so that a thing is spoken of as 'within,' 'without,' 'above,' 'below' the Pleroma: more often it is the spirit-world, the archetypal ideal existing in the invisible heavens in contrast to the imperfect phenomenal manifestations of that ideal in the universe. Thus 'the whole Pleroma of the aeons' contributes each its own excellence to the historic Jesus, and He appears on earth 'as the perfect beauty and star of the Pleroma' (teleiotaton kallos kai astron tou pleromatos, Iren. I. xi. 6). Similarly it was used by writers as equivalent to the full completeness of perfect knowledge (Pistis Sophia, p. 15).

[Some] confess that the Father of all contains all things, and that there is nothing whatever outside of the Pleroma (for it is an absolute necessity that, [if there be anything outside of it,] it should be bounded and circumscribed by something greater than itself), and that they speak of what is without and what within in reference to knowledge and ignorance, and not with respect to local distance; but that, in the Pleroma, or in those things which are contained by the Father, the whole creation which we know to have been formed, having been made by the Demiurge, or by the angels, is contained by the unspeakable greatness, as the centre is in a circle, or as a spot is in a garment . . .

—Iren. II. iv. 2

Again, each separate aeon is called a pleroma in contrast to its earthly imperfect counterpart, so that in this sense the plural can be used, pleromata (Iren. I. xiv. 2); and even each individual has his or her Pleroma or spiritual counterpart (to pleroma autes of the Samaritan woman,—Heracleon, ap. Origen, xiii. p. 205).

It thus expressed the various thoughts which we should express by the Godhead, the ideal, heaven; and it is probably owing to this ambiguity, as well as to its heretical associations, that the word dropped out of Christian theology. It is still used in its ordinary untechnical meaning, e.g. *Theophylact* speaks of the Trinity as *pleroma tou theou*; but no use so technical as that in Ignatius reappears.

Diagram of the Pleroma

First the • (Point), the Monad, Bythus (the Deep), the unknown and unknowable Father. Then the Δ (Triangle), Bythus and the first emanated pair or Duad, Nous (Mind) and its syzygy Aletheia (Truth). Then the □ (Square), the dual Duad, Tetractys or Quaternary, two males II, the Logos (Word) and Anthrōpos (Man), two females, their syzygies, = Zoë (Life) and Ekklesia (the Church or Assembly), Seven in all. The Triangle the Potentiality of Spirit, the Square the Potentiality of Matter; the Vertical Straight Line the Potency of Spirit, and the Horizontal the Potency of Matter. Next comes the Pentagram *, the Pentad, the mysterious symbol of the Manasāputras or Sons of Wisdom, which together with their syzygies make 10, or the Decad; and last of all, the Hexalpha or interlaced Triangles ☆ the Hexad, which with their syzygies make 12, or the Dodecad. Such are the Contents of the Pleroma or Completion, the Ideas in the Divine Mind, 28 in all, for Bythus or the Father is not reckoned, as it is the Root of all. The two small circles within the Pleroma are the syzygy Christos-Pneuma (Christ and the Holy Spirit); these are after-emanations, and, as such, from one aspect, typify the descent of Spirit to inform and evolve Matter, which essentially proceeds from the same source; and from another, the descent or incarnation of the Kumâras or the Higher Egos of Humanity.

The Circle of the Pleroma is bounded by a circumference emanated from Bythus (the Point), this is called the Horus (Boundary), Staurus (Stock, Stake, or Cross) and Metæcheus (Participator); it shuts off the Pleroma (or Completion) from the Hystêrema (the Inferiority or Incompletion), the larger from the smaller Circle, the Unmanifested from the Manifested. Within the Circle of the Hysterêma is the Square of primordial Matter, or Chaos, emanated by Sophia, called the Ektrōma (or Abortion). Above this is a Triangle, primordial Spirit, called the Common Fruit of the Pleroma, or Jesus, for to all below the Pleroma it appears as a unity. Notice how the Triangle and Square of the Hysterêma are a reflection of the Triangle and Square of the Pleroma.

Finally, the plane of the paper, enclosing and penetrating all, is Sigê (Silence). —G.R.S. Mead & H.P. Blavatsky (after Valentinus)

Neoplatonism

In a neoplatonic manifestation of the concept, John M. Dillon, in *Pleroma and Noetic Cosmos: A Comparative Study*, states that Gnosticism imported its concept of the ideal realm, or *pleroma*, from Plato's concept of the *Cosmos* and *Demiurge* in *Timaeus* and of Philo's *Noetic Cosmos* in contrast to the aesthetic *Cosmos*. Dillon does this by contrasting the *Noetic Cosmos* to passages from the *Nag Hammadi*, where the *aeons* are expressed as the thoughts of God. Dillon expresses the concept that *pleroma* is a Gnostic adaptation of Hellenic ideas, since before Philo there is no Jewish tradition that accepts that the material world or *Cosmos* was based on an ideal world that exists as well.[8]

Social sciences

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Carl Jung

Carl Jung used the word in his mystical work, *Seven Sermons to the Dead*, first published anonymously in 1916, and the only part of *Liber Novus* (*The Red Book*) to be published before his death. According to Jung, the *pleroma* is the totality of all opposites.

Gregory Bateson

In his *Steps to an Ecology of Mind*, Gregory Bateson adopts and extends Jung's distinction between *pleroma* (the non-living world that is undifferentiated by subjectivity) and *creatura* (the living world, subject to perceptual difference, distinction, and information). What Bateson calls the "myth of power" is the epistemologically false application to *Creatura* of an element of *Pleroma* (non-living, undifferentiated).

[><https://en.wikipedia.org/wiki/Pleroma>< — retrieved 29 October 2023]

Theory of Interpretation

My theoretical framework for interpreting the cosmology and cosmogony of the religions reviewed in this Part is, of course, Natural Sequence schema, not only the septenarian components but also the Dialectic and Axial Attributes thereof. Some of the correlations that I make between components of the two systems will be obvious because they are so similar, and some of them will not be so obvious because there is less similarity. My suggestion is that the originators and perpetuators of these religions were intuiting the Natural Sequence schema, but there is noise with the signal, chaff with the wheat, and bathwater with the baby. My purpose is to use the Natural Sequence schema clean up the signal, separate the chaff, and throw out the bathwater.

Even if my interpretations and correlations of the systems are not wholly accurate, the Wikipedia quotations prompt me to explain the Natural Sequence schema in ways that it is not explained in other Parts. My hope is that more readers will thereby have more insights and epiphanies than they might otherwise.





Chapter III-X

ZOROASTRIANISM





Chapter III-X

HINDUISM

The Septenary Principle refers to the primacy of the number seven in the manifested Cosmos. Number seven is prominent in many ancient traditions. For example, in Christianity there are the seven gifts of the Holy Spirit, seven deadly sins, the seven sacraments, the duty to forgive seventy times seven that Jesus indicted to Peter, among others. The Book of Revelation also has many septenaries. In Hinduism there are seven sages (Saptarishi), seven shaktis, seven chakras, seven lokas and talas, and many more. Other septenates in the Western antiquity are the seven classical planets, seven seas, seven sages of Greece, seven Kings and Emperors of Rome, seven hills of Istanbul and of Rome, Seven Liberal Arts, Seven Wonders of the ancient world.

[>https://theosophy.wiki/en/Septenary_Principle< — retrieved 04 February 2022]

Some of the septenaries listed in that quotation, **the ones underlined**, are reviewed in other chapters of this *Cosmogony* book

The Seven Lokas

The Hindu teaching about the seven lokas has some resemblance to what are called “planes” in other esoteric cosmologies; refer to Chapter II-5 for more discussion. *[[Does this belong in the Planes chapter?]]*

INTRODUCTION

The Urdhva lokas or upper spheres of the world are composed of seven lokas or “world” according to Hindu mythology. The detailed explanation of them is found in Vishnu Purana. The three highest Lokas (realms), [#5] Jana, [#6] Tapa, and [#7] Satya are styled durable while [#4] Maharloka, has a mixed character; for although it is deserted at the end of the Kalpa, it was not destroyed yet.

The Natural Sequence schema is vaguely discernible in that description, considering it is said that there is a ‘higher’ triad of *lokas* separated by a middle *loka* that is described as having a “mixed” character. Those statements imply that there is a ‘lower’ triad of *lokas*.

[research further?]

LIST OF LOKAS

Bhūloka [Ordinal Action

Bhuloka or Earth where humans live

The sphere of the Earth or Bhū-loka (‘Bhu’ means ‘Earth’ and ‘loka’ means the surface of the Earth),

comprehending its oceans, mountains, and rivers, extends as far as it is illuminated by the rays of the sun and moon; and to the same extent, both in diameter and circumference, the sphere of the sky (Bhuva-loka) spreads above it (as far upwards as to the planetary sphere, or Swarga-loka).



Bhuva Loka [Ordinal Inspiration]

The region, where the Siddhas and other celestial beings move, is the Earth's atmospheric sphere which also contains space which has its neighboring planets in the solar system along with stars and comets.

Swarga Loka [Ordinal Expression]

The interval between the sun and Dhruva, extending fourteen hundred thousand leagues, is inhabited by the Devas, including Devis with their king Indra and its references make it equivalent to the Swarga (heaven), while some Puranic references equate Swarga aloka to the Solar System.

Maharloka [Neutral Assimilation]

Above Dhruva, at the distance of ten million leagues, lies the sphere of saints, or Mahar-loka, the inhabitants of which dwell in it throughout a Kalpa, or day of Brahmā.

Janaloka [Cardinal Expression]

At twice that distance is situated Janaloka, where the Sanandana (four Kumaras) and other pure-minded children of Brahmā reside.

Tapaloka [Cardinal Inspiration]

At four times the distance, between the two last, lies the Tapa-loka (the sphere of penance), inhabited by the immortal beings and deities called Vaibhrājas, who are highly knowledgeable, pure, and enlightened, whereby they can easily travel to the uppermost realm, Satya-loka, are unconsumable by fire of destruction during the dissolution of the universe.

Satyaloka [Cardinal Action]

It is highest plane of consciousness or the highest of the heavenly realms. It is also called Brahma Loka where Brahma and his wife, Saraswati, resides. It is six times the distance (or twelve Crores, a hundred and twenty millions of leagues) and is referred to as the sphere of truth, where all the knowledge is available and the inhabitants never die, become old, become ill, have pain and anxiety.

[>https://en.wikipedia.org/wiki/Urdhva_lokas< — retrieved 09 October 2023]

The Natural Sequence schema is not discernible in these descriptions of the Hindu teaching about the *lokas* except that the

<https://en.wikipedia.org/wiki/Patala>

https://en.wikipedia.org/wiki/Jainism_and_non-creationism

<https://en.wikipedia.org/wiki/Loka>

<https://en.wikipedia.org/wiki/Trailokya>

https://en.wikipedia.org/wiki/Six_Paths





Chapter III-X

TAOISM





Chapter III-X

GNOSTICISM

The chapters in this Part are arranged in historical sequence. Hinduism and Zoroastrianism [and Hermeticism?] appeared centuries before Gnosticism; Gnosticism was a phenomena that appeared in the 1st and 2nd Centuries, subsequent, and perhaps consequent, to the appearance of Jesus and his teachings.

As with the other chapters in this Part, Gnosticism was chosen to review because, of course, it has many of the same components that the Tao's Template ontology has; thus, describing and explaining it reinforces my assertion that the Tao's Template ontology is just another instantiation of the Perennialist notion that various religious, spiritual, philosophical, and scientific teachings share the same core ontology and epistemology.

Introduction to Gnosticism

Gnosticism is an epistemology about an ontology. Its epistemology is the notion that personal inner-higher experience is superior to outer-lower intellectual and philosophical speculation about ontology, aka the nature of reality. In terms of the Natural Sequence schema, the latter (speculation) is the Ordinal way to learn, and the former (experience) is the Cardinal way to learn.

As usual, I rely on Wikipedia to provide an introduction to a subject. I underline words and phrases to emphasize key information, I interpolate key explanations in [brackets], and I intersperse paragraphs of commentary between paragraphs of quotations.

Gnosticism (from Ancient Greek: γνῶστικός, romanized: *gnōstikós*, 'having knowledge') is a collection of religious ideas and systems that coalesced in the late 1st century AD among Jewish and early Christian sects. These various groups emphasized personal spiritual knowledge (*gnosis*) above the proto-orthodox teachings, traditions, and authority of religious institutions. Gnostic cosmogony generally presents a distinction between a supreme, hidden God and a malevolent lesser divinity (sometimes associated with the God of the Hebrew Bible) who is responsible for creating the material universe. Consequently, Gnostics considered material existence flawed or evil, and held the principal element of salvation to be direct knowledge of the hidden divinity, attained via mystical or esoteric insight. Many Gnostic texts deal not in concepts of sin and repentance, but with illusion and enlightenment.

From that quotation alone, one can see that in Gnosticism there are correlates with the TT schema. For instance, we see that Gnostic cosmology is founded on "dualism" or "relationalism", the notion that existence in space and function in time concerns the interactions between contraries or complementarities; this fundamental ontology is described and explained at length in Part One as "Twoness". Gnostic cosmogony is also "emanationist", meaning that the supreme deity fragments Itself by degrees, in a holarchy, which is also discussed in Part One, in [Chapter I-X](#), "Emergence". The seven "Stages of Enlightenment" are discussed in Part Six.

The Wikipedia article continues with a lengthy discussion of the etymology of the term, and the history of the spiritual movement, and if readers of my book are curious about that, they can certainly refer to it. However, in this book I will just review the Gnostic cosmology and cosmogony, and compare and contrast them to the Tao's Template ontology.

Gnostic Cosmology and Cosmogony

The Syrian-Egyptian traditions postulate a remote, supreme Godhead, the Monad. From this highest divinity emanate lower divine beings, known as Aeons. The Demiurge, one of those Aeons, creates the physical world.

Divine elements "fall" into the material realm, and are locked within human beings. This divine element returns to the divine realm when Gnosis, esoteric or intuitive knowledge of the divine element within, is obtained.

Dualism and monism

See also: Nontrinitarianism

Gnostic systems postulate a dualism between God and the world, varying from the "radical dualist" systems of Manichaeism to the "mitigated dualism" of classic gnostic movements. Radical dualism, or absolute dualism, posits two co-equal divine forces, while in mitigated dualism one of the two principles is in some way inferior to the other. In qualified monism the second entity may be divine or semi-divine. Valentinian Gnosticism is a form of monism, expressed in terms previously used in a dualistic manner.

Moral and ritual practice

Gnostics tended toward asceticism, especially in their sexual and dietary practice. In other areas of morality, Gnostics were less rigorously ascetic, and took a more moderate approach to correct behavior. In normative early Christianity, the Church administered and prescribed the correct behavior for Christians, while in Gnosticism it was the internalised motivation that was important. Ptolemy's Epistle to Flora describes a general asceticism, based on the moral inclination of the individual. For example, ritualistic behavior was not seen to possess as much importance as any other practice, unless it was based on a personal, internal motivation.

Female Representation in Gnosticism

It is difficult to find real women represented in sources characterized as 'Gnostic.' The few that are mentioned are portrayed to be chaotic, disobedient, and even enigmatic. However, significant Gnostic texts like the Nag Hammadi place women in roles of leadership and heroism, contradicting the narrative that women in Gnostic spaces were mere victims to their circumstance. The role women played in the evolution of Gnosticism is an area of study still being explored.

CONCEPTS

Monad

In many Gnostic systems, God is known as the Monad, the One. God is the high source of the *pleroma*, the region of light. The various emanations of God are called *æons*. According to Hippolytus, this view was inspired by the Pythagoreans, who called the first thing that came into existence the Monad, which begat the dyad, which begat the numbers, which begat the point, begetting lines, etc.

Pleroma

Pleroma (Greek πλήρωμα, "fullness") refers to the totality of God's powers. The heavenly *pleroma* is the center of divine life, a region of light "above" (the term is not to be understood spatially) our world, occupied by spiritual beings such as *æons* (eternal beings) and sometimes *archons*. Jesus is interpreted as an intermediary *æon* who was sent from the *pleroma*, with whose aid humanity can recover the lost knowledge of the divine origins of humanity. The term is thus a central element of Gnostic cosmology.

Based on the words "fulness" and "totality", I would suggest that the Gnostic concept of the *pleroma* is consistent with *cataphatic* theology. Basically and briefly, this is the notion that God is the opposite of nothing, it is everything.

Pleroma is also used in the general Greek language, and is used by the Greek Orthodox church in this general form, since the word appears in the Epistle to the Colossians. Proponents of the view that Paul was actually a gnostic, such as Elaine Pagels, view the reference in Colossians as a term that has to be interpreted in a gnostic sense.

Emanation

The Supreme Light or Consciousness descends through a series of stages, gradations, worlds, or *hypostases*, becoming progressively more material and embodied. In time it will turn around to return to the One (*epistrophe*), retracing its steps through spiritual knowledge and contemplation.

As usual with space-like cosmologies and time-like cosmogonies, the descent and return can be understood in terms of a stratification of levels and stages as in geology: the lower the level the earlier the stage and the higher the level the later the stage.

This notion of descent and ascent, aka involution and evolution, from the ultimate immanent Substance, by whatever name it is called, in this case “Supreme Light of Consciousness” is found in many religious traditions; notice them in many chapters of this Part. This Gnostic telling is yet another instantiation of the Dialectic Principle. Basically and briefly, this means that the process the return to the One does not end up exactly where it started. Rather the One has become enriched, you might say, but that cycle of emanation and epistrophe.

Aeon

Main article: Aeon (Gnosticism)

In many Gnostic systems, the aeons are the various emanations of the superior God or Monad. Beginning in certain Gnostic texts with the hermaphroditic [gender dual] aeon Barbelo, the first emanated being, various interactions with the Monad occur which result in the emanation of successive pairs of aeons, often in male–female pairings called syzygies. The numbers of these pairings varied from text to text, though some identify their number as being thirty. The aeons as a totality constitute the pleroma, the “region of light”. The lowest regions of the pleroma are closest to the darkness; that is, the physical world.

~~Two of the most commonly paired aeons were Christ and Sophia (Greek: “Wisdom”); the latter refers to Christ as her “consort” in *A Valentinian Exposition*.~~

Sophia

Main article: Sophia (Gnosticism)

In Gnostic tradition, the name Sophia (Σοφία, Greek for "wisdom") refers to the final emanation of God, and is identified with the *anima mundi* or world-soul. She is occasionally referred to by the Hebrew equivalent of Achamoth (this is a feature of Ptolemy’s version of the Valentinian gnostic myth). Jewish Gnosticism with a focus on Sophia was active by 90 AD. In most, if not all, versions of the gnostic myth, Sophia births the demiurge, who in turn brings about the creation of materiality. The positive and negative depictions of materiality depend on the myth’s depictions of Sophia’s actions. Sophia in this highly patriarchal narrative is described as unruly and disobedient, which is due to her bringing a creation of chaos into the world. The creation of the Demiurge was an act done without her counterpart’s consent and because of the predefined hierarchy between the two of them, this action contributed to the narrative that she was unruly and disobedient.

Sophia, emanating without her partner, resulted in the production of the Demiurge (Greek: lit. “public builder”), who is also referred to as Yaldabaoth and variations thereof in some Gnostic texts. This creature is concealed outside the pleroma; in isolation, and thinking itself alone, it creates materiality and a host of co-actors, referred to as archons. The demiurge is responsible for the creation of humankind; trapping elements of the pleroma stolen from Sophia inside human bodies. In response, the Godhead emanates two savior aeons, Christ and the Holy Spirit; Christ then embodies itself in the form of Jesus, in order to be able to teach humans how to achieve gnosis, by which they may return to the pleroma.

Demiurge

A lion-faced deity found on a Gnostic gem in Bernard de Montfaucon’s *L’antiquité expliquée et représentée en figures* may be a depiction of Yaldabaoth, the Demiurge; however, cf.[clarification needed] Mithraic Zervan Akarana.[84]

Main article: Demiurge

The term demiurge derives from the Latinized form of the Greek term *dēmiourgos*, δημιουργός, literally “public or skilled worker”. This figure is also called “Yaldabaoth”, Samael (Aramaic: *səm’a-’el*, “blind god”), or “Saklas” (Syriac: *sækla*, “the foolish one”), who is sometimes ignorant of the superior god, and sometimes opposed to it;

thus in the latter case he is correspondingly malevolent. Other names or identifications are Ahriman, El, Satan, and Yahweh.

The demiurge creates the physical universe and the physical aspect of humanity. The demiurge typically creates a group of co-actors named archons who preside over the material realm and, in some cases, present obstacles to the soul seeking ascent from it. The inferiority of the demiurge's creation may be compared to the technical inferiority of a work of art, painting, sculpture, etc. to the thing the art represents. In other cases, it takes on a more ascetic tendency to view material existence negatively, which then becomes more extreme when materiality, including the human body, is perceived as evil and constrictive, a deliberate prison for its inhabitants.

Moral judgments of the demiurge vary from group to group within the broad category of Gnosticism, viewing materiality as being inherently evil, or as merely flawed and as good as its passive constituent matter allows.

Archon

Main article: Archon (Gnosticism)

In late antiquity some variants of Gnosticism used the term archon to refer to several servants of the demiurge. According to Origen's [book] *Contra Celsum*, a sect called the Ophites posited the existence of seven archons, beginning with Iadabaoth or Ialdabaoth, who created the six that follow: Iao, Sabaoth, Adonaios, Elaios, Astaphanos, and Horiaios. Ialdabaoth had a head of a lion.

Other concepts

Other Gnostic concepts are:

- sarkic – earthly, hidebound, ignorant, uninitiated. The lowest level of human thought; the fleshly, instinctive level of thinking.
- hylic – lowest order of the three types of human. Unable to be saved since their thinking is entirely material, incapable of understanding the gnosis.
- psychic – "soulful", partially initiated. Matter-dwelling spirits
- pneumatic – "spiritual", fully initiated, immaterial souls escaping the doom of the material world via gnosis.
- kenoma – the visible or manifest Cosmos, "lower" than the pleroma
- charisma – gift, or energy, bestowed by pneumatics through oral teaching and personal encounters
- logos – the divine ordering principle of the Cosmos; personified as Christ. See also Odic force.
- hypostasis – literally "that which stands beneath" the inner reality, emanation (appearance) of God, known to psychics
- ousia – essence of God, known to pneumatics. Specific individual things or being.

More about the Aeons





Chapter III-X

CHRISTIAN THEOLOGY

“modalistic monarchianism”





Chapter III-X

MANDAEISM

Introduction to Mandaism

Mandaism ... sometimes also known as Nasoraeanism or Sabianism, is a Gnostic Christian, monotheistic and ethnic religion with roots in Zoroastrianism. Its adherents, the Mandaeans, revere Adam, Abel, Seth, Enos, Noah, Shem, Aram, and especially John the Baptist. Mandaeans consider Adam, Seth, Noah, Shem and John the Baptist prophets, with Adam being the founder of the religion and John being the greatest and final prophet.[9]:45[10]

Refer to a previous chapter here in this Part, **Chapter III-X**, for a discussion of Zoroastrianism and its relevance to the Tao's Template ontology. Even though Mandaism is derived from Zoroastrianism, it is different enough that I deemed it expedient to include this chapter, and is a yet another reminder of the Attributes of the Tao's Template ontology, and it furthers my case for Perennialism, the notion that religions and philosophies from ancient to modern times typically discerned and intuited the same truths that are claimed for the Tao's Template ontology.

The name 'Mandaean' comes from the Aramaic manda, meaning knowledge. Within the Middle East, but outside their community, the Mandaeans are more commonly known as the Şubba... or as Sabians. The term Şubba is derived from an Aramaic root related to baptism..... Occasionally, Mandaeans are also called "Christians of Saint John" [the Baptist].

According to Jorunn Jacobsen Buckley and other scholars who specialize in Mandaism, Mandaeans originated about two thousand years ago in the Palestine region and subsequently moved east due to persecution. Others claim a southwestern Mesopotamia origin. However, some scholars take the view that Mandaism is older and dates back to pre-Christian times. Mandaeans assert that their religion predates Judaism, Christianity, and Islam as a monotheistic faith. Mandaeans believe that they are the direct descendants of Shem, Noah's son, in Mesopotamia and they also believe that they are the direct descendants of John the Baptist's original Nasoraean Mandaean disciples in Jerusalem.

The core doctrine of the faith is known as Nāṣerutā (also spelled Naṣirutha and meaning Nasoraean gnosis or divine wisdom) (Nasoraeanism or Nazorenism) with the adherents called nāṣorāyi (Nasoraean or Nazorenes). These Nasoraean are divided into tarmidutā (priesthood) and mandāyutā (laity), the latter derived from their term for knowledge manda. Knowledge (manda) is also the source for the term Mandaism which encompasses their entire culture, rituals, beliefs and faith associated with the doctrine of Nāṣerutā. Followers of Mandaism are called Mandaeans, but can also be called Nasoraean (Nazorenes), Gnostics (utilizing the Greek word gnosis for knowledge) or Sabians.

[><https://en.wikipedia.org/wiki/Mandaism>< — retrieved 29 October 2023]

Cosmology and Cosmogony of Mandaism

Mandaism, as the religion of the Mandaean people, is based on a set of religious creeds and doctrines. The corpus of Mandaean literature is quite large, and covers topics such as eschatology, the knowledge of God, and the afterlife.

According to Brikha Nasoraia:

The Mandaeans see themselves as healers of the "Worlds and Generations" (Almia u-Daria), and practitioners of the religion of Mind (Mana), Light (Nhura), Truth (Kuṣṭa), Love (Rahma/Ruhma) and Enlightenment or Knowledge (Manda).[9]:28

Principal beliefs

Recognition of one God known as Hayyi Rabbi, meaning The Great Life or The Great Living (God), whose symbol is Living Water (Yardena). It is therefore necessary for Mandaeans to live near rivers. God personifies the sustaining and creative force of the universe.

Power of Light, which is vivifying and personified by Malka d-Nhura ('King of Light'), another name for Hayyi Rabbi, and the uthras (angels or guardians) that provide health, strength, virtue and justice. The Drabsha is viewed as the symbol of Light.

Immortality of the soul; the fate of the soul is the main concern with the belief in the next life, where there is reward and punishment. There is no eternal punishment since God is merciful.

Fundamental tenets

According to E. S. Drower, the Mandaean Gnosis is characterized by nine features, which appear in various forms in other gnostic sects:

1. A supreme formless Entity, the expression of which in time and space is a creation of spiritual, etheric, and material worlds and beings. Production of these is delegated by It to a creator or creators who originated It. The Cosmos is created by Archetypal Man, who produces it in similitude to his own shape.
2. Dualism: a cosmic Mother and Father, Light and Darkness, Left and Right, syzygy in cosmic and microcosmic form.
3. As a feature of this dualism, counter-types (*dmuta*) that exist in a world of ideas (*Mshunia Kushta*).
4. The soul is portrayed as an exile, a captive; his home and origin being the supreme Entity to which he eventually returns.
5. This is the standard emanationist notion of involution and evolution....
6. Planets and stars influence fate and human beings, and are also the places of detention after death.
7. A savior spirit or savior spirits which assist the soul on his journey through life and after it to 'worlds of light'.
8. A cult-language of symbol and metaphor. Ideas and qualities are personified.
9. 'Mysteries', i.e. sacraments to aid and purify the soul, to ensure its rebirth into a spiritual body, and its ascent from the world of matter. These are often adaptations of existing seasonal and traditional rites to which an esoteric interpretation is attached. In the case of the Naṣōraeans, this interpretation is based on the Creation story (see 1 and 2), especially on the Divine Man, Adam, as crowned and anointed King-priest.
10. Great secrecy is enjoined upon initiates; full explanation of 1, 2, and 8 being reserved for those considered able to understand and preserve the gnosis.

Cosmology

Main article: Mandaean cosmology

The religion extolls an intricate, multifaceted, esoteric, mythological, ritualistic, and exegetical tradition with the emanation model of creation being the predominant interpretation.

The most common name for God in Mandaicism is Hayyi Rabbi ('The Great Life' or 'The Great Living God'). Other names used are Mare d'Rabuta ('Lord of Greatness'), Mana Rabba ('The Great Mind'), Malka d-Nhura ('King of Light') and Hayyi Qadmai ('The First Life'). Mandeans recognize God to be the eternal, creator of all, the one and only in domination who has no partner.

There are numerous uthras (angels or guardians), manifested from the light, that surround and perform acts of worship to praise and honor God. Prominent amongst them include Manda d-Hayyi, who brings manda (knowledge or gnosis) to Earth, and Hibil Ziwa, who conquers the World of Darkness. Some uthras are commonly referred to as emanations and are subservient beings to 'The First Life'; their names include Second, Third, and Fourth Life (i.e. Yushamin, Abatur, and Ptahil).

Ptahil, the 'Fourth Life', alone does not constitute the demiurge, but only fills that role insofar as he is seen as the creator of the material world with the help of the evil spirit Ruha. Ruha is viewed negatively as the personification of the lower, emotional, and feminine elements of the human psyche. Therefore, the material world is a mixture of 'light' and 'dark'. Ptahil is the lowest of a group of three emanations, the other two being *Yushamin* (the 'Second Life' (also spelled *Joshamin*)) and Abatur, the 'Third Life'. Abatur's demiurgic role consists of weighing the souls of the dead to determine their fate. The role of Yushamin, the first emanation, is more obscure; wanting to create a world of his own, he was punished for opposing the King of Light ('The First Life'), but was ultimately forgiven.

As is also the case among the Essenes, it is forbidden for a Mandaean to reveal the names of the angels to a gentile.





Chapter III-X

MANICHAISM

Introduction to Manichaeism

INTRODUCTION

Manichaeism ... is a formerly major world religion, founded in the 3rd century CE by the Parthian prophet Mani (216–274 CE), in the Sasanian Empire.

Manichaeism teaches an elaborate dualistic cosmology describing the struggle between a good, spiritual world of light, and an evil, material world of darkness. Through an ongoing process that takes place in human history, light is gradually removed from the world of matter and returned to the world of light, whence it came. Mani's teaching was intended to “combine”, succeed, and surpass the teachings of Christianity, Zoroastrianism, Buddhism, Marcionism, Hellenistic and Rabbinic Judaism, Gnostic movements, Ancient Greek religion, Babylonian and other Mesopotamian religions, and mystery cults. It reveres Mani as the final prophet after Zoroaster, the Gautama Buddha and Jesus Christ.

Manichaeism was quickly successful and spread far through Aramaic-speaking regions. It thrived between the third and seventh centuries, and at its height was one of the most widespread religions in the world. Manichaean churches and scriptures existed as far east as the Han Dynasty and as far west as the Roman Empire. It was briefly the main rival to early Christianity in the competition to replace classical polytheism before the spread of Islam. Under the Roman Dominate, Manichaeism was persecuted by the Roman state and was eventually stamped out in the Roman Empire.

Manichaeism has survived longer in the east than it did in the west. Although it was thought to have finally faded away after the 14th century in South China, contemporary to the decline of the Church of the East in Ming China, there is a growing corpus of evidence that shows Manichaeism persists in some areas of China, especially in Fujian, where numerous Manichaean relics have been discovered over time. The currently known sects are notably secretive and protective of their belief system, which has aided in them going relatively undetected. This stems from fears relating to persecution and suppression during various periods of Chinese history.

....

Cosmology and Cosmogony of Manichaeism

Teachings and beliefs

General

Mani's teaching dealt with the origin of evil, by addressing a theoretical part of the problem of evil by denying the omnipotence of God and postulating two opposite powers. Manichaean theology teaches a dualistic view of good and evil. A key belief in Manichaeism is that the powerful, though not omnipotent good power (God), was opposed by the eternal evil power (devil). Humanity, the world, and the soul are seen as the by-product of the battle between God's proxy, Primal Man, and the devil.

The human person is seen as a battle-ground for these powers: the soul defines the person, but it is under the influence of both light and dark. This contention plays out over the world as well as the human body—neither the Earth nor the flesh were seen as intrinsically evil, but rather possessed portions of both light and dark. Natural phenomena (such as rain) were seen as the physical manifestation of this spiritual contention. Therefore, the Manichaean view explained the existence of evil by positing a flawed creation in the formation of which God took no part and which constituted rather the product of a battle by the devil against God.

Cosmogony

Manichaeism presents an elaborate description of the conflict between the spiritual world of light and the material world of darkness....

To me, this seems like the philosophical notion of “Relationalism” discussed in Part One, Chapter I-X, the idea that everything exists and functions in contrast to its (horizontal) complementary opposite.

From these and other sources, it is possible to derive an almost complete description of the detailed Manichaean vision[103] (a complete list of Manichaean deities is outlined below). According to Mani, the unfolding of the universe takes place with three "creations":[citation needed]

The First Creation

Originally, good and evil existed in two completely separate realms, one the World of Light (Chinese: 明界), ruled by the Father of Greatness together with his five Shekhinas (divine attributes of light), and the other the World of Darkness, ruled by the King of Darkness. At a certain point, the Kingdom of Darkness notices the World of Light, becomes greedy for it and attacks it. The Father of Greatness, in the first of three "creations" (or "calls"), calls to the Mother of Life, who sends her son Original Man (Imperial Aramaic: Nāšā Qaḏmāyā), to battle with the attacking powers of Darkness, which include the Demon of Greed. The Original Man is armed with five different shields of light (reflections of the five Shekhinas), which he loses to the forces of darkness in the ensuing battle, described as a kind of "bait" to trick the forces of darkness, as the forces of darkness greedily consume as much light as they can. When the Original Man comes to, he is trapped among the forces of darkness.

The Second Creation

Then the Father of Greatness begins the Second Creation, calling to the Living Spirit, who calls to his five sons, and sends a call to the Original Man (Call then becomes a Manichaean deity). An answer (Answer becomes another Manichaean deity) then returns from the Original Man to the World of Light. The Mother of Life, the Living Spirit, and his five sons begin to create the universe from the bodies of the evil beings of the World of Darkness, together with the light that they have swallowed. Ten heavens and eight earths are created, all consisting of various mixtures of the evil material beings from the World of Darkness and the swallowed light. The sun, moon, and stars are all created from light recovered from the World of Darkness. The waxing and waning of the moon is described as the moon filling with light, which passes to the sun, then through the Milky Way, and eventually back to the World of Light.

The Third Creation

Great demons (called archons in bar-Khonai's account) are hung out over the heavens, and then the Father of Greatness begins the Third Creation. Light is recovered from out of the material bodies of the male and female evil beings and demons, by causing them to become sexually aroused in greed, towards beautiful images of the beings of light, such as the Third Messenger and the Virgins of Light. However, as soon as the light is expelled from their bodies and falls to the earth (some in the form of abortions – the source of fallen angels in the Manichaean myth), the evil beings continue to swallow up as much of it as they can to keep the light inside of them. This results eventually in the evil beings swallowing huge quantities of light, copulating, and producing Adam and Eve. The Father of Greatness then sends the Radiant Jesus to awaken Adam, and to enlighten him to the true source of the light that is trapped in his material body. Adam and Eve, however, eventually copulate, and produce more human beings, trapping the light in bodies of mankind throughout human history. The appearance of the Prophet Mani was another attempt by the World of Light to reveal to mankind the true source of the spiritual light imprisoned within their material bodies.

Analysis of Mani's cosmology as illustrated in the Manichaean Diagram

Analysis of Mani's cosmology as illustrated in the Manichaean Diagram

Heaven scene from the Manichaean Diagram

Heaven scene from the Manichaean Diagram

"Maiden of Light" from the Manichaean Diagram

"Maiden of Light" from the Manichaean Diagram

Cosmology

In the sixth century, many Manichaeans saw "the earth" as "a rectangular parallelepiped enclosed by walls of crystal, above which three [sky] domes" existed, with the other two being above and larger than the first one and second one, respectively.[104] These represented the "three heavens" in Chaldean religion.[104]

Outline of the beings and events in the Manichaean mythology

Beginning with the time of its creation by Mani, the Manichaean religion has had a detailed description of deities and events that took place within the Manichaean scheme of the universe. In every language and region that Manichaeism spread to, these same deities reappear, whether it is in the original Syriac quoted by Theodore bar Konai,[45] or the Latin terminology given by Saint Augustine from Mani's *Epistola Fundamenti*, or the Persian and Chinese translations found as Manichaeism spread eastward. While the original Syriac retained the original description that Mani created, the transformation of the deities through other languages and cultures produced incarnations of the deities not implied in the original Syriac writings. Chinese translations are especially syncretic, borrowing and adapting terminology common in Chinese Buddhism.[105]

The World of Light

The Father of Greatness (Syriac: ܐܒܐ ܕܪܒܒܘܬܐ, Abbā dərabbūtā; Middle Persian: pīd ī wuzurgīh, or the Zoroastrian deity Zurwān; Parthian: Pidar wuzurgift, Pidar roshn; Chinese: 無上明尊; lit. 'Unsurpassed Divinity of Light' or 薩緩 lit. 'Zurvan')

His Four Faces (Greek: ὁ τετραπρόσωπος πατήρ τοῦ μεγέθους; Chinese: 四寂法身; lit. 'Four Silent Dharmakayas')[105]

Divinity (Middle Persian: yzd; Parthian: bgʾ; Chinese: 清淨)

Light (Middle Persian and Parthian: rwšn; Chinese: 光明)

Power (Middle Persian: zwr; Parthian: zʾwrʾ; Chinese: 大力)

Wisdom (Middle Persian: whyh; Parthian: jyryftʾ; Chinese: 智慧)

His Five Shekhinas (Syriac: ܫܝܬܐ ܕܫܚܝܢܐ, khamesh shkhinatei; Chinese: 五種大 wǔ zhǒng dà, lit. 'five great ones')[106][105]

Shekhina:	Reason	Mind	Intelligence	Thought	Understanding
Syriac	ܐܠܫܐ hawnā	ܐܠܡܐ maddeʾā		ܐܠܦܐ reyānā	ܐܠܦܬܐ maḥsavtā
Parthian	bām	manohmēd	uš	andēšišn	parmānag
Chinese	相 xiāng, "phase"		心 xīn, "heart-mind"		念 niàn, "mindfulness"
	意 yì, "meaning"				思 sī, "thought"
Turkic	qut	ög	köngül	saqinç	tuimaq

Greek	νοῦς (Nous)	ἐννοια (Ennoia)	φρόνησις (Phronēsis)	ἐνθύμησις (Enthymēsis)	λογισμός (Logismos)
Latin	mens	sensus	prudentia	intellectus	cogitatio

The Great Spirit (Middle Persian: Waxsh zindag, Waxsh yozdahr; Latin: Spiritus Potens)

The first creation

The Mother of Life (Syriac: ܡܕܝܬܐ ܕܚܝܐ imā dəḥayyē; Middle Persian: m'dr'y zyndg'n; Chinese: 善母佛; lit. 'Good Mother Buddha')

The First Man (Syriac: ܐܕܡܐ ܕܥܝܠܐ Nāšā Qaḏmāyā; Middle Persian: Ohrmazd Bay, the Zoroastrian god of light and goodness; Latin: Primus Homo)

First Enthymesis (Middle Persian: hndyšyšn nxwystyn; Chinese: 先意; lit. 'First Understanding')

His five Sons (the five Light Elements; Parthian: panj rōšn; Middle Persian: Amahrāspandān; Chinese: 五明子)[105]

Ether (Parthian: ardāw; Middle Persian: frāwahr; Chinese: 氣)

Wind (Parthian and Middle Persian: wād; Chinese: 風)

Light (Parthian and Middle Persian: rōšn; Chinese: 明)

Water (Parthian and Middle Persian: āb; Chinese: 水)

Fire (Parthian and Middle Persian: ādur; Chinese: 火)

His sixth Son, the Answer-God (Syriac: ܐܬܝܐ ܕܥܝܠܐ 'anyā; Parthian and Middle Persian: xroshtag; Chinese: 勢至 Shì Zhì "The Power of Wisdom", a Chinese bodhisattva). The answer sent by the First Man to the Call from the World of Light.

The Living Self (Parthian and Middle Persian: grīw zīndag, grīw rōšn; Chinese: 明性; lit. 'Light Nature') The anima mundi made up of the five Light Elements, identical with the Suffering Jesus who is crucified in the world.

The second creation

The Friend of the Lights (Syriac: ܚܒܝܒ ܕܠܝܬܐ ḥaviv nehirē; Chinese: 樂明佛; lit. 'Enjoyer of Lights')[105] Calls to:

The Great Builder (Syriac: ܒܢܐ ܕܥܝܠܐ ban rabbā; Chinese: 造相; lit. 'Creator of Forms') In charge of creating the new world that will separate the darkness from the light. He calls to:

The Living Spirit (Syriac: ܪܗܝܐ ܕܥܝܠܐ ruḥā ḥayyā; Middle Persian: Mihryazd; Chinese: 淨活風; pinyin: jīnghuófēng; Latin: Spiritus Vivens; Greek: Ζων Πνευμα). Acts as a demiurge, creating the structure of the material world.

His five Sons (Syriac: ܠܝܬܐ ܕܥܝܠܐ ḥamšā benawhy; Chinese: 五等驍健子; lit. 'Five Valiant Sons')

The Keeper of the Splendour (Syriac: ܫܦܬ ܕܥܝܠܐ šfat ziwā; Latin: Splenditenens; Chinese: 催光明使; lit. 'Urger of Enlightenment'). Holds up the ten heavens from above.

The King of Glory (Syriac: ܡܠܟܐ ܕܥܝܠܐ mlex šuvḥā; Latin: Rex Gloriosus; Chinese: 地藏 Dìzàng "Earth Treasury", a Chinese bodhisattva).

The Adamas of Light (Syriac: ܐܕܡܐ ܕܥܝܠܐ adamus nuhrā; Latin: Adamas; Chinese: 降魔使; pinyin: jiàngmó shǐ). Fights with and overcomes an evil being in the image of the King of Darkness.

The Great King of Honour (Syriac: ܡܠܟܐ ܕܝܟܪܐ malkā rabbā dikkārā; Dead Sea Scrolls Imperial Aramaic: ܡܠܟܐ ܕܝܟܪܐ malka raba de-ikara; Latin: Rex Honoris; Chinese: 十天大王; pinyin: Shítiān Dàwáng; lit. 'Ten Heavens Great King'). A being that plays a central role in The Book of Enoch (originally written in Aramaic), as well as Mani's Syriac version of it, the Book of Giants. Sits in the seventh heaven of the ten heavens (corresponding to the celestial spheres, the first seven of which house the classical planets) and guards the entrance to the world of light.

Atlas (Syriac: ܫܒܠܐ sebblē; Latin: Atlas; Chinese: 持世主; pinyin: Chíshìzhǔ). Supports the eight worlds from below.

His sixth Son, the Call-God (Syriac: ܩܪܝܐ qaryā; Middle Persian: Padvaxtag; Chinese: 觀音 Guanyin "watching/perceiving sounds [of the world]", the Chinese Bodhisattva of Compassion). Sent from the Living Spirit to awaken the First Man from his battle with the forces of darkness.

The third creation

The Third Messenger (Syriac: ܝܒܕܐ izgaddā; Middle Persian: narēsahyazad, Parthian: hridīg frēštag; tertius legatus)

Jesus the Splendour (Syriac: ܝܫܘܥ ܝܫܘܥ Isho' Ziwwā; Chinese: 光明夷數; lit. 'Jesus of Bright Light' or 夷數和 lit. 'Jesus the Essence of Harmony'). Sent to awaken Adam and Eve to the source of the spiritual light trapped within their physical bodies.

The Maiden of Light (Middle Persian and Parthian: qnygrwšn; Chinese: 謹你嚕洗, a phonetic loan from Middle Persian)

The Twelve Virgins of Light (Syriac: ܬܪܬܝܢ ܡܝܪܝܢ ܕܠܝܬ trāt'esrā btultē; Middle Persian: kanīgān rōšnān; Chinese: 日宮十二化女; pinyin: Rìgōng shí'èr huà nǚ; lit. 'Sun Palace Twelve Maidens of Transformation').[b][105] Reflected in the twelve constellations of the Zodiac.

The Column of Glory (Syriac: ܥܫܘܢ ܫܘܒܗܐ estūn šuvhā; Middle Persian: srōš-ahrāy; Chinese: 蘇少夷 pinyin: Sūlù shāluóyí and 盧舍那, Lúshěná, both phonetic from Middle Persian: srōš-ahrāy). The path that souls take back to the World of Light; corresponds to the Milky Way.

The Great Nous

His five Limbs (Chinese: 五體) (See "His Five Shekhinas" above.)

Reason

Mind

Intelligence

Thought

Understanding

The Just Judge (Parthian: d'dbr r'stygr; Chinese: 平等王; lit. 'Impartial King')[105]

The Last God

The World of Darkness

The Prince of Darkness (Syriac: ܡܠܟܐ ܗܝܫܘܟܐ mlex ḥešoxā; Middle Persian: Ahriman, the Zoroastrian supreme evil being)

His five evil kingdoms Evil counterparts of the five elements of light, the lowest being the kingdom of Darkness.

His son (Syriac: ܐܫܬܠܘܢ Ashaklun; Middle Persian: Az, from the Zoroastrian demon, Aži Dahāka)

His son's mate (Syriac: ܢܝܪܘܐܝܠ Nevro'el)

Their offspring – Adam and Eve (Middle Persian: Gehmurd and Murdiyanag)

Giants (Fallen Angels, also Abortions): (Syriac: ܝܚܬܐ yaḥtē, "abortions" or "those that fell"; also: ܐܓܪܝܓܘܪܐ ܐܓܪܝܓܘܪܐ; Ἐγρήγοροι Egrēgoroi, "Giants"). Related to the story of the fallen angels in the Book of Enoch (which Mani used extensively in The Book of Giants), and the נפיליִם nephilim described in Genesis (6:1–4).
[><https://en.wikipedia.org/wiki/Manichaeism>< — retrieved 29 October 2023]





Chapter III-X

NEO-PLATONISM





Chapter III-X

JOHN SCOTUS ERIUGENA

Among the philosophical mystical theologians reviewed in this Part, the person named in the title of this chapter was particularly insightful with regard to the components of Tao's Template (TT), aka the Attributes of the Natural Sequence schema. Frankly, it was exciting for me to read about this man's work and revel in how congruent it was with my own work as espoused in this *Cosmogony* book. Therefore, I quote and comment at length from the lengthy Wikipedia article about him. His name is often shortened to Eriugena to distinguish him from other Johns, and so do I.

Introduction to Eriugena

As usual, in this chapter as others, I quote from my go-to source of basic information, Wikipedia. I underline words and phrases that I deem important, I insert clarifying words and phrases in [brackets], and I intersperse paragraphs of explanatory commentary between paragraphs of quotations.

John Scotus Eriugena (c. 800 – c. 877) was an Irish Neoplatonist philosopher, theologian, and poet of the Early Middle Ages. Bertrand Russell dubbed him “the most astonishing person of the ninth century”. The Stanford Encyclopedia of Philosophy states that he “is the most significant Irish intellectual of the early monastic period. He is generally recognized to be both the outstanding philosopher (in terms of originality) of the Carolingian era and of the whole period of Latin philosophy stretching from Boethius [c. 500 CE] to Anselm [c. 1100 CE]”.

Neo-Platonism is reviewed in [Chapter III-X](#). Neo-Platonist philosophers lived a few hundred years prior to John. Basically and briefly, Neo-Platonist philosophers adopted and adapted and extended the work of the ancient Greek philosophers in their glory days, including Plato and those before and after him.

He wrote a number of works, but is best known today for having written *De Divisione Naturae* (*The Division of Nature*), or *Periphyseon*, which has been called the “final achievement” of ancient philosophy, a work which “synthesizes the philosophical accomplishments of fifteen centuries”. The principal concern of *De Divisione Naturae* is to unfold from φύσις (*physis*), which John defines as “all things which are and which are not”, the entire integrated structure of reality. Eriugena achieves this through a dialectical method elaborated through *exitus* and *reditus*, that interweaves the structure of the human mind and reality as produced by the λόγος (*logos*) of God.

That paragraph pretty much sums up my aspiration for this and my other books. Oftentimes among philosophical theologians, the Greek word for physics, namely *physis*, is often contrasted with the Greek word for psychology, namely *psyche*. What John realized, as I do, is that the two are reflective of each other: one can map the one onto the other, item for item. An internet search for those two Greek words together will result in many hits, such as this: ><https://www.pacifica.edu/dissertation-oral-defense/psychology-complementarity-toward-synochi-psyche-physis/><.

Regarding the “dialectical method”, what I refer to as the “Dialectical Principle” is discussed at length in Part One, the Introduction to this book. Basically and briefly, the Dialectic Principle is the notion that the Cosmos makes progress in its three Dimensions of Action (behavior system), Inspiration (value system), and Expression (belief system) via a continual feedback between, for instance, past and present and future, higher and lower levels and stages of a holarchy, inner and outer regions defined by a boundary either in space or time.

Exitus and *reditus* are Latin words that refer to the theological notion that everything comes from God and everything returns to God. In this *Cosmogony* book, as with many other philosophical theologians, I use the words “emanation” and “emergence”, and also “evolution” and “involution”, for the same notion. More is said about this in Part I, “Introduction”, and elsewhere in this book, and further on in this chapter.

Eriugena is generally classified as a Neoplatonist, though he was not influenced directly by such pagan philosophers as Plotinus or Iamblichus. Jean Trouillard stated that, although he was almost exclusively dependent on Christian theological texts and the Christian Canon, Eriugena “reinvented the greater part of the theses of Neoplatonism”....

As you may recall from elsewhere in this *Cosmogony* book, what that paragraph hints at is called “Perennialism” (>https://en.wikipedia.org/wiki/Perennial_philosophy<), which is the notion that “religious traditions share a single, metaphysical truth or origin from which all esoteric and exoteric knowledge and doctrine has grown.” The quoted paragraph used the word “reinvented”, but I would prefer the word “intuited” for what he did, and what other Perennialists do, which is, even if philosophical mystical theologians had no prior sources, they would tend to intuit the same core fundamental ideas about the nature and structure of the *Cosmos* and *logos* and *physis* and *psyche*.

Thereafter followed some paragraphs of information about Eriugena’s name, his background, and his lived experiences, which I omit as irrelevant to my purpose for this chapter.

Theology of Eriugena

And then the Wikipedia article continued with a discussion of Eriugena’s theological understanding:

Eriugena’s work is largely based upon [early Christian theologians:] Origen, St. Augustine of Hippo, Pseudo-Dionysius the Areopagite, St. Maximus the Confessor, and the Cappadocian Fathers. Eriugena’s overall view of reality, both human and divine, was strongly influenced by Neoplatonism. He viewed the totality of reality as a “graded hierarchy” cosmology of gradual declensions from the Godhead, similar to Proclus, and likewise saw in all things a dual movement of procession and reversion: that every effect remains in its cause or constitutive principle, proceeds from it, and returns to it. According to Deirdre Carabine, both “ways” must be understood as intrinsically entwined and are not separate movements or processes.

What Eriugena referred to as a “graded hierarchy” of “declensions [fragmentation in quantity and/or deterioration in quality] from the Godhead”, I refer to as Tao’s Template as found in Chapter 42 of Lao Tzu’s book *Tao Te Ching*: “Tao produced the One, the One produced the Two, the Two produced the Three, the Three produced All things.”

Regarding “dual movement of procession and reversion” and “intrinsically entwined”, I can correlate this to the second sentence of Tao’s Template, to wit “All things carry the Yin and embrace the Yang and through the blending of the Chi they achieve harmony”, accepting as I do that “procession” correlates with Yang and “reversion” correlates with Yin. I can also see that what I call the “Taijitu Tango Principle” applies to what Eriugena proposed. Basically and briefly, this is the notion that the Cosmos as a whole is balanced, but parts of the graded hierarchy can be unbalanced in their declension from the Godhead. This is the origin of the “personality” of the components of the Cosmos.

“For the procession of the creatures and the return of the same are so intimately associated in the reason which considers them that they appear to be inseparable the one from the other, and it is impossible for anyone to give any worthy and valid account of either by itself without introducing the other, that is to say, of the procession without the return and collection and vice versa.”

Thereafter in the Wikipedia article followed a few paragraphs about Eriugena beliefs borrowed from his Christian predecessors, but these are irrelevant to the philosophical mystical theology that concerns me here.

Eriugena’s view, as he sets it out in this “rather hastily written treatise”, is that because God is simple and unchangeable, there can be nothing at all that can be predestined. Eriugena explains God’s predestination as God’s knowledge of the primordial causes. Carabine outlines Eriugena’s argument against double-predestination as follows: God cannot predestine the human will, and people are blessed or punished because of their own free will. Since the free will of human beings can be misused, sins must be the fault of individuals. Sin and evil, and the fact that some souls are damned, cannot imply a change in God or a defect in God’s power; if we accept the view of Gottschalk, God is responsible for sin and evil. Eriugena’s way out of this difficult position is based on the Neoplatonic idea that God as good is simply existence and, therefore, the opposite of non-being. Evil and sin are negations that do not, in fact, exist and cannot be caused by God.

"In addition to the arguments based on the dialectical understanding of being and non-being and the unity of God's nature, Eriugena also invokes the principles of negative theology in his answer to Gottschalk's heresy. Foreknowledge and predestination imply temporal notions in God, who transcends time. Since God is simple and unchanging, ideas, signs, and language cannot properly signify the divine nature." [26]

Thus, God cannot predestine any soul to damnation; rather, human sinfulness creates its own hell. This was, in brief, the case Eriugena presented to Hincmar for scrutiny. On one hand, against Gottschalk, Eriugena had followed Augustine in that the faults of the wicked and their resulting damnation are their own responsibility. But since Eriugena had denied the possibility of the predestination of the elect to eternal bliss, he had contradicted Augustine; for this reason Hincmar ultimately rejected the treatise.

DE DIVISIONE NATURAE

Scope of the work

Eriugena's magnum opus, *De Divisione Naturae* (*On the Division of Nature*) or *Periphyseon*, is arranged in five books. It has been called the 'final achievement' of ancient philosophy, a work which "synthesizes the philosophical accomplishments of fifteen centuries." The form of exposition is that of a catechetical dialogue between a theologian and his pupil, and the method of reasoning is the ancient syllogistic. Nature (*Natura* in Latin or *physis* [φύσις] in Greek) is the name of the most comprehensive of all unities, that which contains within itself the most primary division of all things, that which is (being) and that which is not (nonbeing). It is presented, like Alcuin's book, as a dialogue between Master and Pupil. Eriugena anticipates St. Thomas Aquinas, who said that one cannot know and believe a thing at the same time.

Eriugena explains that reason is necessary to understand and interpret revelation. "Authority is the source of knowledge, but the reason of mankind is the norm by which all authority is judged."

Sergei N. Shushkov has challenged the dominant strains of Eriugena scholarship in pointing out these key points regarding the approach to the structure, internal progression, and purpose of the *De Divisione Naturae*:

1. Rather than the specific divisions of Nature, the modes of interpreting being and non-being are to the true constitutive subject-matter of each book of the *Periphyseon* (hence, of the five parts of his system, yet four divisions).
2. The fourfold division of Nature is to be interpreted not as a basic structure of the system offered by Eriugena, but as a means of introducing dialectic to the body of theology through discourse and negation of St. Augustine's specific metaphysical hierarchy, indicating the way of resolution of the cardinal theological contradiction (God does and does not create at the same time).
3. Thus one should not associate Eriugena's work with exploration of the division of God's Nature but rather reinterpret it as an immense anti-division project to be understood as an important turn in the history of Christian thought entirely focused on the truth of God's unity and perfection, and the lived human life assenting to it.

The fourfold divisions of nature

The Latin title refers to these four divisions of nature:

1. Creating and not created.
2. Created and creating.
3. Created and not creating.
4. Not creating and not created.

The first is God as the ground or origin of all things; the second, Platonic ideas or forms as *logoi*, following St. Maximus and Augustinian exemplarism; the third, corporeal world of phenomena and formed matter world; and the last is God as the final end or goal of all things, and that into which the world of created things ultimately returns. The third division is the dialectical counterpart to the first, the fourth to the second. The inspiration of this division comes from Augustine's City of God, "The cause of things, therefore which makes but is not made, is God; but all other causes both make and are made." The first and fourth divisions are to be understood of God, regarded alternately as the efficient and sustaining cause of all as dependent upon Him, and the teleological end of all:

Let us then make an "analytical" or regressive collection of each of the two pairs of the four forms we have mentioned so as to bring them into a unity. The first, then, [and] fourth are one since they are understood of God [alone]. For He is the Principle of all things which have been created by Him, and the end of all things which seek Him so that in Him they may find their eternal and immutable rest. For the reason why the Cause of all things is said to create is that it is from it that the universe of those things which have been created after it (and) [by it] proceeds by a wonderful and divine multiplication into genera and species and individuals, and into differentiations and all those other features which are observed in created nature; but because it is to the same Cause that all things that proceed from it shall return when they reach their end, it is therefore called the end of all things and is said neither to create nor to be created. For once all things have returned to it nothing further will proceed from it by generation in place and time (and) genera and forms since in it all things will be at rest and will remain an indivisible and immutable One. For those things which in the processions of natures appear to be divided and partitioned into many are in the primordial causes unified and one, and to this unity they will return and in it they will eternally and immutably remain. But this fourth aspect of the universe, which, like the first also, is understood to exist in God alone, will receive a more detailed treatment in its proper place, as far as the Light of Minds shall grant (us). Now what is said of the first and fourth, that is to say, that neither the one nor the other is created since both the one and the other are One — for both are predicated of God — will not be obscure, I think, to any who use their intelligence aright. For that which has no cause either superior to or equal with itself is created by nothing. For the First Cause of all things is God, whom nothing precedes (nor) is anything understood (to be) in conjunction with Him which is not coessential with Him. Do you see, then, that the first and fourth forms of nature have been reduced to a unity?

These divisions are not to be understood as separated and within the nature of God, but rather they are not God at all but our thought of God because we are compelled, by the very constitution of our minds, to think of a beginning and an end. The second and the third divisions, however, do not merely exist in our thought, but in things themselves and are the things in themselves, in which causes and effects are actually divided. The second division represents the primordial causes, of which the Logos is the unity and the aggregate. All that we see divided and a multiplicity in nature is one in the primal causes. The third division represents the created universe; it is all that is known in generation, in time and in space. These divisions of Nature do not mean that God is the genus of the creature, or the creature a species of God, though Gregory Nazianzen does say, *pars Dei sumus*, which is a metaphorical use of language, to express the truth that in God we live and move and have our being, which Eriugena himself follows. The four divisions are an example of analysis descending from the most general to the most special, and then reversing the process, and resolving individuals into species, species into genera, genera into essences, and 'essences into the wisdom of the Deity, from where all these divisions arose and where they end.

Modes of non-being

Next in importance to the fourfold division of Nature for the understanding of Eriugena's philosophy, is his fivefold division of non-being. It is fundamental to Eriugena's scheme that Nature, as the general name for all things, comprises both the things which are and the things which are not. All that is perceived by the senses or understood by the intellect is said to be (*esse*). The five modes of non-being are as follows:

1. Non-being as the ineffable Godhead: All that by reason of the excellence of its nature (*per excellentiam suae naturae*) escapes the reach of the senses and of the intellect. The essence of all things belongs to

this category. Whatever is known is a kind of accident of the underlying, unknown and unknowable substance. We know anything by quality and quantity, form, matter, difference, time and space. But the essence of it, to which these attach themselves, we cannot know. Since this essence cannot be known by us, it does not exist for us.

2. Non-being as the inaccessibility of the higher to the lower: Derived from the first mode of non-being, in the order of Nature, the affirmation of the higher existence is the denial of the lower, and the denial of the lower existence is the affirmation of the higher. Anything is, in so far as it is 'known by itself or by what is above it; it is not, in so far as it cannot be comprehended by what is below it.
3. Non-being as all latent or seminal or potential existence: All men who will ever exist were potentially created in the first man; all plants that will ever exist now exist potentially in the seed of existing plants. But in this sense, actual existence is existence, and potential existence is non-existence.
4. Non-being as that which is phenomenal and material: All that exists by generation as a form of matter in space and time, and is liable to increase and decrease. All this is not, in the full sense of being. Only what is solely comprehended by the intellect is real being. All else is appearance and not reality.
5. Non-being as sin: This last mode of non-being belongs only to human nature. Man properly is in so far as he is in the image of God: in so far as he loses the image of God through sin, he is not. When is restored to him in Christ, he is again, as St. Paul the Apostle says: Who calleth the things that are not as though they were.

Cataphatic and apophatic theology

This dimension of Eriugena's theology consists largely of his direct intellectual inheritance from Pseudo-Dionysius the Areopagite. While the same predicate may rightly be affirmed and denied of God, the affirmation is metaphorical (*metaphorice*) yet truly indicative, the denial is literal (*proprie*). This depends upon the fact that every human thought involves a contrary, and God, as the Absolute, is beyond all oppositions, for He is the reconciliation and the resolution of contraries and tensions. Therefore, for Eriugena, God may be said to be *essentia*, as He is conceived to be the essence of all that is, yet strictly He is not *essentia* (of which the contrary is *nihil*) because God is beyond opposition, so he is more appropriately super-*essentia*. Similarly He is more-than-good and more-than-goodness, more-than-eternal, and more-than-eternity. The use of phrases like these is the attempt to unite the affirmation and the negation in one statement, since the Absolute involves both the positive and the negative. But, as Eriugena sees it, every one of these attempts to express the nature of God by super- is really a negation. To say that God is superessential is not to say what He is, but what He is not. God indeed is beyond all words, and all thought, for He surpasses all intellect, and is better known by not knowing, and is more truly denied in all things than affirmed.

Cataphatic and apophatic theology are discussed in detail in **Chapter I-X** in Part One, "Theological Considerations". Basically and briefly ...

Theophany

It is therefore one of Eriugena's fundamental tenets that it is impossible to know God as He is. We know that He is, but not what He is. He is known to be only through the things He has created,[52][53] that is, He is known only by theophany,[54][55][56] as Dionysius the Areopagite before him argued.[57] The sense which Eriugena attaches to this phrase is not particularly clear or consistent. It seems generally to mean every manifestation of God through the medium of the creation. But it is only the devout soul that is prepared to receive the higher manifestations, and it is only to such souls that these are given. The words of Maximus are quoted as a definition of theophany in the narrower sense. "As far as the human mind ascends in love, so far the divine wisdom descends in mercy." [58] The "creation" of the world is in reality a theophania, or showing forth of the Essence of God in the things created. Just as He reveals Himself to the mind and the soul in higher intellectual and spiritual truth, so He reveals Himself to the senses in the created world around us. Creation is, therefore, a process of unfolding of the Divine Nature. Theophany, therefore, in this more restricted sense, is, on the part of man, an ascent to God in which every good desire and deed is a step, and on the part of God, a revelation of Himself to the human spirit in such fashion as our intelligence can understand.

The nature of God

God is ἄναρχος (ánarkhos),[59] that is; without beginning, uncaused, the absolutely self-sufficient, uniquely possessing aseitas.[60] The essence of God is incomprehensible, as is the οὐσία of all that exists. But as our human intellect, which is one and invisible in itself, yet manifests itself in words and deeds, and expresses its thought in letters, and figures, so the Divine Essence, which is far above the reach of our intellect, manifests itself in the created universe. In this sense, it may even be said to be created, in those things which are made by it and through it and in it.[61] Eriugena is fundamentally following St. Paul the Apostle here in saying that the Divine Nature is made, where the Word of God is born in the heart.[62] So the Divine Nature may, in this strictly qualified sense, be said to create itself inasmuch as it creates from itself the nature of things.[63]

Filioque

While God is ἄναρχος, strictly speaking Eriugena argues, only the Father is ἄναρχος, since the Son and the Spirit have a principium in the Father and are generated and conspired respectively.[64] While Eriugena does rely on the Greeks even more so than the Western Fathers, and at times does show sympathy to Constantinople, he is a staunch defender of the filioque clause.[65][66] Eriugena argues that, as the Holy Spirit proceeds from the Father through the Son, so the Son is born of the Father through the Holy Spirit both in the Incarnation[67] and, in a much different sense, in baptism.[68]

Intersubjectivity

Moran refers to the communicating intelligences (i.e., the human merged with and in God) within Eriugena's theological schema as constituting an "intersubjective" domain of circular figuration which Eriugena inherits from Boethius: "Eriugena does not have a modern understanding of the self-enclosed isolated subject. Rather, he has the idea of a nous which as a 'circular' motion around God, and can come into a unity with Him." [69] Likewise, Boethius' description in the Consolation notes that the relation between Providence and Fate is as a set of concentric orbits around an axis, with Providence as the unmoved axis itself and Fate as occupying the outermost orbits, which must traverse ever longer distances around that center.[70] For both Eriugena and Boethius, to the degree to which a soul can infuse itself with the Godhead, which is the omnipresent center, it can also be absorbed in its undivided, non-dual nature, and cease to experience the distension of being torn in multiple directions thus attaining beatitude.[71]

Additionally, Moran argues that the notion of intersubjectivity is in Eriugena's philosophy, and it is "anti-hierarchical, bubble-like". Eriugena writes of a communion that occurs in the mind through intellectual penetration such that whenever the intellect knows something perfectly, it is "made in that thing and becomes one with it." Eriugena explication of his cosmological schema reveals how the traditional hierarchy of angels placed above the human[72] is uniquely transfigured by Christian revelation[73] and folded through the soul's proximity to the divine:

If you look more closely into the mutual relation and unity which exist between intelligible and rational natures, you will at once find that not only is the angelic nature established in the human but also the human is established in the angelic. For it is created in everything of which the pure intellect has the most perfect knowledge and becomes one with it. So closely indeed were the human and angelic natures associated, and so they would be now if the first man had not sinned, that the two would have become one. Even as it is this is beginning to happen in the case of the highest men, from whom are the firstborn among the celestial natures. Moreover the angel is made in man, through the understanding of angel which is in man, and man is in the angel through the understanding of man which is established in the angel. For, as I have said, he who has a pure understanding is created in that which he understands. So the intelligible and rational nature of the angel is created in the intelligible and rational nature of man, just as the nature of man is created in the nature of angel, through the mutual knowledge by which angel understands man and man angel.[74]

Becoming-other through mutual embrace or absorption represents a medieval complication of the purely top-down hierarchies often representative of classical Neoplatonism. They are complicated insofar as, at one level of structure the hierarchy remains, but at another level, it is transcended and included in a wider notion of a single

divine-self (i.e., network-refraction). A later medieval concordance is found with St. Thomas Aquinas, who in the thirteenth century wrote that, when a spiritual entity exists fully and completely in something, it contains that thing and is not contained by it.[75] Gardiner notes how that is similar to Object-Oriented-Ontology, that in the relationship of knowing, a subject is brought into contact with an Other outside of the self, not in the interior of that Other, but rather in the interior of the relationship-with-that-Other-as-object.[76]

Learned ignorance

In Eriugena's *De Divisione Naturae*, the most excellent part of our nature as moving is nous, and as essence it is οὐσία. All emanation or "division," and all return or "analysis" begins and ends in οὐσία.[77] It is known only in this exitus-reditus process; immediately it is knowable neither generically nor in particulars. According to Wayne J. Hankey, the ambiguity that was in Boethius is absent from Eriugena, who is far more confident in his trinitarianism: οὐσία names the One, the Godhead shared between persons.[78] The Divine "nothingness by excellence" is "beyond all things which are and which are not".[79] By plunging into this divine nature, which is said not to be, "because of its ineffable excellence and incomprehensible infinity", [80] Eriugena follows Pseudo-Dionysius's apophaticism into its extremes towards "the ineffable and incomprehensible and inaccessible brilliance of the divine goodness, unknown to any intellect", and so beyond the activity of intellect. The mystical attainment of this ascent to God is through a learning of ignorance; a trained effort towards going beyond discursive thought. According to Trouillard, learned ignorance is essential to human dignity and its cosmic role:

God does not know himself. And the reason for this ignorance, is that God is nothing... God... remains... inaccessible to all thought and is communicable only as motion. Therefore we distinguish in God, so to speak, two levels: that of the Deity, which is an irremediably obscure centre, and that of God the Creator, who, by the rays which he projects, makes himself known through his creatures... Our spirit is in itself a silent spontaneity and, nonetheless, manifests itself to the outside and to itself by signs and figures... Because it is in the image of God our mind is nothingness, and this is why it expresses the totality of the universe. Becoming the meanings which it emits, it creates itself in them, and nevertheless however refuses to define itself by its own creations.[81]

God is intimately woven to the human as the human is to Divinity. Eriugena came to understand human nature as more than being, "that in which all things could be found," but rather became; "that in which all things are created." The human is the workshop of creation; as the *imago Dei*, the human is the image of the creator. It is the medium in which God knows and creates himself out of his own unknowing nothingness, precisely because, uniquely among beings, the human possesses all the forms of knowing and ignorance, including sensation.[82] Donald Duclow explains the indissoluble marriage between the two:

Eriugena places the human being among the primordial causes within the divine Word. He further describes humanity as created in God's image and likeness, with two basic features: (1) a self-ignorance whereby humanity knows only that it is, not what it is; and (2) a self-knowledge that embraces all creation, visible and invisible. In the first, the human being reflects God's unknowable transcendence. In the second, the human being becomes — in Maximus's phrase — "the workshop of all things, *officina omnium*," and faithfully mirrors God's creative Wisdom. Simultaneously transcending and embracing the whole created order, humanity thus becomes a precise image of its divine exemplar.[83]

This is why Eriugena, while being a master of the dialectic of a Greek Rationalist flavour, is able to paradoxically "praise ignorance more than knowledge". It is precisely this kicking away of discursive multiplicity which can only gesture towards but never fully capture God that accords better to God:

For the human mind does know itself, and again does not know itself. For it knows that it is, but does not know what it is. And as we have taught in the earlier books it is this which reveals most clearly the Image of God to be in man. For just as God is comprehensible in the sense that it can be deduced from His creation that he is, and incomprehensible because it cannot be comprehended by any intellect whether human or angelic nor even by Himself what He is, seeing that He is not a thing but is superessential: so to the human mind it is given to know one thing only, that it is — but as to what it is, no sort of notion is permitted; and, a fact which is stranger still

and, to those who study God and man, more fair to contemplate, the human mind is more honoured in its ignorance than in its knowledge; for the ignorance in it of what it is is more praiseworthy than the knowledge that it is, just as the negation of God accords better with the praise of His Nature than the affirmation, and it shows greater wisdom not to know than to know that Nature of Which ignorance is the true wisdom and Which is known all the better for not being known. Therefore the Divine Likeness in the human mind is most clearly discerned when it is only known that it is, and not known what it is; and, if I may so put it, what it is, is denied in it, and only that it is, is affirmed. Nor is this unreasonable. For if it were known to be something, then at once it would be limited by some definition, and thereby would cease to be a complete expression of the Image of its Creator, Who is absolutely unlimited and contained within no definition, because He is infinite, beyond all that may be said or comprehended, superessential.[84]

Alleged pantheism

De Divisione Naturae was condemned by a council at Sens by Honorius III (1225), for appearing to promote the identity of God and creation, and by Gregory XIII in 1585.[18] According to Max Bernhard Weinstein, Eriugena argued on behalf of something like a panentheistic definition of nature.[85] Lutheran theologian Otto Kirn severely criticised Weinstein, claiming sweeping generalisations and shallow assertions pertaining to Eriugena and other such Neoplatonic theologians.[86] Eriugena maintained that for one to return to God, he must first go forth from Him[87] and so Eriugena himself denied that he was a pantheist.[88] Étienne Gilson also argued that Eriugena's alleged pantheism derived from a misunderstanding of the nature of "division" in the Periphyseon.[89] Gilson writes that when we read Eriugena, "nature" is not meant as a totality of which God and creatures are parts; or as a genus of which God and creatures would be species. God is not all things, nor are all things God and Eriugena explicitly tells us that such a conception is a monstrosity.[90] The division of nature signifies the act by which God expresses himself in hierarchical declension, and making himself known in a hierarchy of beings which are other than, and inferior to, him by being lesser grades of reality; "yet, in point of fact, Eriugena only means that each and every creature is essentially a manifestation, under the form of being, of what is above being. The esse of a being is but a light radiated by the superessee, which is God." [91]

Historian of philosophy Frederick Copleston summarized the matter thus:

If one takes a particular set of isolated statements of John Scotus one would have to say that he was either a pantheist or a theist. For example, the statement that the distinction between the second and third stages of Nature is due only to the forms of human reasoning[92] is in itself clearly pantheistic, while the statement that the substantial distinction between God and creatures is always preserved is clearly theistic. It might seem that we should opt for one or the other set in an unqualified manner, and it is this attitude which has given rise to the notion that John Scotus was a conscious pantheist who made verbal concessions to orthodoxy with his tongue in his cheek. But if one realises that he was a sincere Christian, who yet attempted to reconcile Christian teaching with a predominantly neo-Platonic philosophy or rather to express the Christian wisdom in the only framework of thought which was then at hand, which happened to be predominantly neo-Platonic one should also be able to realise that, in spite of the tensions involved and the tendency to rationalise Christian dogma, as far as the subjective standpoint of the philosopher [i.e., of John Scotus] was concerned a satisfactory reconciliation was effected.[93]

Apocatastasis

Eriugena is believed to have held to a form of apocatastasis or universal reconciliation,[94] which maintains that the universe will eventually be restored under God's dominion. His form of apocatastasis however is fairly unique. It is not Christian Universalism,[95] but rather part of a broader Neoplatonic eschatology. As the Cosmos for Eriugena gradually unfolds the grades of reality from the Godhead, so too will the various grades enfold into each other in a cosmic return to God, of which the Incarnation of Christ is a necessary tool for such a reversion. After the resurrection, the division between the sexes shall be abolished and elevated man will be as the fall had never happened for the elect. The body of each person will return to the soul from which it was separated such that, "life will become sense; sense will become reason and reason will become pure thought. A fourth stage will return

the human soul to its primary cause or Idea and, together with the soul, the body it has reabsorbed...The fifth and last moment of this universal "analysis" will bring the terrestrial sphere back to Paradise. As this movement will propagate itself from sphere to sphere, nature and all its causes will let themselves be progressively permeated by God as air is by light. From that time and on, there will be nought else but God."[96]

However for Eriugena, this deification does not result in annihilation, because he believes that things are more real in their primordial causes than in themselves, and as such he evades the Origenistic apocatastasis whereby the lower grades of reality are annihilated. So, while everything has indeed returned to God in Eriugena's account, material hell is a "pagan superstition", eternal punishment remains as "the supernatural distinction between the chosen and the condemned will remain whole and will persist eternally, but each one will be beatified or punished in his own conscience."





Chapter III-X

HERMETICISM

As above, so below; as within, so without.





Chapter III-X

KABBALAH





PART IV — NATURAL EVOLUTION



Chapter IV-1

INTRODUCTION TO NATURAL EVOLUTION

Within this Part of this *Cosmogony* book I present a series of chapters on the *natural* manifestations of the Natural Sequence, hence the name of this Part, “Natural Evolution”. Per the previous exposition on the “Great Chain/Nest of Being”, we surmise that the entire natural Cosmos has evolved, so naturally this series of chapters discusses the evolution of inanimate realms as well as animate realms. Many readers will regard the “scientific” evidence for the Natural Sequence presented in this Part more highly than the type of evidence provided in the previous Parts, which covered such realms of inquiry as religion, spirituality, philosophy, and theology.

On a personal note, I named it the “*Natural* Sequence” primarily because of my discovery of the information that is revealed and reviewed in this Part of this *Cosmogony* book. This Part consists of numerous chapters that discuss various instantiations of the Natural Sequence that we find in nature, from the longest time scale to shorter time scales. As with other Parts, these natural instantiations are also per the “Great Chain/Nest of Being” (GC/NB) discussed in the Introduction to the book, Part I.

This is the first in a series of chapters on various branches of academic research that bear on the subject of natural evolution. These include, but are not limited to, cosmology, biology, paleontology, and anthropology. As such, it is very much to be expected that the evolution of inanimate and animate realms might follow the Natural Sequence, which alleges to be about a discernible pattern of predictable stages of development of one sort or another, from the shortest to the longest time cycles in Nature.

In this chapter, an introduction to the topic is presented. In subsequent chapters, outlines of the specific work of various luminaries in various fields of natural evolution are discussed, and compared and contrasted to the Natural Sequence schema, and compared and contrasted to each other. My conclusion to this research is that, indeed, natural evolutionists are seeing instantiations of the Natural Sequence. In fact, there are instantiations of natural evolution that we all partake of because it has resulted in a particular structure of the human brain, and this affects our lived experience. Because knowing about this helps us to be more self-aware and other-aware, I regard Part IV of the *Cosmogony* book as one of the most important Parts of this book. For the same reason, I have made it one of the longest Parts.

The following numbered comments apply to each of the following chapters on natural evolution.

1. Because of the convenience that abbreviation affords, hereinafter I reduce the phrase “natural evolution” to NatEvo.
2. **Most** of the quoted information in these chapters in this Part of the *Cosmogony* book has been extracted from online Wikipedia articles. This makes it easy for readers of this book to access the referenced material, and, from there, readers may be led to other sources mentioned in the Wikipedia articles. (One can spend hours following hyperlinks down various ‘rabbit holes’ into the ‘wonderland’

of the web of knowledge available on the internet.) Wikipedia is a so-called “secondary” resource, but it often references so-called “primary” resources, meaning, the published works of the original NatEvo researchers. My second best resource for information in this Part has been various websites other than Wikipedia, but also freely and conveniently available on the internet, and I provide links to them. Only as a last resort do I refer to and quote from books that one would need to purchase or check out of a library if one were inclined to explore my references.

3. Regarding the acceptability of Wikipedia information, it may be, in some cases, that most credentialed scholars and academics do not perceive it as an authoritative and objective source. Because I am not myself a credentialed scholar or academic, I am in no condition or position to evaluate these claims, or to evaluate the information that Wikipedia presents. I rely on Wikipedia because it is convenient for me to borrow from it — it is relatively unencumbered by copyright, so long as I reference the specific article and the date when I retrieved the quotation. The situation is the same with other internet resources that I may quote, regardless of their standing in academic communities: *caveat emptor* — do your own research.
4. I like to have long quotations within the main body of my text because it saves readers from the inconvenience of looking up the reference, and/or looking at foot-notes and/or end-notes. It also demonstrates to the reader that: 1) I am not making this stuff up; 2) I have done some research homework; and 3) these other writers are likely smarter and more knowledgeable and more talented than I am, thus more reliable as well as easier to read.
5. My penchant for assimilating a lot of information and then reducing it down to fundamental principles is found in abundance in this Part of the *Cosmogony* book. This is the way my brain works, but I acknowledge that it has its advantages and disadvantages as far as the reader is concerned, and it might not appeal to everyone, or produce totally accurate results. Not only is my work a reduction of the work of scientists, but my work is derived from secondary sources, such as Wikipedia, that are also reductions; certainly my results are even less complete and less comprehensive than Wikipedia. All chapters are, of course, summaries and simplifications of lifetimes of work by the original researchers. It would take a lifetime of work on my part to fully assimilate their lifetimes of work, and obviously I have not done that. There is so much more knowledge, both interesting and useful, about these scientists and their work than is offered herein, so I suggest that those readers so inclined pursue the leads and links that the referenced internet materials provide. If my limited knowledge and my reduction process has resulted in my misunderstanding and distorting their work, then I offer my apology to any readers who may know more than I do about the work of these researchers; feedback is welcomed.
6. In each of the following chapters, there might be mention of some scientists, researchers, and academics other than the one that the chapter is about. I have given some of those people a chapter of their own in this book, but others I have not. Their research and their models corroborate the thesis of this *Cosmogony* book, so far as I can tell, but I could not include everyone without this book becoming even more unwieldy than it already is. I had to be selective, but inclusive enough to get my point across. Nevertheless, readers are invited to investigate these additional and important scientists, if they are so inclined.
7. For my *Cosmogony* book, I have selected the clearest and most complete examples from NatEvo researchers in terms of the obvious correlation with the Natural Sequence schema. Then, I have selected those portions of their work that appears to be the most relevant to the Natural Sequence schema. Where possible, I have quoted them in their own words, using their own summaries. I know that I could therefore be criticized for “cherry-picking” the data to support my case for the Natural Sequence, but so be it.
8. Each and every natural evolutionist reviewed in these chapters stands in a long line of researchers over the last hundred years or so. Some of them are still living and working. It looks to me as if they each furthered the work of those who preceded them, and/or provided a side branch to the work of their predecessors. These chapters are arranged to show this historical chronological development in the realm of NatEvo, as research is built upon research, as understanding is built upon knowledge.
9. Each of these scientists has critics, other researchers who find some defects and deficiencies with their models. I am in no position to criticize the critics, so I just report what I find.

10. As much as seemed reasonable to me, my aim has been to make each of these chapters on NatEvo somewhat self-sufficient, so as to minimize the reader needing to refer back and forth to other chapters in this Part, just in order to get the gist of what each chapter is saying.
11. None of these chapters on NatEvo are about any practical application of the information; my focus in these chapters is on showing that these models unwittingly substantiate and embellish the Natural Sequence schema.
12. The Natural Sequence schema is an idealized presentation of near-ultimate archetypes. Archetypes are abstractions, and as such they are pure and simple. Concrete instantiations of the Natural Sequence archetypes, such as the stages of cosmic and biological evolution, have some of the discernible and recognizable nature of the archetypes, but the manifestation is relatively distorted and complex. My endeavor and aspiration in this entire book is to present my discoveries and explanations about how the abstract archetypes elucidate the concrete instantiations, and the concrete instantiations elaborate on the archetypes.
13. Because scientific research aspires to be objective but does not always succeed, the study of NatEvo domains is an inherently arguable exercise that involves subjective evaluation. This built-in ambiguity is why there is some disagreement among the models that various NatEvo researchers have proposed. The models put forward by academic researchers are not, and cannot be, as exacting and definitive as the Natural Sequence is. One corollary to this limitation on accuracy in NatEvo models is that I might not have always identified the best fit correlation of the various ambiguous models with the unambiguous Natural Sequence schema. Therefore, *caveat emptor* — do your own research.
14. Despite the inherent ambiguity of the subject and object, nature, the field of NatEvo seems to be clarifying, over the decades of its existence, in the direction of definitive correlation with the Natural Sequence schema. Of course, this Part of this *Cosmogony* book is aimed at nudging the field further in that direction, if any of the academic researchers happen to become aware of the Natural Sequence schema, and then care to take the Natural Sequence schema seriously.
15. My intention in these chapters is also to further the case argued in this entire book, namely that the Natural Sequence schema provides the abstract structural framework that *explains* the stages discovered by researchers in the field of NatEvo. If I may be so presumptuous and pretentious, my claim is that, until their correlation with the Natural Sequence schema is understood, these models only provided a *description* of the stages; they document an observed effect without knowing the underlying cause or source, which I believe the Natural Sequence schema to be.
16. As we will see in these chapters in this Part, different natural evolutionists have researched different domains of the world, at large and at small. *As it turns out, these various realms can be categorized per the Natural Sequence schema. For instance, there is physical development in the body (Ordinal Action), there is emotional, moral, and social development (Ordinal Inspiration), there is intellectual and cognitive development (Ordinal Expression), there is psychological development in general (Neutral Assimilation), there is aesthetic and philosophical development (Cardinal Expression), there is ethical and spiritual development (Cardinal Inspiration), and there is self-governing or so-called “ego” development (Cardinal Action). This Part V discusses the work of at least one academic naturalist who did their research in one of these seven realms.*
17. The NatEvo stages have a space-like and a time-like metaphor. In the space-like metaphor, each stage can be ‘higher’ or ‘lower’ in the stack, somewhat like the strata of sedimentary rocks in geology. I use this metaphor in the tables where the stages are listed, with the ‘lowest’ stage at the bottom of the table and the ‘highest’ stage at the top of the table. In the case of the time-like metaphor, the stages of NatEvo models are not actually a metaphor, because the stages are in fact steps in the journey of the Cosmos through time. Throughout this Part, each stage is referred to as “low(er)–earl(ier)” and “high(er)–late(r)”, depending on where they are on the full spectrum of the stages of the model. These very words are typically used in the NatEvo models by their originators and their expositors. In terms of the Natural Sequence schema, these terms are used in both an absolute way and in a relative way. In the absolute way, “low–early” and “high–late” refer to Ordinal stages and to Cardinal stages respectively. In the relative way, except for the lowest–earliest stage, there are stages that are earlier–lower, and except for the highest–latest stage, there are stages that are higher–later.

18. Just so you know that there is no attempt on my part to misrepresent my level of expertise in the realm of NatEvo, I declare under penalty of perjury that I have no credentials whatsoever wherewith I am allowed to pontificate authoritatively in this realm. It is totally presumptuous, pretentious, and pompous for me to write this Part. However, I do claim some expertise in understanding the structure and meaning of the Natural Sequence schema. On the Dunning-Kruger competence-confidence curve, I am competent in the latter, and incompetent in the former.
19. In the Introduction to this *Cosmogony* book in Part I, there is a chapter on “The Psychology of the Natural Sequence”. That chapter expounds on the notion that there is a certain personality type that loves to discern the patterns, the regularities, the systematics, of various realms of the Cosmos. There are people who apply this penchant and their talents for it to the subject of NatEvo. This chapter is a study of some of those attempts to discern the regular patterns that NatEvo researchers claim to have discerned.
20. People who study NatEvo phenomena attempt to derive and arrive at so-called “models” of the phenomena. It is often said that “the map is not the territory”, so no model can be expected to capture the entirety of the phenomena with complete accuracy. Models are attempts to reduce the phenomena to their most salient features. My claim is that the Natural Sequence schema is the essence of the time structure of cyclical developmental phenomena.

Review of Natural Sequence Attributes

For your convenience, the following table shows the Attributes of the Natural Sequence schema. Throughout this Part, reference will be made to these Attributes as they apply to various NatEvo models. To understand all of what you read in this Part, it would help you considerably if you commit this table to long-term memory right now. Or maybe just print it out and refer to it as needed while you read the chapters of this Part of this *Cosmogony* book.

Table IV–1a — ATTRIBUTES of the NATURAL SEQUENCE							
RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
DIALECTIC	–ORDINAL–			=NEUTRAL=	+CARDINAL+		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
PROCESS → ASPECT ↓	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
CENTER	MOTION	EMOTION	INTELLECT	IMPULSE	CONCEPT	SYMPATHY	EXCITATION

My comments on this table are as follows:

6. The names (and numbers) in headers of rows and columns are described and explained in Chapter I-x in Part I, “Structure of the Natural Sequence”.
7. ATTRIBUTES: The first five rows (Rank, Dialectic, Axial, Dimension, Direction) show the Attributes of the Natural Sequence schema. These are explained and described in Chapter I-x in Part I, “Attributes of the Natural Sequence”.
8. PROCESS: The sixth row shows the names of the so-called “Processes” of the Natural Sequence schema.
9. ASPECT: The names of one so-called “Aspect” of the Process/Aspect System (Center) is shown in the last row. There are six other Aspects in the Process/Aspect System, but the one that seems most relevant to the discussion of NatEvo models is Center.
10. CENTER: The seven so-called “Centers” shown in the last row can be thought of as a sequence. They correlate with the Attributes of the Natural Sequence, and they are part of many DevPsy models in terms of the so-called “dimensions” of personality, namely the sensorial-behavioral dimension

(“Action” in the Natural Sequence schema), the emotional-social dimension (“Inspiration” in the Natural Sequence schema), the mental-cognitive dimension (“Expression” in the Natural Sequence schema), and experience in general (“Assimilation” in the Natural Sequence schema). The appearance of Centers in some NatEvo models will be noted in the sections and chapters that follow. Centers are discussed at length in **Chapter Xx in Part X**, “The Seven Centers”.

11. The bottom four rows refer to developmental sequences that run on different time scales or schedules, all having to do with ‘growing up’ — increasing psychological “maturity” considered as a whole. The shortest time scale is Life-Stage and the longest time scale is Culture.
12. In my opinion, the table above shows the greatest amount of respect for, and does the least amount of violence to, the DevPsy models discussed in this chapter and in subsequent chapters, as constrained by the theoretical framework embodied in the Natural Sequence schema, which I regard as canonical, based on the evidence and argument presented throughout this book.

These four Aspects (Life-Stage, Zone, Worldview, Culture) of the Natural Sequence schema determine a person’s overall psychological maturity. Each person is usually at a different stage of each of the four Aspects. Each Aspect influences how each of the other Aspects manifests, such that it is difficult to sort out where exactly a person is “coming from” in general, and in specific instances. This is one of the facts of life that makes “pigeon-holing” people so difficult when assessing their psychological maturity. One might hope that information in this Part of this *Cosmogony* book will assist the reader with the task of understanding and tolerating the lack of psychological maturity in oneself and others, and show the way to greater psychological maturity where that is a possibility. In other words, this *Cosmogony* book need not be a mere academic exercise in understanding how the world works, even if that is its main function.

Other than “growing up”, as systematized in these four Aspects of the Natural Sequence schema, there is yet another developmental track that might be called “waking up”, which is often referred to as “spiritual growth”, and which I refer to as “Enlightenment” in this *Cosmogony* book. This track is discussed in several chapters in **Part VI — “Paths to Enlightenment”**. This time track influences and is influenced by the four tracks discussed in this and other Parts of this *Cosmogony* book.

Principles of the Natural Sequence schema

[[Borrowed from the DevPsy Part; modify for this NatEvo Part. This section might get a significant rewrite after I finish the full Introduction to the Natural Sequence schema in Part One.]]

Another useful preliminary discussion, before we delve into a review of NatEvo models, it would be helpful to review what I refer to as Natural Sequence, Canonical Septenary Principles, because these show up repeatedly in the discussion of the various NatEvo models that follow. This section is a condensation of **Chapter I-x** in Part I, “Natural Sequence Principles”. I regard these as “principles” because they can be discerned in many if not most of the staged developmental septenaries reviewed in this book. It seems expedient, and potentially helpful, to review the Principles here because they are especially relevant to natural evolution.

Table IV-1a above provides a graphic representation for the discussion of the Natural Sequence Principles, so look back and forth between the table and the discussion below. The top five rows of the table below the title row show the Attributes of the Natural Sequence: Rank, Dialectic, Axial, Dimension, Direction. The bottom row (below the double line) show the Centers.

- **HOLARCHY:** The first row shows the RANKS of the Natural Sequence; the practice of assigning a rank is *per se* a kind of so-called “holarchy”. Regarding the Life-Stages, it is said that the perceptions and the perspective in each stage between birth and death are built on the foundation of the experiences had during previous stage(s), such that each stage includes the previous stage(s), but transcends it or them. This means that, at each stage, there are additional and different characteristics and qualities; specifically, each stage provides a more encompassing perspective and a more mature perception. I often use the hyphenated phrases “higher-later” and “lower-earlier” to refer to the relative position of stages in the spectrum of the holarchy. This Principle has other names, such as: development, evolution, advancement, and emergence.
- **TRANSITION:** In the table, there are vertical lines that separate each rank in the holarchy. As we will see in the sections that follow, each Life-Stage is said to be separated from previous and subsequent

Life-Stages by a troubled, turbulent, traumatic, tortured metamorphosis phase. This is a so-called “Transition”, when people are said to have an “identity crisis”, when they “do not know who they are any more”, but then they make the required course correction and end up in the next rank or stage of the holarchy. Typically and normally, there is a relatively stable plateau between the metamorphoses. If a person emerges from the Transition in a healthy way, then the following plateau is relatively stable and productive; if a person does not emerge from the Transition in a healthy way, then the trauma continues. These metamorphoses can be compared to “phase transitions”, e.g., as changes of state from solid to liquid to gas. The person metaphorically remains as the same basic ‘substance’ or ‘essence’, but the personality undergoes substantial behavioral system, value system, and belief system changes during the Transition from one plateau to following plateau.

- PLATEAU: Between the metamorphoses in the holarchy, there are relatively stable phases that I refer to metaphorically as the “plateaus”. During the plateau, there is progress, but it is evolutionary rather than revolutionary, which the Transition phase is. It is not as if the ‘plateaus’ are metaphorically ‘flat’; they have an ‘incline’, and those inclines lead up to the next ‘cliff’ to climb, aka the metamorphoses. The plateaus and the metamorphoses have different natures and characteristics.
- ATTRIBUTION: The seven Life-Stages have so-called “Attributes” as shown in the table: the Dialectic Attributes are named Ordinal, Neutral, Cardinal; the Axial Attributes are named Action, Inspiration, Expression, Assimilation. The combination of Dialectic and Axial Attributes are called Septenarian Attributes. As explained in my book *The Process/Aspect System*, personality phenomena in the time/space (subjective) realm are analogous to the geometry of physics phenomena in the space/time (objective) realm. The Septenarian Attributes have both so-called “Dimensions” (space-like being-noun) and so-called “Directions” (time-like doing-verb) in terms of geometry, as shown in the table. The change in Attributes from Life-Stage to Life-Stage causes the so-called “identity crisis” of a Transition: the personality makes quantitative and qualitative changes in both space-like being-noun (Dimension) and time-like doing-verb (Direction) by successfully passing through the Transition from Life-Stage to Life-Stage.
 - DIALECTIC: A corollary to the Attribution Principle is the so-called “Dialectic” Principle, which is a consequence of the Dialectic Attributes, not the Axial Attributes. Dialectic refers to the struggle between complementary contraries that moves an interacting system forward to a resolution or reconciliation. This word “dialectic” hearkens back to the work of Fichte and Hegel, two German philosophers from a couple hundred years ago. You might have heard of “thesis, antithesis, synthesis”. This is the notion that progress is made in the universe — as well as in human life through the ranks of holarchy from Life-Stage to Life-Stage — by the reconciliation of contradictions, meaning that they work through their issues with each other until they arrive at at neutrality with each other, but the system as a whole then ends up at a higher level and later stage. In the Life-Stage schema, in terms of the Dialectic Attributes, “thesis” is a Cardinal assertion that is countered by its “antithesis”, an Ordinal assertion; the two interact both during a Transition and during a plateau, and eventually the contraries combine into a Neutral state at the next higher-later Life-Stage ... until that plateau is disrupted with the initiation of the next Transition.
- FEEDBACK: Besides the notion that progress through the Life-Stages is driven by internal changes in Septenarian Attributes from Life-Stage to Life-Stage as described above, there are also changes driven by interaction between internal conditions and external conditions; I refer to this interaction as the “Feedback Principle”. The feedback loop between internal “nature” and external “nurture” influences the characteristics of each Life-Stage. Sometimes this Principle is referred to as “agent/arena” catalyst. The basic idea is that “it takes two to tango”, meaning that without the interaction of self and not-self, no progress is made. (The Feedback Principle is a specific variation of the more general Dialectic Principle.) This Principle embodies a deep philosophical insight about how the universe ‘dances’ through cycles of time. That is, as a person develops over the course of a lifetime from birth to death, different internal systems come ‘on line’, so to speak. At the same time, the developing person changes and enlarges their environment, and this external system provides feedback to the internal system. Thus, back and forth and round and round we go in an ascending spiral of perceptual-behavioral, emotional-social, mental-cognitive, and consciousness-ego development as the inner world processes and assimilates the outer world ... and *vice versa*.

- **FRACTALICITY:** In the **channeling** that we will review further on, the seven Life-Stages are said to consist of seven sub-stages. We have already seen above, and will see again below, that the seven Life-Stages are said to be a subset of the seven Levels, the seven Levels are said to be a subset of the seven Ages, and the seven Ages are said to be a subset of the seven Planes. “Fractalicity” is my invented word for this phenomenon; it is the combination of “fractal” with “cyclicity”. The span of a full human lifetime is just one time-cycle that correlates with the septenarian (seven step) Natural Sequence schema. There are septenarian times-cycles that are longer, and there are septenarian time-cycles that are shorter than the span of a full human lifetime. The entire spectrum from the shortest to the longest septenarian time-cycle is commonly referred to as the “Great Chain/Nest of Being” in esoteric literature. Each instantiation of the septenarian time-cycle in the GC/NB has different qualities and characteristics because of differing circumstances and situations at that time scale, but there is a similarity from one time cycle to another (per the Septenarian Attributes), which is what one sees in a fractal. Fractalicity is really just an extension of the Hierarchy Principle into septenaries ‘above’ and ‘below’ whatever septenary in the GC/NB is under discussion.
- **ME-WE:** In the table, in the Dialectic row, notice the –ORDINAL– (ME) and the +CARDINAL+ (WE) cells. Because of the Fractalicity Principle, in terms of the Life-Stages, each Life-Stage typically starts out in the ego-centric so-called “me” phase of the plateau in the first three sub-stages. In the three sub-stages the person is focused on dealing with, and presumably fully resolving, the Transition at the start of a new Life-Stage. If the Transition is in fact resolved in a healthy way during the (Ordinal) ME phase, then the person can refocus on the socio-centric so-called “WE” phase during the last three (Cardinal) sub-stages of the plateau of the Life-Stage. The Me-We Principle applies to each Life-Stage, but it also applies to the entire septenary of Life-Stages, the “ME” phase correlates with the Ordinal Life-Stages, and the “WE” phase correlates with the Cardinal Life-Stages. And, of course, the ME-WE Principle also applies to the longer developmental time-cycle septenaries: the Levels, the Ages, and the Planes. (I borrowed this Principle and this terminology from some of the developmental psychologists reviewed in my *Natural Sequence* book.)
- The last three rows of the table show the other developmental septenaries known to the Michaelian teachings (Level, Soul Age, Plane), with the names that I prefer, as explained in the relevant chapters here in Part Four of this *History* book.
- **TAIJITU TANGO:** As chapter 42 of the Tao teh Ching says, “Tao produced the One, the One produced the Two, the Two produced the Three, the Three produced all things. All things carry the Yin and embrace the Yang, and through the blending of the Chi they achieve harmony.” The Cosmos as a whole (Oneness) is balanced or symmetrical, but then it is divided (Twoness) into an unbalanced, asymmetrical yin and yang, and then both the yin and the yang are split three ways (Threeness). Add this all up and you have the Canonical Septenary. According to the Taijitu Tango Principle, there is a yin/yang and a yang/yin balance or symmetry in the Septenary as a whole. Recall from discussion in other chapters of this *Cosmogony* book that the TTP refers to a paragraph in the “Michael Math” chapter of *More Messages from Michael*: “You can perceive that [from the point of view of space, being, noun] while one is ordinal and seven is cardinal, that [from the point of view of time, doing, verb] the first half is cardinal and the last half is ordinal — in other words, the pattern ‘doubles back on itself’. This is what is implied by the ‘yin-yang’ symbol, and it would probably be of use to keep the ‘yin-yang’ in mind while considering what we tell you of the function of levels and numbers.” [MMFM, p. 189] **One way to explain what this means in terms of the Natural Sequence schema in regard to NatEvo is that a septenarian cycle start out with the most vitality and ends with the least vitality and is therefore *entropic*. Thus Cardinal Action and the Origination Process progress through the cycle to Ordinal Action and Termination Process. But on the other hand the septenarian cycles are also the opposite — *syntropic* — in that they start out with an emphasis on the earlier-lower-outer Ordinal Action and the Termination Process and progress to later-higher-inner Cardinal Action and Origination Process [The application of the TTP to the understanding of what happens in the story arcs of the NatEvo instantiations should be expanded considerably in future edits of this chapter.]**

Toward the end of each chapter on a specific DevPsy model, I will point out where that model recognized one or another of these Principles, and where they did not. Every model recognized at least some of the Principles, but not always the same Principles as other models. However, all of the Principles have been recognized in the collective field of DevPsy. The fact that not all Principles are recognized by all DevPsy researchers, no matter

how much research they do, indicates that these Principles are archetypal, but people are not; they are ambiguous and diverse as hell. Principles can be obscured behind the ambiguity and diversity that is present in every human being.

[[Describe in detail how biological evolution (variation + selection = evolution) is an instantiation of the Dialectic Principle (thesis + antithesis = synthesis): random chaotic mutation produces a variation inside a living organism, then the environment evaluates the fitness of the variation such that it either promotes or demotes the survivability of the variation. Round and round the Feedback goes as the self and the not-self interact and make adjustments to each other.]]

[[Make a reference to the autodidactic universe idea discussed in the Introduction to the book.]]

“Big History”

Big History is an academic discipline which examines history from the Big Bang to the present. Big History resists specialization, and searches for universal patterns or trends. It examines long time frames using a multidisciplinary approach based on combining numerous disciplines from science and the humanities, and explores human existence in the context of this bigger picture. It integrates studies of the Cosmos, Earth, life, and humanity using empirical evidence to explore cause-and-effect relations, and is taught at universities and primary and secondary schools often using web-based interactive presentations.

Historian David Christian has been credited with coining the term "Big History" while teaching one of the first such courses at Macquarie University. An all-encompassing study of humanity's relationship to cosmology^[15] and natural history has been pursued by scholars since the Renaissance, and the new field, Big History, continues such work.

[>https://en.wikipedia.org/wiki/Big_History< — retrieved 02 November 2023]

[[Much more, relevant to this Part, can be gleaned from that Wikipedia article]]





Chapter IV-x

ARTHUR YOUNG — THE REFLEXIVE UNIVERSE

In the early 1980s, I serendipitously discovered the book *The Reflexive Universe* authored by Arthur M. Young. He was one of the inventors and developers of the Bell helicopter shortly after WWII. He was also inclined to philosophize about the fundamental structure of the universe. In addition to *TRU*, he wrote several other books, which I also have. He is now deceased, but his collection of written works is preserved on the website <https://arthuryoung.com/>.

Brief Biography of Arthur Young

From my usual source:

Arthur Middleton Young (November 3, 1905 – May 30, 1995) was an American inventor, helicopter pioneer, cosmologist, philosopher, astrologer, and author. Young was the designer of Bell Helicopter's first helicopter, the Model 30, and inventor of the stabilizer bar used on many of Bell's early helicopter designs. He founded the "Institute for the Study of Consciousness" in Berkeley in 1972. Young advocated process philosophy, an attempt to integrate the realm of human thought and experience with the realm of science so that the concept of universe is not limited to that which can be physically measured. Young's theory embraces evolution and the concept of the great chain of being. He has influenced such thinkers as Stanislav Grof and Laban Coblentz.

Thereafter followed a few paragraphs of biography, mostly having to do with his role in the invention and development of the Bell helicopter before, during, and after World War II. Then this:





























In 1976, Young's theory of evolution of life on Earth — which attempted to synthesize understandings from geology, biology, anthropology, psychology, and parapsychology — appeared under the title *The Reflexive Universe*. Young accepted the general "theory of evolution", but pointed out where he felt the Darwinian theory was insufficient to the facts. The book also incorporates a brief speculative discussion of further human psychological and spiritual growth. [https://en.wikipedia.org/wiki/Arthur_M._Young — retrieved 03 September 2022]

from his website:

He explored the four essential aspects of the relationship of knower to known through the agency of the calculus, and in the process discovered a correlation between control and force that he felt was important for philosophy. While classical mechanics employed position and two derivatives, velocity and acceleration, there was a logical third derivative: control, or change of acceleration, which is recognized in engineering though not by physics. Young pointed out that force and control correlate to body and mind. One is physical and the other non-physical. He felt he thus had a scientific basis for dealing with the difficult problem of will.

But where to go from there? Only some bisociative act, it seemed, where he could live on several planes at once, could carry him further in his research into his theory of process. "As I got into modern quantum physics I found that the photon, the unit of light, can itself create particles. This gave me a scheme of seven stages." He found confirmations of the significance of sevenness in the seven "shells" into which the Bohr atom elaborated, and the seven groups into which the elements fall in Mendeleyev's Periodic Table. Alfred Percy Sinnett's book *The Mahatma Letters* also helped shore up this idea.

Young felt that the world as we know it could be elaborated into seven stages, which could be depicted as an arc. Process could be seen as a “fall” into the determinate constraint of matter followed by an ascent in which matter becomes free and indeterminate again. “The primary reality is this activity – which could be light, or it could be seeing, or it could be understanding — not knowledge, but understanding or recognition. It’s behind all the world of manifestation, and it’s a restoration, in effect, of the spiritual nature of things.”

KINGDOMS	STAGES	POTENTIAL	BINDING	IDENTITY	COMBINATION	GROWTH	MOBILITY	DOMINION
1.LIGHT 3deg. of freedom no symetry POTENTIAL: No rest mass; No charge; Space-Time path has no length; Quanta of Action.		10^{25} 10^{15} 10^{11} Cosmic rays Proton rest energy	10^{22} 10^{11} 10^7 Gamma rays Nuclear binding energy	10^{18} 10^8 10^4 X rays Atomic spectra	10^{15} 10^{-4} 10^0 UV Molecular spectra	10^{11} 10^{-1} 10^{-3} Microwaves Cellular rad.? $h\nu = kT$	10^8 10^3 10^{-7} Radio waves Animal radiations?	10^4 CPS 10^8 CM 10^{-10} EV Low freq. waves
2.NUCLEAR 2deg. of freedom bilateral sym. BINDING: Substance; Force of Attraction & Repulsion. The spell aspect of image, hence Illusion.								
3.ATOMIC 1deg. of freedom radial sym. IDENTITY: Acquires its own center. Order creates properties of the Elements by the Exclusion Principle.		 Hydrogen	 Lithium to Fluorine	 Sodium to Chlorine	 Potassium to Bromine	 Rubidium to Iodine	 Cesium to Astatine	 Francium to 117
4.MOLECULAR 0deg. of freedom complete sym. COMBINATION: Molar properties; Classical Physics; Determinism; The only Kingdom we see.		 Metals Metallic bond	 Salts Ionic bond	 Nonfunctional Compounds Covalent bond	 Functional Compounds	 Nonfunctional Polymers	 Functional Polymers (Proteins)	 DNA & Viruses
5.VEGETABLE 1deg. of freedom radial sym. GROWTH: Self multiplication; The Cell or organizing principle; Order building by negative Entropy.		 Bacteria Unicellular	 Algae Colonies	 Embryophytes Embryos	 Psyllophytes Vascular stems	 Pteridophytes Segments	 Gymnosperms Seeds	 Angiosperms Flowers
6.ANIMAL 2deg. of freedom bilateral sym. MOBILITY: Action & Satisfaction; Eating & Sex; Force becomes volitional.		 Protozoa Unicellular	 Sponges Colonies	 Coelenterates One organ	 Mollusks etc. Many organs	 Annelids Segmentation	 Arthropods Side Segments	 Chordata Integrated brain
7.DOMINION 3deg. of freedom no symmetry CONSCIOUSNESS: Memory of one's own acts leads to Knowledge & Control.		?	TRIBAL SOCIETIES Collective Unconscious	← Self Consciousness	MODERN MAN Objective Thought	→ Creative Genius	CHRIST BUDDHA	?

Comments on this image are as follows:

1. This image reproduced above is a scan of the two-page spread 86-87 of the book *The Reflexive Universe*.
2. The same as the Process/Aspect System matrix, this graph is a matrix of 7x7 cells. What Young names “Stages”, the Natural Sequence schema names “Processes”; what Young names “Kingdoms” the Natural Sequence schema names “Aspects”. This being a proper matrix, there is a correlation between the sequence of Stages and the sequence of Kingdoms, the same as with the Process/Aspect System matrix. (Note the seventh Stage and the seventh Kingdom are both called “Dominion”).
3. In the orientation shown, the names of “Stages” are given as Potential, Binding, Identity, Combination, Growth, Mobility, and Dominion. These correspond to the Natural Sequence Processes of Termination, Involution, Analysis, Combination, Synthesis, Evolution, and Origination respectively. **Descriptions of the Stages and their correlation with Natural Sequence Processes are found elsewhere in this chapter.**
- 4.

I have also seen the Natural Sequence in a book *The Reflexive Universe* (1976) by a scientist/engineer named Arthur Young. He examines many facets of the universe (from physics to chemistry to biology to evolution) and shows how they express what he calls the “seven powers”, which are arranged in a mirrored pattern of three lower, one middle, and three higher powers. His various names for these seven powers are thus:

1. potential, purpose
2. substance, binding, force, motivation, emotion
3. form (acquiring identity), concept formation, intellect

4. combination, embodiment, body, objects
5. growth, organization, reproduction (giving up identity)
6. mobility, transformation
7. dominion, goal

[[Note to self: expound on The Reflexive Universe at length. It is worth several pages in this exposition and a whole chapter in a real book manuscript since it corroborates the Natural Sequence in so many realms of nature.]]

One of his diagrams is of the descent/involution from emanation into form, then the ascent of form via emergence and evolution.

Comments on The Reflexive Universe

1. You can find a lot of his ideas on the Internet at >www.arthuryoung.com<.
2. John Raithal compares and contrasts Young's septenarian cosmology with the Enneagram at ><http://www.rahul.net/raithel/otfw/93article.html>< and
3. I first read this book in the mid 1980s, before *MMFM* was published in 1986. It actually had the answer to the sequence of the Overleaves that I had been looking for after I first laid out the Overleaf chart in 1981. I failed to consciously recognize it when I first read the book, but it was so obvious after I read *MMFM*. It may be that this book helped my subconscious recognize that Natural Sequence was correct and MMS was incorrect when I first read it in 1986. The centerfold chart in the book is a grid of $7 \times 7 = 49$ boxes in the Monadal Attribute pattern: three Ordinal on one side and three Cardinal on the other side and the Neutral in the middle. Therefore identical to the pattern in the grid that I have settled on.
4. Stages in the evolution of life are briefly discussed by Young in this chapter, but they are discussed in much greater detail in subsequent chapters.





Chapter IV-X

JIM FISHER — INTERNAL TIME DIMENSIONS

[[This chapter might fit better in the Cosmology book because it does not espouse an evolutionary schema that I know of at this level of my investigation of it.]]

This guy lives in Boulder, Colorado and sometimes attends the local monthly Society for Scientific Exploration (SSE) chapter meetings, where I met him. By profession, he a retired chemist and chemical engineer. He developed an understanding of photons and leptons that includes 3-D time. Thus, Fisher shares a background with Dewey Larson, discussed in [Chapter IV-x](#), who also tumbled to the realization that phenomena within atoms and between atoms can be more easily understood and explained in terms of three dimensions of time in a reciprocal relationship with three dimensions of space. Fisher explains it all on his website at:

><http://leptons-n-photons.org/><. The section about 3-D time is in Part 2, Chapter 2.1: >http://leptons-n-photons.org/book/part-2/#Chapter_2.1<:

5 The Embedding Or Layering Of Time

In the report *Time & Space*, Appendix 2, the concept is presented that time is not only an internal or implicit variable, but that multiple dimensions of time are embedded within one another. That is to say multiple dimensions of time should be represented as dimensions within dimensions within dimensions, and so on. This is very different from the typical human concepts of spatial dimensions as being external to one another. That is to say multiple dimensions of space are represented as dimensions outside of dimensions outside of dimensions, and so on.

This embedding of dimensions of external space and internal time is what I call the Holarchy Principle of the Natural Sequence schema. Basically and briefly, the Holarchy Principle is the notion that each septenarian cycle is a superset of septenaries of smaller size or shorter duration, and that each septenarian cycle is a subset of septenaries of larger size or longer duration.

So when I look in Appendix 2 (><https://leptons-n-photons.org/wp-content/uploads/2019/08/Collected-Appendices-August-2019.pdf><), I find the following description and explanation (and much more):

Space is an external phenomenon. Each new dimension in space forms at right angles to, away from, all the other dimensions already in existence, or in the discussion. Space is a dimension, outside of a dimension, outside of a dimension, et cetera. An illustration of this concept of externality is seen where the corners of a room meet the ceiling.

Time is an internal phenomenon. Each new dimension forms in a parallel or co-linear fashion to, on top of, all the dimensions already in existence. Time is a dimension, inside a dimension, inside a dimension, et cetera.

Dimensions of time are thought of as ever smaller, or more faster, patterns within the previously mentioned dimension. An illustration of this concept is the human voice wave pattern riding on, through, or embedded in the longer carrier radio wave. [Appendix 2, Section 3, page 19]

As with so many other models reviewed in this Cosmogony book, Fisher frames the reciprocal relationship between space and time with the words “external” and “internal”. Others use the words “objective” and “subjective” awareness. The Tao’s Template ontology uses the words “Yang” and “Yin”. The Natural Sequence schema and the Process/Aspect System matrix use the words “Cardinal” and “Ordinal”. The different words are all referring to the same phenomenon, “Twoness” in the fundamental Cosmic structure.

Following that brief introduction, further on, in Section 4, “Mathematical Views of Space and Time”, Fisher provides a discussion of the way humans use mathematical expressions when discussing phenomena in space and time. If you grok mathematics, you might appreciate Section 4; if not, then move on to Section 5,

“Psychological Perspectives of Space and Time”. I quote that section below because it is relevant as yet another instantiation of the Natural Sequence schema:

5. Psychological Perspectives of Space and Time

Humans are externally oriented where space dominates, and are used to thinking in terms of perpendicular dimensions. People with typical busy modern lifestyles are not used to turning inward or else they would immediately see that there are multiple simultaneous internal dimensions in time. After a brief internal examination three levels of temporal existence are found as follows.

Fisher uses the words “external” and “external” there and does not use the words “objective” and “subjective”, but he does use them as synonyms further on in the quoted material. In an Appendix of my *Cosmology* book, I provide a Bibliography of sources on three-dimensional time. It is divided into two parts: a collection of papers on 3-D time as an objective phenomenon, and a collection of papers on 3-D time as a subjective phenomenon. The point that I want to emphasize here is that the abstract concept of three-dimensionality implies another abstraction, namely that there are objects in the universe that have an ‘inside’ that is distinct from an ‘outside’, and the two are separated or joined (depending on how you look at it) by a mutual boundary, and entities on both sides of the boundary have a rough model of the world on the other side of the boundary, and the entities on both sides of the boundary learn from their interactions with the other on the other side of the boundary. This is the essence of the Dialectic Principle.

In the next few paragraphs of Fisher’s description of “Level 1” time, we see that it correlates with the one-dimensional Action Attributes of the Natural Sequence schema:

Level 1 Time: This is the outer most level of time and applies to people’s experience of the consensus physical world. This is the level of time with which people are most familiar. This is because when interacting with the consensus external world people are surrounded by time. Typically this realm of time is spoken of as linear. A short investigation shows this verbalization is inaccurate, though, because of the limitations humans have placed upon their conceptualization processes due to the nature of their symbolic languages. The past can be thought of, some event can be recalled from memory, daydreams can be indulged in, or plans can be made for some future event. But when doing so, though, the past is not automatically placed to the left and the future to the right. Likewise when thinking of time and space, the past is not oriented so as to be behind people’s backs and the future so as to be in front of them. These things or events in the mind are just out there somewhere, away from the present point from where the visualizations are occurring. In the mind an event from the past which now no longer exists can just as easily be placed side-by-side with a not yet existing one from the future. These events don’t have to be 180° apart from each other.

Fisher is saying that the three dimensions of time can be modeled as functioning at right angles to each other, the same way that the three dimensions of space are orthogonal to each other, but he is also saying that time dimensions do not take up any dimensions of space in the external world or the internal world of the mind, the imagination, the memory, or the dream. In my simplified description of 3-D time I say that 1-D time is Motion Center “Change” and metaphorically goes from ‘left to right’ in the psyche, that 2-D time is Emotion Center “Choice” and metaphorically goes from ‘bottom to top’ in the psyche, and that 3-D time is Intellect Center “Chance” and metaphorically goes from ‘outside to inside’ in the psyche. It seems to me as if, with his words “left” and “right” and “behind” and “front”, Fisher has a vague notion of my preferred description.

From another view time seems to flow from yesterday towards tomorrow. This may be a direction, an orientation yes, again dictated by discursive verbalizations. But this is clearly not the same thing as saying that time is linear or has a constant smooth flow. Everyone is familiar with sayings to the effect, when a person is busy, time flies. Or when a person is worried or idle, time drags [subjectively speaking]. But what has just occurred? A second [subjective] sense of time has been invoked to use as a yardstick to gauge the speed of passage of the first [objective] sense of time. This first sense is that which focuses on the consensus world of physical matter and energy and is gauged by a supposed agreed upon internal average human experience of the passage of events.

There are yet further problems with the original idea of the flow of time as being linear or smooth. Some cultures, their languages and thinking processes have a circular sense of time. This is particularly true of those peoples living near the equator, such as in Bali. There is one planting season after the next, with celebrations in between. The fact that X number of these occur in one cycle of the earth around the sun is completely irrelevant. Such peoples also have greater views of longer cycles within which the shorter cycles occur [= the Holarchy Principle]. Examples of such longer cycles would be those of life. Western scientists can be viewed as quite arrogant when

they say that time is linear. Such statements simply show the mental bias of western science which frequently subconsciously attempts to embed physical and greater reality into the linear narratives of monotheistic religions.

At this first outer level besides distance and time, the other experiences of the consensus physical reality include a sense of matter and energy. In this realm static, stuck, or quantized energy is conceived of as matter. The words encapsulated, encompassed, enclosed, or entrapped energy could also be used to describe this “solid” fermionic material. Moving, kinetic, or bosonic material is just called energy. The mathematical–geometric descriptions of the leptons and photons show how time plays out mathematically in these matter and energy arenas.

In the next two paragraphs of description of “Level 2” time, we see that it correlates with the two-dimensional Inspiration Attributes of the Natural Sequence schema, particularly the Emotion Center of the Process/Aspect System matrix:

Level 2 Time: This is the intermediate level of time that is invoked when speech such as time drags or flies is used. Such observations as these come when the awareness has been shifted to the internal sensory apparatus. There is still external awareness, even very keen awareness, that the time of the external physical world is still passing at the usual rate as measured by clocks. Somehow though the internal clocks of the current awareness are out of sync with the external world. There appears to be two different realms of time and they are not passing at the same rate.

Instead of the physical realm [as in Level 1 Time], this internal arena could be referred to as the feeling-emotional level of existence. In the physical world the long term “unchanging” or more “solid” material is referred to as being matter. Whereas at this level static, stuck, or long term material, is referred to as feelings. From an internal view these feelings can seem solid, real, and impenetrable. This “solidified” emotional energy sometimes can last for a lifetime and often goes totally unnoticed, just as there is only a vague awareness of solid sidewalks when moving through daily routines. The moving, flowing, rising and falling material of this level is called emotions. This emotional level energy or simply emotions usually rise and fall and pass fairly rapidly from shaping one internal scene to the next. Naturally emotions can occur and feelings exist simultaneously with physical action taking place externally.

In the next two paragraphs of description of “Level 3” time, we see that it correlates with the three-dimensional Expression Attributes of the Natural Sequence schema, particularly the Intellect Center of the Process/Aspect System matrix::

Level 3 Time: One way to get a sense of this often hidden inner most level of time is by referring to an experience of an activity in which there had been complete and intense singleness of focus. Example typically cited are involvement in high speed competitive athletic events or in situations which were life threatening for self or others nearby and which required immediate action of some type. In these cases the world, or the awareness of it, was narrowed down to the specific small area which was the focus of importance at the time. In these events the world may still have been very real and maybe even vividly clear. But physical reality appeared to be moving in slow motion. Likewise emotions and thoughts were out there somewhere, if there was any awareness of them at all. The sensory apparatus of the consciousness had shifted to a deep internal level. The conscious awareness had been shifted to an observer mode while the physical body and the emotions were doing whatever they were doing.

We might refer to this level as the mental-conceptual level. Here “solid” material consists of fixed ideas, opinions, beliefs, or attitudes some of which may last for many generations. The very rapidly moving short lived material consists of passing thoughts and free floating or fleeting ideas. Obviously [Level 3] thoughts occur while [Level 2] emotions are rising and dissolving away again, and while [Level 1] physical action is occurring.

Summarizing: Humans have no difficulty with multiple dimensions in space because they are externally visually oriented. The bodily physical sensory apparatus of humans can see or touch different places simultaneously. Humans see space is multidimensional or parametered. They perceive these dimensions to exist simultaneously and pass thru each other. These are seen as all being “external” to each other and new dimension forming at right angles to all those previously existing. Waves in space are easy as being transverse waves, like ocean waves or ripples in the toilet bowl.

The description of 3-D space in the previous paragraph is understandable, but the next paragraph about how 3-D time manifest has some clumsy and incomplete descriptions. Other researchers in the realm of 3-D time propose that some quantum atomic phenomena are explained by that model; these are phenomena that are not manifested in 3-D space. For instance, there is “superposition” and “entanglement” and “probability”;

refer to my *Cosmogony* book for more about that. If Fisher explained those three phenomena in terms of 3-D time, I did not see it in my cursory review of his work. *[[Note to self: I should look for it.]]*

Whereas only the [Level2] emotional or [Level 3] conceptual apparatus can be used to see or touch different realms in time, in contrast to the external or objective level 1, measurable time, levels 2 and 3 are internal or subjective. Additional descriptors for these two underlying temporal levels may be experiential, personal, projected, apparent, or relativistic time.

Fisher is unaware that besides 1-D time, 2-D time, and 3-D time, there is also P-D time — Pan-dimensional time (the Neutral Assimilation stage of the septenary) according to the Natural Sequence schema. It is not as Fisher claimed, that humans only experience 1-D (Level 1) time, but they also experience the other two dimensions wrapped up in the P-D time composite. This means, among other things, that the atomic quantum phenomena of superposition and entanglement and probability are present in macrocosmic human experience, but they are not generally recognized as correlated with microcosmic phenomenon. This notion is explained *elsewhere* in this *Cosmogony* book.

Again, looking at a year in a person's life, what is found is time is multidimensional or multi-tiered or has multi levels. Thoughts happen very rapidly at one level, emotions endure longer at another, meanwhile daily activities at work are occurring. All these temporal dimensions exist simultaneously and pass thru each other. These are seen as all being "internal" to each other or new dimensions forming "parallel" to all those previously existing. Waves in time tend to be viewed as compressional or longitudinal. Although people talk about the passage of time, this never gets stated mathematically as seen in Equations (03 & 04). While people may concede that a rabbit, a fly, and a saguaro cactus experience time differently from humans, this idea hasn't as yet been translated into scientific or mathematical terms.

That last sentence about the way that plants and animals subjectively experience time as distinct from the way that humans subjectively experience time is reminiscent of, and similar to, some things that are said in *Chapter IV-x*, "Arthur Young: The Reflexive Universe". Basically and briefly, it has been recognized since ancient times that, very broadly speaking, living things can be lumped into three domains: the #1 Plant Kingdom, the #2 Animal Kingdom, and #3 the Human Kingdom. In the Natural Sequence schema these are said to correlate with the three geometric dimensions of time, and in the Process/Aspect System matrix, these are said to correlate with the three Ordinal Centers: Motion, Emotion, and Intellect. If Fisher had known this, he might have been able to "translate into scientific and mathematical terms". One of my aspirations with my *Cosmology* and *Cosmogony* books is to provide a foundation for others to maybe do exactly that, even though I do not have the knowledge or the intelligence or the talent to complete the project.

These human conceptual tools of time and space get even more turned on their heads when considering the world experience of other animals. Animals with keen senses of hearing probably put time in the numerator and distance secondarily in the denominator. Some animals are only "here" less than half of the time. Bears hibernate during winter, cats sleep 18 hours a day. Animals with sharp senses of smell probably are much more internally oriented. For example; dogs walking out into the street are just noses with 4 legs under them. They don't have a clue where they are in space, or time, or any other human dimensionality. They live in a whole other dimension, called smell. Stationary life forms, plants, saguaro cactus, grass, etc. may only experience the passage of time and know nothing of human's beloved space. [Appendix 2, Section 5, pages 22-24]

Even though Fisher is correct in realizing that time has objective and subjective manifestations in three dimensions, he does not seem to realize that these combine into a Pan-dimensional experience in the everyday human consciousness. Consequently, his descriptions leave somewhat to be desired in terms of clarity. So far as I have been able to determine, he has not read the extensive published literature on three-dimensional time; he came to the idea on his own and he developed the idea on his own. It would have added to accuracy and clarity and completeness if Fisher had been aware of what others have contributed to the discussion of three-dimensional time. What I am saying here is that Fisher seems not to be aware of the Septenarian Principle (wherewith there is an Assimilative phase between the three "external" and the three "internal" phases), even though he is aware of the Dialectic Principle (and the Holarchy Principle; see below).

Brief conversation with him revealed that he is also of a mind to believe that 'Consciousness is Fundamental', a claim found in numerous other places in this *Cosmogony* book, and that I subscribe to. I have not (yet) explored with him or in his writings how he gets from chemistry to psychology to spirituality, from physics to metaphysics.

[[Fisher's description is muddled, and my description is less muddled, but this chapter should get a lot more work when I have disambiguated 3-D time in this book and the Cosmology book.]]





Chapter IV-X

GEORGE ELLIS — PHYSICS > BIOLOGY > MIND

><https://www.frontiersin.org/journals/physiology/articles/10.3389/fphys.2018.01966/full><

The major difference between physics and life has been characterized above as due to the difference between the immutable impersonal logic of physical causation (1) and the branching functional logic of biological causation (9), enabled by biomolecules in general and proteins in particular (section 4.2).

The progression of emergence is illustrated in Table 1 [see below]. Inanimate systems are subject only to causation C1. In all life from cells to organisms to populations to ecosystems, as well as causation C1, causation C2 occurs, involving logically based branching ... such as homeostasis ... and adaptive selection Thus causation C2 characterizes life in general ... as opposed to inanimate systems. Hence there is a major difference between these two kinds of emergence out of the same basic physical elements What enabled causation C2 to emerge in historical terms was the origin of life out of a physical substratum, when both metabolic and adaptive evolutionary processes first came into being. We do not know how that occurred.

However, a higher form of causation C3 occurs in intelligent life, when deductively based action (32) occurs, enabling deductive logic *per se* to have causal powers. Emergence of this kind of causation is a major transition in evolution ...; we also do not know how that occurred. Intelligent organisms are those that can engage in deductive causation C3, which enables transcending the physical limitations of bodies through the power of abstract thought, prediction, planning, and imagination, enabling technology to develop (so that for example they can fly through the sky or make computer systems). It is this kind of causation (made possible by symbolic systems such as language and mathematics) that underlies the rise of civilization and the domination of humans over the planet ...: we are no longer limited by the strength of our bodies but by the limits of our imagination and understanding.

TABLE 1 — The three major forms of causation: physical, biological, and deductive. Each relies on the previous one to enable its emergence.

Causation	Agency	Outcome
C1 Physical	Physical laws	Determinist
C2 Biological	Goal-seeking, Selection	Adaptive
C3 Deductive	Logical argument	Planned outcomes

It is obvious that Ellis's three types of causation correlate with the Ordinal Triad of the Natural Sequence schema: Ordinal Action, Ordinal Inspiration, and Ordinal Expression respectively.

Ellis elsewhere has somewhat to say about 'bottom-up' emergence and 'top-down' emergence. Within that model, using his terminology, "causation" happens within a level ('horizontally'), and "influence" happens between levels ('vertically').





Chapter IV-X

PIERRE TEILHARD DE CHARDIN

Cosmosphere > Biosphere > Noosphere > Pneumatosphere

Biography of Teilhard

As usual I turn to Wikipedia for a brief biography of the subject of this chapter:

Pierre Teilhard de Chardin SJ (1 May 1881 – 10 April 1955) was a French Jesuit priest, scientist, paleontologist, theologian, philosopher, and teacher. He was Darwinian in outlook and the author of several influential theological and philosophical books.

His mainstream scientific achievements included taking part in the discovery of Peking Man. His more speculative ideas, sometimes criticized as pseudoscientific, have included a vitalist conception of the Omega Point and the development along with Vladimir Vernadsky of the concept of a noosphere.

In 1962, the Congregation for the Doctrine of the Faith condemned several of Teilhard's works based on their alleged ambiguities and doctrinal errors. Some eminent Catholic figures, including Pope Benedict XVI and Pope Francis, have made positive comments on some of his ideas since. The response to his writings by scientists has been divided....

During his career, Teilhard published many dozens of scientific papers in scholarly scientific journals. When they were published in collections as books, they took up 11 volumes. John Allen Grim, the co-founder and co-director of the Yale Forum on Religion and Ecology, said: "I think you have to distinguish between the hundreds of papers that Teilhard wrote in a purely scientific vein, about which there is no controversy. In fact, the papers made him one of the top two or three geologists of the Asian continent. So this man knew what science was. What he's doing in [his book] *The Phenomenon [of Man]* and most of the popular essays that have made him controversial is working pretty much alone to try to synthesize what he's learned about through scientific discovery — more than with scientific method — what scientific discoveries tell us about the nature of ultimate reality." Grim said those writing were controversial to some scientists because Teilhard combined theology and metaphysics with science, and controversial to some religious leaders for the same reason.

[>https://en.wikipedia.org/wiki/Pierre_Teilhard_de_Chardin< — retrieved 10 February 2024]

What makes Teilhard's notions acceptable for this book is that his cosmology about the grand stages of universal evolution is that it follows the Natural Sequence schema that has been found by so many other scientists in so many other realms of inquiry.

Teilhard's Cosmology

>https://en.wikipedia.org/wiki/Omega_Point<

>https://en.wikipedia.org/wiki/The_Phenomenon_of_Man<





Chapter IV-x

② GREGG HENRIQUES — TREE OF KNOWLEDGE

Following internet links from one Wikipedia article to another has led to various researchers whose work seems to corroborate the Tao's Template ontology and/or the Natural Sequence schema and/or the Process/Aspect System matrix. Another path of discovery has been books and their bibliographies, and another path of discovery has been journal articles and their bibliographies. Yet another resource has been what I call "YouTube University". If you search for a subject on that website, if you watch a few videos there, if you subscribe to a few channels there, then ever afterward the YouTube recommendation algorithm will lead you to many educational videos delivered by some of the best minds and hearts on the planet. This chapter briefly documents the work of one of my discoveries on YouTube, the philosophical psychotherapist, Gregg Henriques.

Biography

On his professional website, Henriques provided a brief autobiography wherein he mentions the scope of his interests and works, which is very broad, and which happens to be somewhat like the breadth of the domains of inquiry discussed in this *Cosmogony* book. Those domains are underlined in the following quotation:

For over 20 years, I have been passionate about the possibility of developing a more integrated and coherent way of approaching the field of psychology and the work of psychotherapy. I first published my approach for developing a theoretically unified view of the field in 2003, and I have been expanding on that view and its implications ever since. In 2011, I outlined my approach in the book, *A New Unified Theory of Psychology*. Since that time, in addition to authoring professional publications, I have developed a blog on Psychology Today called Theory of Knowledge, which offers regular posts on a wide variety of topics, including updates on the unified theory to general issues in philosophy to morality to politics to current issues facing the field of psychology. I am also active in a number of movements that are involved in consolidating our knowledge into more coherent schemes. For example, I am a leader in the Unified Psychotherapy Movement, which attempts to use meta-theory to achieve an effective integrative scheme for the various psychotherapy paradigms. I am also interested in synthetic approaches to philosophy, and I have started a group called the Theory of Knowledge Society, which hosted its first conference in April (2018), titled: Toward a Big Theory of Knowledge.

I am a Full Professor and a core faculty member in James Madison University's Combined–Integrated Clinical and School Psychology Doctoral Program. I arrived at JMU in 2003, and directed the C-I doctoral program from 2005 to 2017. It has been a unique opportunity to train unified health service psychologists, as JMU is arguably the leading program in integrative theory and training. I currently teach courses on integrative/unified psychotherapy, personality, social, and cognitive psychology, and history and systems and engage in much clinical supervision. In addition to exploring and promoting my unified framework for psychology and philosophy, I am currently engaged in developing a systematic evaluation of character functioning and well-being (called the Well-being Checkup), examining an approach to psychological mindfulness called "CALM MO" (which stands for developing a Curious, Accepting, Loving-compassionate, and Motivated toward valued states of being Metacognitive–Observer) and researching the college student mental health crisis and what might be done about it. [<http://www.gregghenriques.com/> — retrieved 02 November 2023]

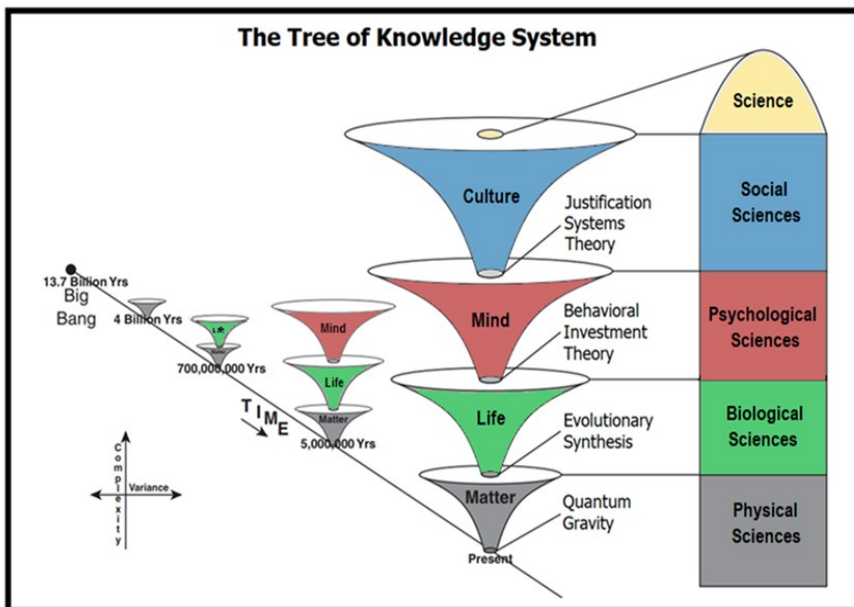
The Tree of Knowledge System

In addition to the vast amount of material found on his personal professional website, Henriques has also provided a vast amount of information on a website dedicated to his Unified Theory of Knowledge (UTOK): ><https://www.unifiedtheoryofknowledge.org/><. From that I extracted the following quotation:

The tree of knowledge (ToK) system is a new map of Big History that traces cosmic evolution across four different planes of existence, identified as Matter, Life, Mind and Culture that are mapped respectively by the physical, biological, psychological and social domains of science. The Tree of Knowledge (ToK) System was developed by Gregg Henriques, who is a professor and core faculty member in the Combined–Integrated Doctoral Program in Clinical and School Psychology at James Madison University [Harrisonburg, Virginia, USA]. The ToK System is part of a larger Unified Theory of Knowledge that Henriques describes as a consilient scientific humanistic philosophy for the 21st Century.

Table IV-Xx near the end of this chapter correlates the four “planes of existence” in the ToK with the first four stages of the Natural Sequence schema.

Chapter II-5 in Part Two, “The Seven Planes” discusses six alleged levels–stages of the Cosmos (the immanent Tao) ‘above and beyond’ what we know of as the physical universe, which is the realm explored in the mainstream exoteric scientific endeavor. The ToK covers the first four levels–stages of the first septenarian subset of the largest septenarian set, the Cosmic septenary of planes, called the “Physical Plane” throughout this *Cosmology* book and various other sources. The ToK does not cover the three subtle levels of the Physical Plane, known as the Etheric levels in esoteric lore, which are the abstract mirror of the tangible levels of the Physical Plane per the Process/Aspect System matrix.



By the way, Wikipedia has an article on what has come to be called “Big History”, mentioned by Henriques in the quotation above: >https://en.wikipedia.org/wiki/Big_History<.

The following series of quotations was copied from the Wikipedia article on the Tree of Knowledge:

The official Unified Theory of Knowledge website describes the ToK System as:

“[A] theory of scientific knowledge that defines the human knower in relation to the known. It achieves this novel accomplishment by solving the problem of psychology and giving rise to a truly consilient view of the scientific landscape. It accomplishes this via dividing the evolution of behavioral complexity into four different planes of existence... The ToK also characterizes modern empirical natural science as a kind of justification [explanation, rationalization] system that functions to map complexity and change.”

The ToK is a relationalist epistemology, meaning that every self exists in relation to, and functions in interaction with, its not-self.

The “four planes of existence” are discussed above and below.

We see in that brief description, and in what follows, that the ToK is aware of, and embodies, what I call the Transition Principle and the Dialectic Principle and the Hierarchy Principle.

In some ways, the ToK System reflects a fairly common hierarchy of nature and of the sciences that has been represented in one way or another since the time of Auguste Comte, who in the 19th century used a hierarchical conception of nature to argue for the existence of sociology. It also has clear parallels with Aristotle’s conception of the scales of nature and the first four levels of the Great Chain of Being.

Refer to **Chapter I-x** in Part One, the section on “The Hierarchy Principle”. That chapter includes a subsection on the Great Chain Of Being. Basically and briefly, the Hierarchy Principles says that the Cosmos exists in levels and transforms in stages, with each ‘higher-later’ level and stage including but transcending the ‘lower-earlier’ level(s) and stage(s). *[[I should investigate Compte.]]*

Despite some overlap with a number of traditional schemes, the ToK System is properly thought of as a new theory of both ontic reality [ontology] and our scientific knowledge [epistemology] of that reality. One of the most important and salient features of the Tree of Knowledge is how it represents reality as consisting of four different planes of existence. The theory is that, following [#1] Matter, [#2] Life, [#3] Mind and [#4] Culture each represent complex adaptive landscapes that are organized and mediated by novel emergent information processing and communication systems [Dialectic Principle]. Specifically, DNA/RNA store information that is processed by cells which then engage in intercellular communication to create the plane of existence called Life. Similarly, the brain and nervous system store and process information in animals which then engage in communication networks on the complex adaptive plane called Mind. Finally, linguistic storage and processing and communication between human beings generates the emergence of the Culture–Person plane of existence.

Refer to **Chapter I-x in Part One**, the section on “**Ontology and Epistemology**”. Basically and briefly, a couple of major branches of philosophy are ontology (the study of what is ultimately real) and epistemology (the study of how do we discover and discern what is real). Also refer to **Chapter I-x, “Reductionism + Emanationism = Emergentism**”. Basically and briefly, emergence is the notion that the Cosmos exists in levels and functions in stages that are separated by boundaries that influence each other. Refer to **Chapter I-x** for a discussion of the Dialectic Principle. Basically and briefly, the Dialectic Principle states that entities (selves) on levels of the Cosmos interact with each other in ways that drives evolution from one stage to the next later stage.

The separable planes of existence or dimension of complexity argument is one of the most crucial aspects of the system. Many have argued nature is hierarchically leveled; for example, a list of such levels might be subatomic particles, atoms, molecules, cells, organ structures, multi-celled organisms, consciousness, and society is common. The ToK System embraces a view of nature as levels [the Hierarchy Principle], but adds the notion that there are also separable dimensions of complexity. The difference becomes particularly clear in the extension of the ToK System into the Periodic Table of Behavior. The **Periodic Table of Behavior (PTB)** shows that natural science can be arranged in terms of the four fundamental dimensions (i.e., matter, life, mind, and culture) and three fundamental levels of analysis (i.e., part, whole, group). The PTB also demonstrates that behavior is a central concept in science. Epistemologically, natural scientists view the world via a third person behavioral lens. Ontologically, science is about mapping different kinds of behaviors that take place in nature at various levels and dimensions of analysis.

In other words, being of different “dimensions”, each plane is qualitatively different from other planes. Perhaps it can be said that the ToK notion of “hierarchy” can be thought of as “levels” on a vertical axis of evolution, whereas the “dimensions” can be thought of as various factors on the levels, **but I need to research this further...**

The Wikipedia article continues with a brief description of each “plane” the hierarchy”.

The best fit for the following description is that the first plane correlates with Ordinal Action of the Process/Aspect System matrix, particularly the Motion Center.

[#1] The Matter/Object plane of existence is mapped by the Physical Sciences

The dimension of matter refers to the set of material objects and their behaviors through time. In accordance with modern cosmology, matter is theorized to have emerged from a pure energy singularity at the Big Bang. Space and time were also born at such a point. Nonliving material objects range in complexity from subatomic particles to large organic molecules. The physical sciences (i.e., physics, chemistry, geology, astronomy) describe the behavior of material objects.

The best fit for the following description is that the second plane correlates with Ordinal Inspiration of the Process/Aspect System matrix, particularly the Emotion Center.

[#2] The Life/Organism plane of existence is mapped by the Biological Sciences

The dimension of life refers to organisms and their behaviors through time. Living objects are considered a unique subset of material objects. Just as quantum particles form the fundamental units of material complexity, genes are the fundamental units of living information. Although many questions about the emergence of life remain unanswered, in accordance with modern biology, the ToK posits that natural selection operating on

genetic combinations through time is the unified theory of biology and forms the foundational understanding for the emergence of organic complexity.

The correlation of Life/Organism with the Emotion Center is not as obvious as the correlation of Matter/Object is with Motion Center (per previous plane) and the correlation of Mind/Animal is with Intellect Center (per next plane), but other instantiations of the Natural Sequence schema also make this correlation, **as documented in Chapter ...**

The best fit for the following description is that the third plane correlates with Ordinal Expression of the Process/Aspect System matrix, particularly the Intellect Center.

[#3] The Mind/Animal plane of existence is mapped by the (basic) Psychological Sciences

Mind/cognition in the ToK system refers to the set of mental behaviors. Mental behaviors are behaviors of animals mediated by the nervous system that produce a functional effect on the animal-environment relationship. As such, Mind/cognition is essentially synonymous with what behavioral psychologists have meant when they use the term behavior. Thus, a fly avoiding a fly swatter, a rat pushing a bar or a human getting a drink of water are all mental behaviors. Mind is not synonymous with sentience or the capacity for mental experience, although such processes are presumed to emerge in the mental/cognitive dimension. Cognition, in the broad sense of the term is meaning bodily-neuro-social information processing, as in EEEE Cognition: Embodied, Embedded, Enactive, Extended. While cognitive science stands for naturalist study of mind, psychology is an approach grounded in the tradition of humanities, especially philosophy. Thus, by defining mind as mental behavior, Henriques argues that the ToK System provides a way to bridge the epistemological differences between cognitive and behavioral science. Henriques argues that comparative psychology, ethology, and (animal) cognitive behavioral neuroscience should all be thought of as parts of the discipline that maps the animal-mental domain.

The best fit for the following description is that the fourth plane correlates with Neutral Assimilation of the Process/Aspect System matrix, particularly the Impulse Center.

[#4] The Culture/Person plane of existence is mapped by the Human Social Sciences

Culture in the ToK system refers to the set of sociolinguistic behaviors, which range from large scale nation states to individual human justifications for particular actions. Just as genetic information processing is associated with the Life dimension and neuronal information processing associated with the Mind dimension, symbolic information processing emerges with the Cultural dimension. Henriques argues that human cognitive science, human psychology and the social sciences (i.e., anthropology, sociology, political science, and economics) work to map this domain. [https://en.wikipedia.org/wiki/Tree_of_knowledge_system — retrieved 02 November 2023]

[[Another way to correlate these four levels is #1 = Physiology Center, #2 = Motion Center, #3 = Emotion Center, and #4 = Intellect Center. Not certain whether I am confused or Henriques is confused.]]

The Periodic Table of Behavior

The Wikipedia article, quoted above, references one of Henriques's journal articles called "The Periodic Table of Behavior". In that article, the "planes" (discussed in the previous section) are referred to as "dimensions", and more detail is given about them. The dimensions are listed as

Matter: The First Dimension of Behavioral Complexity

Life: The Second Dimension of Behavioral Complexity

Mind: The Third Dimension of Behavioral Complexity

Culture: the Fourth Dimension of Behavioral Complexity

The Periodic Table of Behavior					
Major Domains of Reality and Science	Planes of Existence	MATTER	LIFE	MIND	CULTURE
	Class of Science	Physical	Biological	Psychological	Social
General Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Person
Primary Levels of Analysis (Part, Whole, Group)	Groups of Wholes	Molecule ³	Multicell/Colony ⁶	Family-Group ⁹	Family-Community ¹²
	Primary Whole	Atom ²	Cell ⁵	Mind ¹ ⁸	Mind ¹ ¹¹
	Primary Part	Particle ¹	Gene ⁴	Neural Network ⁷	Symbolic Justification ¹⁰

The numbers track the "12 Floors" of science.

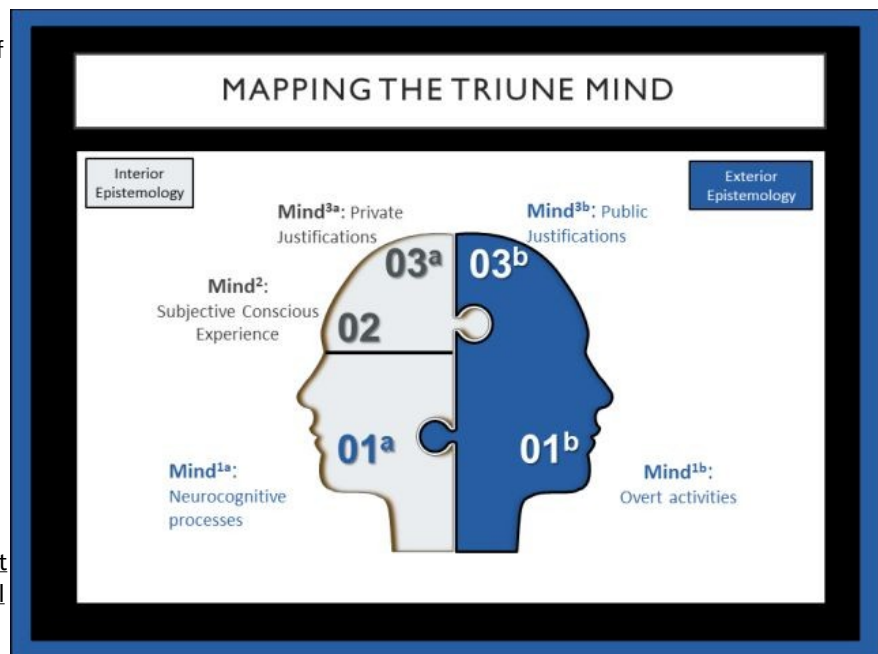
In none of those descriptions are to be found any hints that Henriques understood “dimension” in the sense of the three Axes of the Cartesian Coordinate System geometry, as I do. However, it is fairly easy to correlate these planes/dimensions with components of the Natural Sequence schema, and these are shown in [Table IV-Xx](#) below.

Henriques’s Three Domains of Mental Processes

In the fifth column of “The Periodic Table of Behavior, three levels of mind are listed, from bottom to top: Animal > Environment > Psychological. So what is that all about. The answer is found in another Psychology Today web page.

After several paragraphs of introductory material making the distinction between brain structures and mind structures, we find the following descriptions of Henriques’s “Triune Mind Model”. Henriques called his notion the TMM to compare and contrast it to the so-called “Triune Brain Theory”, which is reviewed in Chapter IV-x, “Paul MacLean — Triune Brain Theory”. The TBT fell out of favor in the decades since MacLean proposed it in the 1970s, and Henriques proposed that the TMM be its successor. It follows the same pattern, which correlates with the three Ordinal Centers of the Process/Aspect System matrix. Thus:

[#1 Motion Center] First, there is the neurocognitive activity of animals in the form of a sensory-motor loop. We can see this in both the structure and function of the brain and the way it processes information. And we can see this domain in the functional awareness and responsivity of animals. We can call this domain of mental processes Mind1, with Mind1a referring to neurocognition that takes place inside the nervous system, and Mind1b referring to the overt functional awareness and responsivity that takes place between the animal and environment (often referred to as behavior).



[#2 Emotion Center] Next, there is the subjective, felt experience of being in the world. This is the focus of phenomenology. It is different from Mind1 in that it is only directly available from the inside of the person (or animal). That means we know about this domain of mind differently than Mind1 (i.e., we experience it directly as subjects in the world, and it cannot be observed by another directly, which makes it difficult for science to study). We can call this Mind2.

[#3 Intellect Center] Finally, there is the self-conscious reasoning and justifying domain. This domain operates via the intersubjective highway of human language. It is the domain that allows us to connect through this blog post. Whereas Mind1 is available to study via the brain and behavior, and Mind2 is available to be perceived from the inside, Mind3 is verbal and is studied via human language, justification, and meaning-making. Moreover, Mind3 flows through the skin and resides in the intersubjective domain of human persons. When you talk privately (Mind3a) and then share that thought publicly (Mind3b), the information content is the same. This is in direct contrast to the way you experience red or the taste of ice cream, which can’t be shared directly. This means that Mind1 is primarily available via objective analysis and observation, Mind2 via subjective knowing, and Mind3 via intersubjective knowing.

The take-home point here is that next time someone asks you to define the mind, tell them that is a confusing term that means many different things. Then follow that up by explaining that you can tell them what the triune mind is and proceed to make sense out of a lot of confusion that exists in the literature.

These components of the TMM are shown in **Table IV-Xx** below.

Henriques's Five Systems of Character Adaptation

The "Five Systems of Character Adaptation" is a subset of the set reviewed in the previous section. Quotations in this section are copied from a Psychology Today web page, one of many where/when Henriques introduced and outlined his work for that venue. As usual, the underlined words are my emphasis; my comments interspersed between blocks of quoted text often refer to those underlined words, so pay attention to them.

After several paragraphs of introductory material, the description of the system begins:

Via examining the field of psychology through the meta-lens of the [Henriques] unified theory, I argue that there is a way to more precisely define the "cognitive-affective" systems discussed by Mischel. I posit that there are five systems of adaptation to consider when analyzing how a person will react to a particular situation.

In the Process/Aspect System matrix, the Aspect called "Center" is defined as that component of one's overall array of personality traits from which one reacts or responds to events, whether it be with behavior (Motion Center), or "affect" (Emotion Center), or "cognition" (Intellect Center). Most people emphasize one or another of those Ordinal Centers. In the psychotherapeutic application of the Process/Aspect System, one of the goals is to help people to "grow up": rather than automatic reactivity in their default or habitual Center, they learn to respond from the Center that is most appropriate for the particular situation in which they find themselves.

Thus, what I propose here is a 'Big Five' for characteristic adaptations, which are as follows: 1) the Habit System; 2) the Experiential System; 3) the Relational System; 4) the Defensive System; and 5) the Justification System. These systems develop in this order, with the [#1] habit system forming the foundational base, then [#2a] the experiential system and [#2b] relationship system first emerging in early interactions with the environment and other people, and finally the [#3a] justification and [#3b] defensive systems emerging with language and self-conscious identity. Each system is described in a bit more detail below.

From the paucity of "a bit more detail" in the following description, I am not certain of the time span in which a person is said by Henriques to "develop" through these phases, but, for my purposes in this *Cosmogony* book, that is not so important as the "develop in this order", because the order is seen to be according to the Ordinal phase of the Natural Sequence septenary of Centers. Whatever the time frame, Henriques's "character adaptation" or maturation process seems to be consistent with the psychotherapy known as "Rational Emotive Behavior Therapy", which is the subject of **Chapter IV-x right here in Part Four**.

The best fit for the following description in terms of the Process/Aspect System matrix is of the development of the Motion Center during infancy, where the infant learns to control the body and then learns to control the body as it moves around in the environment (as explained in Part Five, "Developmental Psychology"):

[#1] The Habit System corresponds to the basic levels of implicit mental processing and consists of sensori-motor reflexes, fixed action patterns, and procedural memories. Habitual responses are automatically initiated upon the presence of specific environmental cues and are shaped based on associations and consequences. Whereas consciousness awareness is activated in response to unexpected changes, routine actions conversely become ingrained in the habit system, and one can characterize the habit system as that which involves doing without thinking....

In terms of thinking about people, the habit system corresponds to looking at an individual's patterns like a behaviorist and thinking about daily routines, general activity levels, patterns of eating, sleeping, substance use, sexual activity and exercise, and stimuli or triggers that evoke particular kinds of response patterns. The habit system is especially important to consider when conceptualizing addictive behavior patterns (e.g., drinking, smoking, or gambling) that a client wants to alter. Indeed, many, if not most of the actions that people consciously wish they did not engage in will have a strong habitual component to them.

The best fit for the following description in terms of the Process/Aspect System matrix is of the Ordinal phase of the development of the Emotion Center during childhood, that being the "Me" phase, which is concerned with getting along with oneself (as explained in Part Five, "Developmental Psychology"):

[#2a] The Experiential System refers to the nonverbal feelings, images, and sensory aspects of mental life. Examples of experiential phenomena include seeing red, being hungry, and feeling angry. The experiential system connects our perceptions, motivations, and emotions into a behavioral guidance system. For example,

hunger activates a template to approach food. The individual will then search the perceptual field and if food is perceived and a pathway to acquire it realized, the individual will feel positive, energizing affect. If, however, the pathway is blocked, the emotional response is one of frustration. In addition, the experiential system also includes fantasy and remembered images, as it includes the capacity to simulate objects, events, and actions in one's imagination.

Because emotions play a key organizing role in the experiential system, it is probably most useful to focus first on emotions when analyzing the functioning of the experiential system in contexts like psychotherapy. As delineated by work done by emotion focused therapists, questions for the psychotherapist to consider when conceptualizing about the experiential system include: What is the range of emotional expression and experiencing? Are there emotional states that dominate an individual's experience, as is the case in depressive and anxiety disorders? Are certain emotions restricted, warded off, over-regulated, or inhibited? What are primary and adaptive emotional responses and which are secondary and maladaptive?

The best fit for the following description in terms of the Process/Aspect System matrix is of the Cardinal phase of the development of the Emotion Center during childhood, that being the "We" phase, which is concerned with getting along well with other people (as explained in Part Five, "Developmental Psychology"):

[#2b] The Relational System refers to the social motivations and feelings states, along with internal working models and self-other schema that guide people in their social exchanges and relationships. The foundation for the human relationship system is built in the original bond with caretakers and delineated by attachment theory. The [Henriques] unified theory posits that the relational system is organized around the concept of relational value, which is the extent to which we are valued by important others. Humans are generally motivated to seek and approach high relational value (i.e., they desire being loved, admired, and respected. Likewise, they seek to avoid loss of relational value (being rejected, criticized, or ostracized). In addition, people navigate relational value on three relational process dimensions of Power, Love, and Freedom....

The best fit for the following description in terms of the Process/Aspect System matrix is of the Ordinal phase of the development of the Intellect Center during adolescence, that being the "Me" phase, which is concerned with separation from identification with the family (as explained in Part Five, "Developmental Psychology"):

[#3a] The Defensive System refers to the ways in which individuals manage their actions, feelings and thoughts, and shift the focus of conscious attention to maintain a state of psychic equilibrium. In more everyday terms, the defensive system can be thought of in terms of how people cope with distressing thoughts and experiences. In many regards, the defensive system is the most diffuse of the characteristic adaptational systems, as it refers more to the interrelationships between the domains and the strategies utilized to maintain mental harmony and coherence. This is not to say that the defensive system cannot be identified or studied. Psychodynamically oriented clinicians and theorists have long documented mechanisms of defensive process. From the perspective of the unified theory, the Freudian and Rogerian filters provide a framework to understand how people inhibit threatening material from emerging into self-consciousness and work to maintain desired social impressions. Closely related to psychodynamic conceptions of defense, academic psychologists have experimentally examined defensive processes under the guise of cognitive dissonance, and have documented the enormous tendencies to arrange one's beliefs and actions in such a way as to maintain a justifiable narrative of the self.

The best fit for the following description in terms of the Process/Aspect System matrix is of the Cardinal phase of the development of the Intellect Center during young adulthood, that being the "We" phase, which is concerned with finding one's place in the world outside their family (as explained in Part Five, "Developmental Psychology"), while justifying, explaining, rationalizing with they find out about themselves with others and themselves:

[#3b] The Justification System refers to the language-based beliefs and values that an individual uses to legitimize actions and develop a meaningful worldview. We can think about the Justification System in two ways. One is how it provides the language-based interpretations people make and the expectations they have of their environment and their ability to influence it. These are the semantic elements were characterized by Beck as automatic thoughts, which are the immediate self-talk an individual engages in during an activity or moment of reflection. Some important constructs in the social cognitive literature relating to these kinds of justifications include pessimism and optimism, self-efficacy, and an internal versus external locus of control. The other lens that is useful is the broader and deeper lens of existential and narrative therapists who focus on the guiding justification narratives that people have regarding who they are, what their purpose is, and why they are doing what they are doing in. This is the level of identity and life narrative that is so central to personality that McAdams

[><https://www.psychologytoday.com/us/blog/theory-knowledge/201204/another-big-five-personality>< — retrieved 05 May 2024]

[[Review Henriques's other work to find other aspects of it that are relevant to my book.]]

As usual, it can be helpful to readers if I tabulate the information presented in a chapter with the theme of the entire *Cosmogony* book, namely the Natural Sequence schema:

My comments on this table are as follows:

1. NS RANK: the first row below the title shows the ranks of the Natural Sequence schema stages used throughout this *Cosmogony* book.
2. NS ATTRIBUTES: the second row shows the names of the Attributes that are used in the headers of the Process/Aspect System matrix throughout this *Cosmogony* book.
3. CENTER: the third row shows the names of the Centers, which are one of the Aspects of the Process/Aspect System matrix, the Aspect that is most appropriate to the correlation of Henriques's work with the other instantiations of the Natural Sequence schema.
4. TREE OF KNOWLEDGE: the fourth row shows Henriques's four so-called "planes" of phenomena that have allegedly emerged in the Big History of the Cosmos subsequent to the Big Bang. Henriques is aware of the work of Ken Wilber, who fills in the three Cardinal stages of the ToK.
5. TMM: TRIUNE MIND MODEL: The fifth row shows key words for Henriques's preferred replacement for the Triune Brain Theory. There is an obvious correlation of the TMM with the three Ordinal Centers of the Process/Aspect System matrix, shown in the third row.
6. CHARACTER ADAPTATION: the sixth row shows Henriques's "Five Systems of Character Adaptation". So far as I know, Henriques himself did not make a correlation between these five and the four planes of the ToK, but it is obvious when one understands the plethora of instantiations of the Natural Sequence that are documented in this *Cosmogony* book.
7. *[[If more research turns up more realms to correlate with the NS schema, add them here.]]*

Scoring Henriques's Tree of Knowledge versus Natural Sequence Principles

[[Complete this section when the chapter in Part One is complete.]]

Concluding Comments of Henriques

It is often the case in this Part of this *Cosmogony* book, which is about the natural sciences, that the researchers perceive the three Ordinal phases and the one Neutral phase of the Natural Sequence schema but do not see the three Cardinal phases, which could be termed the realm of the “supernatural” sciences.

The section on Character Adaptation could conceivably have been included in Part Five, “Developmental Psychology”, and there is no good reason to not have included it there other than the fact that Henriques covers other realms outside of that one, so I put them all here in this chapter.





Chapter IV-x

EVOLUTION OF LIFE

[[This chapter is almost worthless and needs to be almost totally researched and written.]]

Cosmic, Biological, Noosphere Evolution

This section is a crude attempt to bridge the gap between the supposed creation of the universe and the present day. Some researchers believe they have noticed three fundamental stages in this development between then and now, which if one stretches far enough, seems like it might correlate with the ordinal triad of the Natural Sequence. For instance, Teilhard de Chardan (my comments in [brackets] as usual):

<http://www.kheper.net/topics/Teilhard/Teilhard-evolution.htm>

According to Teilhard, Consciousness and Matter are aspects of the same reality, and are called the “Within” and the “Without” respectively. Evolution is the steady increase in the “Within” or degree of consciousness and complexity, through a number of successive stages: the various grades of inanimate matter [[Stage One = ordinal action]]; life or the “Biosphere” [[Stage Two = ordinal inspiration]]; man or thought or mind, the “Noosphere” [[Stage Three = ordinal expression]] (Teilhard’s cosmology reflects the Christian anthropocentric bias in having man as the first species capable of self-reflective thought); and finally the uniting of all humans in a single Divine Christ-consciousness [[Stage Four = Neutral Assimilation]].

Teilhard thus follows the evolutionish understanding of an evolutionary progression from [[Ordinal Action:]] inanimate matter through [[Ordinal Inspiration:]] primitive life and invertebrates to fish, amphibia, reptiles, mammals, and finally [[Ordinal Expression:]] man; always an increase in consciousness. With man a threshold is crossed — self-conscious thought, or mind, appears. But even humans do not represent the end-point of evolution, for this process will continue until all humans are [[Neutral Assimilation:]] united in a single Divine Christ-consciousness, the “Omega Point” (so-called after the last letter of the Greek alphabet...

Teilhard refers to “Centeredness” as a characteristic of the universe on all levels. Each corpuscle of matter has a centre “within”, its principle of organisation. The more complex the being, the greater degree of centreity. Teilhard teaches that Centreity is the true, absolute measure of being in the beings that surround us, and the only basis for a truly natural classification of the elements of the universe. The axis of evolution stretches from the lowest degree of centreity to the highest, and entities having the same degree of centreity constitute “isopheres”, forming universal units of the same type of being. So pre-living entities are ordered on Earth in the lithosphere, the hydrosphere, and the atmosphere. Organic beings make up the biosphere, and thinking entities (which in Teilhard’s system solely means man) the noosphere. When ranked in their natural order, the whole family of isopheres will define at the heart of the system a focus-point of universal synthesis, the Centre of centres, Omega [Activation of Energy, pp. 10-13, 102; Beatrice Bruteau, Evolution towards Divinity, p. 138]

http://www.kheper.net/topics/Aurobindo/Teilhard_and_SriAurobindo.htm

Teilhard and Aurobindo both see [evolution](#) as a collective and [teleological](#) progression through particular levels: Matter, Life and Mind, or Inorganic Earth, Biosphere, and Noosphere. These stages are almost exactly equivalent to [the three evolutionary stages](#), or three codes, as described by scientific writers like [Erich Jantsch](#) and Rush W. Dozier.

[[Take a look at Eric Jantsch's book The Self Organizing Universe and see if it applies to the Natural Sequence]]

[[Random note to fit somewhere: There was discussion in Part One regarding the Source from which all emanates as being both “immanent” (within creation) and “transcendent” (beyond creation). Briefly, in terms of the Process/Aspect System, the transcendent Source can be somewhat equated with the mathematical concepts of Zero and Infinity. In this

quotation, the “first reality, or principle, or perfect God”, the immanent Source, can be equated with the number One, and it is that “One” from which the creation emanate, as stated in the Wikipedia article:

EARTH, WATER, AIR, FIRE

This is really getting far afield from the Michaelian teachings, but in my researches I could not help but notice a pattern having to do with the “four state of matter”: solid, liquid, gas, plasma and how occultists for millennia have related these to stages of development that happen to follow — surprise! surprise! — *the Natural Sequence*. I have collected some of these for your education.

First of these is Jewish mysticism based on the Kaballah. You might recall my previous section on the subject:

http://www.learnkabbalah.com/four_worlds/

... and four souls of nefesh (fleshly, ‘earth’ soul), ruach (emotional, ‘water’ soul), neshamah (intellectual, ‘air’ soul) and chayah (spiritual, ‘fire’ soul) roughly map onto the familiar matrix of body, heart, mind and spirit. But all are really a reflection of yechidah (“unity”).

<http://www.kheper.net/topics/cosmology/correspondences.htm>

The four Elements — Correspondences

To give a trivial example (which is nevertheless central to modern astrology), the [four elements](#) of the Greeks — Earth, Air, Fire and Water, can be equated with the [four ego-functions](#) (faculties of consciousness) of the Jungian typology (sensation, thinking, feeling, intuition), and the four magical instruments of modern [Hermeticism](#) (and Tarot suites), as follows ...

Hope you can see why I am calling it the Natural Sequence — it pervades certain phenomena of nature.

BODY, SOUL, AND SPIRIT

Besides the four states of matter, there three realms of being.

<http://www.lawsofwisdom.com/LawsofWisdom/Laws%20of%20Wisdom.pdf>

BODY means physical; solid; matter; mass; space; particle; cerebellum, brain stem, reptilian brain; conditioned learning. [p. 73]

SOUL means the world of people; psyche; energy; wave; time; vitality; bio-plasma; chakras; Ki or Chi; vital force; ego-self; self-other; sociality; individual; entity; mind as in body-“mind”-spirit; limbic system, mammalian brain; instincts.

SPIRIT means the following fields of consciousness, the following experiences: animating vital principle; meaning; ideas; representations; quality; space-time continuum; intelligent or sentient part of a being; essential principle; significance; incorporeality; intellect; concept; thought; noeticity; event; information; pattern; gestalt; geist; the abstract; ideation; ideal; neo-cortex, human brain; knowledge.

Many of the esoteric spiritual traditions taught the three realms in terms of each human having three different brains. For instance, the esoteric spiritual philosopher George Gurdjieff always spoke of Man as a “three-brained being”. There was one brain for the spirit, one for the soul, and one for the body. In some traditions the spirit brain was thought to be the usual brain located in the skull. The soul brain was the heart, and the body brain somewhere lower, frequently in the sacrum (sacred bone)...

Until recently scientific thinking rejected the idea that man was a three-brained being as so much “hogwash”. There was obviously only one brain, the one located in your head. Now we know better. Brain scientist Paul MacLean discovered that our skull holds not one brain, but three: the neocortex, the limbic system and the brainstem with cerebellum. MacLean discovered that the tripartite structure of consciousness was built into the very structure of our brains! The spirit realm events were primarily processed in the neocortex, the soul realm in the limbic system, and body in the brain stem and cerebellum. Each of the three brains is connected by nerves to the other two, but each seems to operate as its own brain system with distinct capacities. [p. 75]

MacLean thinks of the cortex as “the mother of invention and father of abstract thought”. The old mammalian brain residing in the limbic system is concerned with emotions and instincts, the “Four F’s”: feeding, fighting, fleeing, and sexual behavior. As MacLean observes, everything in this emotional system is either “agreeable or disagreeable”. Survival depends on avoidance of pain and repetition of pleasure. As for the oldest reptilian brain, MacLean compares it to a troll under a bridge in a Scandinavian fairy tale. It has the same type of archaic behavioral programs as snakes and lizards. It is rigid, obsessive, compulsive, ritualistic and paranoid, it is “filled with ancestral memories”. It keeps repeating the same behaviors over and over again, never learning from past mistakes. [p. 77]

Realistically — the centres concept is most vulnerable to the banal question: why accept their existence at all? They seem to combine in an awkward manner Platonic and Thomist psychology (where centres are psychological functions located in a body-soul compound: vegetative soul, passionate/animal, and rational soul — this triple division corresponds exactly to Gurdjieff's three stories or "brains") and Theosophical/Hindu idea of energy wheels or chakras located in subtle supra-physical bodies. The confusion arises because these two approaches are not harmonized: for, chakras don't have any psychological functions (save in New Age interpretations). The majority of them are dormant (like Ajna in the head), while Plato's psyche logistike/rational soul is perfectly functional in an ordinary human. Also, in Oriental traditions some say spiritual pole is dormant, and physiological active — with the exception of "lower" centers which don't have even dormant spiritual function. c) expanding on the Platonic metaphor, one could ponder something like this: Plato speaks of immortal soul. Evidently, his "centers" are located not in physical, but in supra-physical "soul body", which is not further dissected. Such a view is endorsed in chief dialogues, "Apologia", "Phaedo" and "The Republic". Socrates, as the story goes, will (probably) lead an immortal life, conversing with Homer, Orpheus and company, with all his mental and emotional functions/centres operating. As a simple paradigm, it would fit nicely with Gurdjieff's views, save for a few irreconcilable points: GIG's "theory" contains more than one body. More, he has elaborated an intricate web of interrelated connections between centres leading to aberrant or functional behavior, all set in a materialist lingo (sex center steals energy/substance for its gratification etc.). Multiplicity of bodies in Gurdjieff's system and unity of one, soul body with various functions/centres in Plato's psychology are mutually exclusive. A subvariant of "protoplatonic" interpretation (although a bit stretchy) is that a center in a "lower" body acts as a focus or radiating "centre" for higher body, which is termed a centre, but in actuality is a whole "higher" body. But, as I said: this is, to say the least, not very probable interpretation.





Chapter IV-x

TERRENCE DEACON — ICONIC > INDEXICAL > SYMBOLIC

This guy first came to my attention when I read the book *The Re-Emergence of Emergence*, an anthology of chapters by various researchers, published in 2006. Deacon's contribution was a chapter titled, "Emergence, The Hole at the Wheel's Hub". I will quote from that chapter after a brief introduction to the man and his work. As with so many other people and their work that I have chosen to review in this *Cosmogony* book, what I have to say is only an introduction, intended to show its relevance to the Natural Sequence schema; readers are invited to explore Deacon's work further elsewhere if this introduction piques their curiosity.

This is a case where the names and the descriptions of a three-stage development might not trigger in your mind an immediate correlation with the Natural Sequence schema. However, in terms of the structure of the descriptions, the attributes of Deacon's schema 'looks like a duck, walks like a duck, and quacks like a duck', so that makes the correlation somewhat obvious.

Biography

Read the following excerpt from Wikipedia and you will see why I included Deacon and his work in this Part of my *Cosmogony* book:

Terrence William Deacon (born 1950) is an American neuroanthropologist (Ph.D. in Biological Anthropology, Harvard University 1984). He taught at Harvard for eight years, relocated to Boston University in 1992, and is currently Professor of Anthropology and member of the Cognitive Science Faculty at the University of California, Berkeley.

Theoretical interests

Deacon's theoretical interests include the study of evolution-like processes at multiple levels, including their role in embryonic development, neural signal processing, language change, social processes, and focusing especially on how these different processes interact and depend on each other. He has long stated an interest in developing a scientific semiotics (particularly biosemiotics) that would contribute to both linguistic theory and cognitive neuroscience.

How semiotics relates to the Natural Sequence schema will be explained after this Biography. If the reader is not familiar with semiotics, know this: "Semiotics is the study of the use of symbolic communication. Semiotics can include signs, logos, gestures and other linguistic and nonlinguistic communication methods. As a word, semiotics derives from the Greek *sēmeiōtikós*, which describes the action of interpreting signs."

><https://www.techtarget.com/whatis/definition/semiotics>< — retrieved 13 May 2024]

Fields of research

Deacon's research combines human evolutionary biology and neuroscience, with the aim of investigating the evolution of human cognition. His work extends from laboratory-based cellular-molecular neurobiology to the study of semiotic processes underlying animal and human communication, especially language and language origins. His neurobiological research is focused on determining the nature of the human divergence from typical primate brain anatomy, the cellular-molecular mechanisms producing this difference, and the correlations between these anatomical differences and special human cognitive abilities, again, particularly language.

Work

His 1997 book, *The Symbolic Species: The Co-evolution of Language and the Brain* is widely considered a seminal work in the subject of evolutionary cognition. His approach to semiotics, thoroughly described in the book, is fueled by a career-long interest in the ideas of the late 19th-century American philosopher, Charles Sanders

Peirce. In it, he uses the metaphors of parasite and host to describe language and the brain, respectively, arguing that the structures of language have co-evolved to adapt to their brain hosts.

Peirce and some of his notions are discussed [elsewhere](#). Basically and briefly, Peirce's fundamental ontology was the notion that the basic structure of the universe could be characterized as "Firstness > Secondness > Thirdness".

"Co-evolution" is discussed in the section on the Dialectic Principle in [Chapter I-x](#), "Principles of the Natural Sequence". Basically and briefly, everything that evolves does so in relation to other things in its environment, and to its environment in general.

His 2011 book, *Incomplete Nature: How Mind Emerged from Matter*, explores the properties of life, the emergence of consciousness, and the relationship between evolutionary and semiotic processes. The book speculates on how properties such as information, value, purpose, meaning, and end-directed behavior emerged from physics and chemistry.... Deacon explicitly rejects claims that living or mental phenomena can be explained by dynamical systems approaches. Instead, Deacon argues that life- or mind-like properties only emerge from a higher-order reciprocal relationship between self-organizing processes. [https://en.wikipedia.org/wiki/Terrence_Deacon — retrieved 13 May 2024]

Incomplete Nature

[[Study and ponder the following until it makes sense how it correlates with the NS schema.]]

Incomplete Nature: How Mind Emerged from Matter is a 2011 book by biological anthropologist Terrence Deacon. The book covers topics in biosemiotics, philosophy of mind, and the origins of life. Broadly, the book seeks to naturalistically explain "aboutness", that is, concepts like intentionality, meaning, normativity, purpose, and function; which Deacon groups together and labels as ententional phenomena.

By "naturalistic" explanations for phenomena, scientists typically exclude the supposition that there might be "supernaturalistic" explanations for phenomena. I can agree with Deacon's use of "naturalism" so long as it is not limited to the (using TT-NS-PAS terminology) Ordinal levels and stages of the Cosmos, but also includes the Cardinal (insubstantial, abstract, mind-like) levels and stages of the Cosmos. As we will see below, Deacon sorta kinda includes the Cardinal realm in his conceptualization.

CORE IDEAS

Deacon's first book, *The Symbolic Species* focused on the evolution of human language. In that book, Deacon notes that much of the mystery surrounding language origins comes from a profound confusion about the nature of semiotic processes themselves. Accordingly, the focus of *Incomplete Nature* shifts from human origins to the origin of life and semiosis. *Incomplete Nature* can be viewed as a sizable contribution to the growing body of work positing that the problem of consciousness and the problem of the origin of life are inexorably linked. Deacon tackles these two linked problems by going back to basics. The book expands upon the classical conceptions of work and information in order to give an account of ententionality that is consistent with eliminative materialism and yet does not seek to explain away or pass off as epiphenomenal the non-physical properties of life.

CONSTRAINTS

A central thesis of the book is that absence can still be efficacious. Deacon makes the claim that just as the concept of zero revolutionized mathematics, thinking about life, mind, and other ententional phenomena in terms of constraints (i.e., what is absent) can similarly help us overcome the artificial dichotomy of the mind body problem. A good example of this concept is the hole that defines the hub of a wagon wheel. The hole itself is not a physical thing, but rather a source of constraint that helps to restrict the conformational possibilities of the wheel's components, such that, on a global scale, the property of rolling emerges. Constraints which produce emergent phenomena may not be a process which can be understood by looking at the make-up of the constituents of a pattern. Emergent phenomena are difficult to study because their complexity does not necessarily decompose into parts. When a pattern is broken down, the constraints are no longer at work; there is no hole, no absence to notice. Imagine a hub, a hole for an axle, produced only when the wheel is rolling, thus breaking the wheel may not show you how the hub emerges.

ORTHOGRADE AND CONTRAGRADE

Deacon notes that the apparent patterns of causality exhibited by living systems seem to be in some ways the inverse of the causal patterns of non-living systems. In an attempt to find a solution to the philosophical problems associated with teleological explanations, Deacon returns to Aristotle's four causes and attempts to modernize them with thermodynamic concepts.

A cartoon characterization of the asymmetry implicit in thermodynamic change from a constrained ("ordered") state to a less constrained ("disordered") state, which tends to occur spontaneously (an orthograde process), contrasted with the reversed direction of change, which does not tend to occur spontaneously (a contragrade process), and so only tends to occur in response to the imposition of highly constrained external work (arrows in the image on the right).

Orthograde changes are caused internally. They are spontaneous changes. That is, orthograde changes are generated by the spontaneous elimination of asymmetries in a thermodynamic system in disequilibrium. Because orthograde changes are driven by the internal geometry of a changing system, orthograde causes can be seen as analogous to Aristotle's [so-called] formal cause. More loosely, Aristotle's [so-called] final cause can also be considered orthograde, because goal oriented actions are caused from within.

Contragrade changes are imposed from the outside. They are non-spontaneous changes. Contragrade change is induced when one thermodynamic system interacts with the orthograde changes of another thermodynamic system. The interaction drives the first system into a higher energy, more asymmetrical state. Contragrade changes do work. Because contragrade changes are driven by external interactions with another changing system, contragrade causes can be seen as analogous to Aristotle's [so-called] efficient cause.

HOMEODYNAMICS, MORPHODYNAMICS, AND TELEODYNAMICS

Much of the book is devoted to expanding upon the ideas of classical thermodynamics, with an extended discussion about how consistently far from equilibrium systems can interact and combine to produce novel emergent properties.

Deacon defines three hierarchically nested levels of thermodynamic systems: Homeodynamic systems combine to produce morphodynamic systems which combine to produce teleodynamic systems. Teleodynamic systems can be further combined to produce higher orders of self organization.

Homeodynamics

Homeodynamic systems are essentially equivalent to classical thermodynamic systems like a gas under pressure or solute in solution, but the term serves to emphasize that homeodynamics is an abstract process that can be realized in forms beyond the scope of classic thermodynamics. For example, the diffuse brain activity normally associated with emotional states can be considered to be a homeodynamic system because there is a general state of equilibrium which its components (neural activity) distribute towards. In general, a homeodynamic system is any collection of components that will spontaneously eliminate constraints by rearranging the parts until a maximum entropy state (disorderliness) is achieved.

Morphodynamics

A morphodynamic system consists of a coupling of two homeodynamic systems such that the constraint dissipation of each complements the other, producing macroscopic order out of microscopic interactions. Morphodynamic systems require constant perturbation to maintain their structure, so they are relatively rare in nature. The paradigm example of a morphodynamic system is a Rayleigh-Bénard cell. Other common examples are snowflake formation, whirlpools, and the stimulated emission of laser light.

Maximum entropy production: The organized structure of a morphodynamic system forms to facilitate maximal entropy production. In the case of a Rayleigh-Bénard cell, heat at the base of the liquid produces an uneven

distribution of high energy molecules which will tend to diffuse towards the surface. As the temperature of the heat source increases, density effects come into play. Simple diffusion can no longer dissipate energy as fast as it is added and so the bottom of the liquid becomes hot and more buoyant than the cooler, denser liquid at the top. The bottom of the liquid begins to rise, and the top begins to sink — producing convection currents.

Two systems: The significant heat differential on the liquid produces two homeodynamic systems. The first is a diffusion system, where high energy molecules on the bottom collide with lower energy molecules on the top until the added kinetic energy from the heat source is evenly distributed. The second is a convection system, where the low density fluid on the bottom mixes with the high density fluid on the top until the density becomes evenly distributed. The second system arises when there is too much energy to be effectively dissipated by the first, and once both systems are in place, they will begin to interact.

Self organization: The convection creates currents in the fluid that disrupt the pattern of heat diffusion from bottom to top. Heat begins to diffuse into the denser areas of current, irrespective of the vertical location of these denser portions of fluid. The areas of the fluid where diffusion is occurring most rapidly will be the most viscous because molecules are rubbing against each other in opposite directions. The convection currents will shun these areas in favor of parts of the fluid where they can flow more easily. And so the fluid spontaneously segregates itself into cells where high energy, low density fluid flows up from the center of the cell and cooler, denser fluid flows down along the edges, with diffusion effects dominating in the area between the center and the edge of each cell.

Synergy and constraint: What is notable about morphodynamic processes is that order spontaneously emerges explicitly because the ordered system that results is more efficient at increasing entropy than a chaotic one. In the case of the Rayleigh–Bénard cell, neither diffusion nor convection on their own will produce as much entropy as both effects coupled together. When both effects are brought into interaction, they constrain each other into a particular geometric form because that form facilitates minimal interference between the two processes. The orderly hexagonal form is stable as long as the energy differential persists, and yet the orderly form more effectively degrades the energy differential than any other form. This is why morphodynamic processes in nature are usually so short lived. They are self organizing, but also self undermining.

Teleodynamics

A teleodynamic system consists of coupling two morphodynamic systems such that the self undermining quality of each is constrained by the other. Each system prevents the other from dissipating all of the energy available, and so long term organizational stability is obtained. Deacon claims that we should pinpoint the moment when two morphodynamic systems reciprocally constrain each other as the point when ententional qualities like function, purpose, and normativity emerge.

Autogenesis

Deacon explores the properties of teleodynamic systems by describing a chemically plausible model system called an autogen. Deacon emphasizes that the specific autogen he describes is not a proposed description of the first life form, but rather a description of the kinds of thermodynamic synergies that the first living creature likely possessed.

Reciprocal catalysis: An autogen consists of two self catalyzing cyclical morphodynamic chemical reactions, similar to a chemoton. In one reaction, organic molecules react in a looped series, the products of one reaction becoming the reactants for the next. This looped reaction is self amplifying, producing more and more reactants until all the substrate is consumed. A side product of this reciprocally catalytic loop is a lipid that can be used as a reactant in a second reaction. This second reaction creates a boundary (either a microtubule or some other closed capsid like structure), that serves to contain the first reaction. The boundary limits diffusion; it keeps all of the necessary catalysts in close proximity to each other. In addition, the boundary prevents the first reaction from completely consuming all of the available substrate in the environment.

The first self: Unlike an isolated morphodynamic process whose organization rapidly eliminates the energy gradient necessary to maintain its structure, a teleodynamic process is self-limiting and self-preserving. The two reactions complement each other, and ensure that neither ever runs to equilibrium — that is completion, cessation, and death. So, in a teleodynamic system there will be structures that embody a preliminary sketch of a biological function. The internal reaction network functions to create the substrates for the boundary reaction, and the boundary reaction functions to protect and constrain the internal reaction network. Either process in isolation would be abiotic but together they create a system with a normative status dependent on the functioning of its component parts.

WORK

As with other concepts in the book, in his discussion of work Deacon seeks to generalize the Newtonian conception of work such that the term can be used to describe and differentiate mental phenomena — to describe “that which makes daydreaming effortless but metabolically equivalent problem solving difficult.” Work is generally described as “activity that is necessary to overcome resistance to change. Resistance can be either active or passive, and so work can be directed towards enacting change that wouldn't otherwise occur or preventing change that would happen in its absence.” Using the terminology developed earlier in the book, work can be considered to be “the organization of differences between orthograde processes such that a locus of contragrade process is created. Or, more simply, work is a spontaneous change inducing a non-spontaneous change to occur.”

Thermodynamic work

A thermodynamic system's capacity to do work depends less upon the total energy of the system and more upon the geometric distribution of its components. A glass of water at 20 degrees Celsius will have the same amount of energy as a glass divided in half with the top fluid at 30 degrees and the bottom at 10, but only in the second glass will the top half have the capacity to do work upon the bottom. This is because work occurs at both macroscopic and microscopic levels. Microscopically, there is constant work being performed on one molecule by another when they collide. But the potential for this microscopic work to additively sum to macroscopic work depends on there being an asymmetric distribution of particle speeds, so that the average collision pushes in a focused direction. Microscopic work is necessary but not sufficient for macroscopic work. A global property of asymmetric distribution is also required.

Morphodynamic work

By recognizing that asymmetry is a general property of work — that work is done as asymmetric systems spontaneously tend towards symmetry, Deacon abstracts the concept of work and applies it to systems whose symmetries are vastly more complex than those covered by classical thermodynamics. In a morphodynamic system, the tendency towards symmetry produces not global equilibrium, but a complex geometric form like a hexagonal Benard cell or the resonant frequency of a flute. This tendency towards convolutedly symmetric forms can be harnessed to do work on other morphodynamic systems, if the systems are properly coupled.

Resonance example: A good example of morphodynamic work is the induced resonance that can be observed by singing or playing a flute next to a string instrument like a harp or guitar. The vibrating air emitted from the flute will interact with the taut strings. If any of the strings are tuned to a resonant frequency that matches the note being played, they too will begin to vibrate and emit sound.

Contragrade change: When energy is added to the flute by blowing air into it, there is a spontaneous (orthograde) tendency for the system to dissipate the added energy by inducing the air within the flute to vibrate at a specific frequency. This orthograde morphodynamic form generation can be used to induce contragrade change in the system coupled to it — the taut string. Playing the flute does work on the string by causing it to enter a high energy state that could not be reached spontaneously in an uncoupled state.

Structure and form: Importantly, this is not just the macro scale propagation of random micro vibrations from one system to another. The global geometric structure of the system is essential. The total energy transferred

from the flute to the string matters far less than the patterns it takes in transit. That is, the amplitude of the coupled note is irrelevant, what matters is its frequency. Notes that have a higher or lower frequency than the resonant frequency of the string will not be able to do morphodynamic work.

Teleodynamic work

Work is generally defined to be the interaction of two orthograde changing systems such that contragrade change is produced. In teleodynamic systems, the spontaneous orthograde tendency is not to equilibrate (as in homeodynamic systems), nor to self simplify (as in morphodynamic systems) but rather to tend towards self-preservation. Living organisms spontaneously tend to heal, to reproduce and to pursue resources towards these ends. Teleodynamic work acts on these tendencies and pushes them in a contragrade, non-spontaneous direction.

Reading exemplifies the logic of teleodynamic work. A passive source of cognitive constraints is potentially provided by the letterforms on a page. A literate person has structured his or her sensory and cognitive habits to use such letterforms to reorganize the neural activities constituting thinking. This enables us to do teleodynamic work to shift mental tendencies away from those that are spontaneous (such as daydreaming) to those that are constrained by the text. Artist: Giovanni Battista Piazzetta (1682–1754).

Evolution as work: Natural selection, or perhaps more accurately, adaptation, can be considered to be a ubiquitous form of teleodynamic work. The orthograde self-preservation and reproduction tendencies of individual organisms tends to undermine those same tendencies in conspecifics. This competition produces a constraint that tends to mold organisms into forms that are more adapted to their environments — forms that would otherwise not spontaneously persist.

For example, in a population of New Zealand wrybill who make a living by searching for grubs under rocks, those that have a bent beak gain access to more calories. Those with bent beaks are able to better provide for their young, and at the same time they remove a disproportionate quantity of grubs from their environment, making it more difficult for those with straight beaks to provide for their own young. Throughout their lives, all the wrybills in the population do work to structure the form of the next generation. The increased efficiency of the bent beak causes that morphology to dominate the next generation. Thus an asymmetry of beak shape distribution is produced in the population — an asymmetry produced by teleodynamic work.

Thought as work: Mental problem solving can also be considered teleodynamic work. Thought forms are spontaneously generated, and task of problem solving is the task of molding those forms to fit the context of the problem at hand. Deacon makes the link between evolution as teleodynamic work and thought as teleodynamic work explicit. “The experience of being sentient is what it feels like to be evolution.”

Emergent causal powers

By conceiving of work in this way, Deacon claims “we can begin to discern a basis for a form of causal openness in the universe.” While increases in complexity in no way alter the laws of physics, by juxtaposing systems together, pathways of spontaneous change can be made available that were inconceivably improbable prior to the systems coupling. The causal power of any complex living system lies not solely in the underlying quantum mechanics but also in the global arrangement of its components. A careful arrangement of parts can constrain possibilities such that phenomena that were formerly impossibly rare can become improbably common.

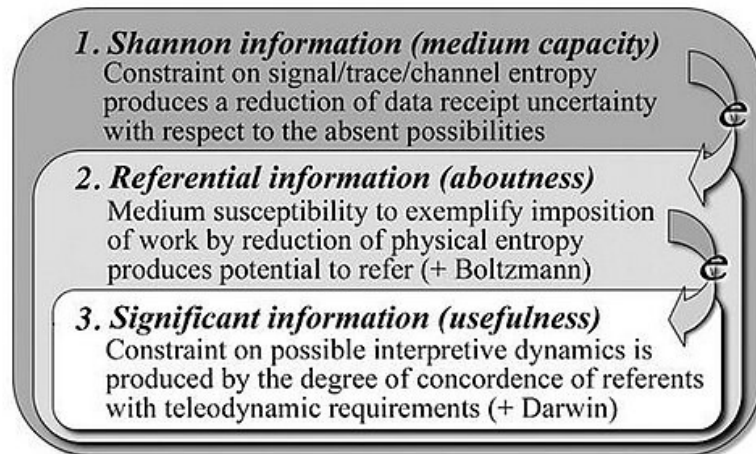
INFORMATION

One of the central purposes of Incomplete Nature is to articulate a theory of biological information. The first formal theory of information was articulated by Claude Shannon in 1948 in his work *A Mathematical Theory of Communication*. Shannon’s work is widely credited with ushering in the information age, but somewhat paradoxically, it was completely silent on questions of meaning and reference, i.e., what the information is about. As an engineer, Shannon was concerned with the challenge of reliably transmitting a message from one location to another. The meaning and content of the message was largely irrelevant. So, while Shannon information

theory has been essential for the development of devices like computers, it has left open many philosophical questions regarding the nature of information. Incomplete Nature seeks to answer some of these questions.

Shannon information

Shannon's key insight was to recognize a link between entropy and information. Entropy is often defined as a measurement of disorder, or randomness, but this can be misleading. For Shannon's purposes, the entropy of a system is the number of possible states that the system has the capacity to be in. Any one of these potential states can constitute a message. For example, a typewritten page can bear as many different messages as there are different combinations of characters that can be arranged on the page. The information content of a message can only be understood against the background context of all of the messages that could have been sent, but weren't. Information is produced by a reduction of entropy in the message medium.



Three nested conceptions of information. *Shannon* information is the most minimal and the most basic. *Referential* information is emergent (*e*) from Shannon information, and *significant*—or useful—information is emergent from referential information.

Boltzmann entropy

Shannon's information based conception of entropy should be distinguished from the more classic thermodynamic conception of entropy developed by Ludwig Boltzmann and others at the end of the nineteenth century. While Shannon entropy is static and has to do with the set of all possible messages/states that a signal bearing system might take, Boltzmann entropy has to do with the tendency of all dynamic systems to tend towards equilibrium. That is, there are many more ways for a collection of particles to be well mixed than to be segregated based on velocity, mass, or any other property. Boltzmann entropy is central to the theory of work developed earlier in the book because entropy dictates the direction in which a system will spontaneously tend.

Significant information

Deacon's addition to Shannon information theory is to propose a method for describing not just how a message is transmitted, but also how it is interpreted. Deacon weaves together Shannon entropy and Boltzmann entropy in order to develop a theory of interpretation based in teleodynamic work. Interpretation is inherently normative. Data becomes information when it has significance for its interpreter. Thus interpretive systems are teleodynamic — the interpretive process is designed to perpetuate itself. "The interpretation of something as information indirectly reinforces the capacity to do this again." [https://en.wikipedia.org/wiki/Incomplete_Nature < — retrieved 13 May 2024]

<https://www.youtube.com/watch?v=PqZp7MIRC5g&t=6816s>

<https://dickhudson.com/wp-content/uploads/2013/07/deacon.pdf>

<https://philarchive.org/archive/NIXTWDv2>

1-D plant > 2-D animal > 3-D human





Chapter IV-x

② MERLIN DONALD — HUMAN COGNITIVE EVOLUTION

This chapter is devoted to a review of the book, *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition*, which was written by Merlin Donald. It proposes a sequence in the development of certain human faculties. As we will see below, Donald's three stages correlate with the Ordinal triad of the Natural Sequence schema. The Aspect of the Process/Aspect System (PAS) 7x7 matrix that best fits with Donald's developmental stages are the Ordinal Centers: Ordinal Action/Motion Center > Ordinal Inspiration/Emotion Center > Ordinal Expression/Intellect Center. This chapter confirms what we have seen in other chapters in this Part, chapters that discuss other instantiations of the Natural Sequence schema on both longer and shorter time scales. In other words, Donald's theory is just another septenarian segment of the Great Chain/Nest of Being, aka what I call the "Fractality Principle", which is the notion that the same septenarian cycle of stages governs natural developmental processes at all scales of the Cosmos. In this case, Donald connects the evolution of the human brain with the evolution of human culture.

Biography of Merlin Donald

The following quotation in this section was extracted from the Wikipedia article on Merlin Donald. As usual, where I quote a block of text, I have interjected explanatory comments in [brackets] that alert the reader to my correlation to the Natural Sequence equivalent, I have underlined words to draw attention to ideas that are most relevant to this discussion, and I provide a commentary between blocks of quoted text.

Merlin Wilfred Donald (born November 17, 1939) is a Canadian psychologist, neuroanthropologist, and cognitive neuroscientist, at Case Western Reserve University. He is noted for the position that evolutionary processes need to be considered in determining how the mind deals with symbolic information and language. In particular, he suggests that explicit, algorithmic processes (the computational theory of mind) may be inadequate to understanding how the mind works. He is also known as the proponent of the mimetic theory of speech origins. He received his degrees in Canada, culminating in his Ph.D. in neuropsychology from McGill University in 1968. Following three years on the faculty of Yale School of Medicine, he joined the faculty of Queen's University at Kingston in 1972 and is still professor emeritus at Queen's. In the fall of 2005, Donald became the founding chair of the cognitive science department at Case Western Reserve University. He has since retired as the chair of that department and is currently an adjunct professor within the university.

Obviously, Donald has academic credentials. Also obviously, he is clever enough to contribute new ideas to his chosen field of inquiry.

Introduction to Donald's Stages

The Wikipedia article provides an introduction to Donald's notions about human cognitive evolution:

Merlin Donald is widely known as the author of two books on human cognition, *Origins of the Modern Mind* and *A Mind So Rare*.

His central thesis across these works is that the human capacity for symbolic thought arises not from the evolution of a language-specific mental module, but out of evolutionary changes to the prefrontal cortex affecting the executive function of the primate brain. The enhanced attentional, metacognitive, and retrieval capacities that resulted from these changes made hominids immensely more capable of dealing with social complexity than their ancestors. He concludes that what drove brain expansion was not the cognitive demands of toolmaking or spatial mapping of the environment, but the growth in the size of the social group, that imposed greater demands on memory.

Whether Donald's ideas or other ideas about the evolution of human cognition are correct (perhaps all make their contribution to some extent), we see here the Dialectic Principle at work, namely there is an interaction between agent and arena, between self and environment, that drives development of a system over time.

In Donald's account, these changes amounted to the evolution of a completely novel cognitive strategy: a symbiosis between brain and culture. The human brain, he argues, is adapted to function expressly in a complex symbolic culture; it cannot realize its potential unless it is immersed in a complex network of communication and symbolic representation. This inextricable relationship between biology and culture also, he proposes, has interesting ramifications for the future of human cognitive development in light of the continuing development of technologies that support and change our relationship with symbolic thought and culture.

This is Donald's way of stating what I refer to as the Holarchy Principle: each stage is built upon previous stages, and the differences between stages are qualitative in nature. That there are stages beyond the Ordinal triad of stages is, as we see in this entire *Cosmogony* book, recognized by various academic researchers in various fields of study.

Origins of the Modern Mind proposes a three-stage development of human symbolic capacity through culture:

- **Mimetic culture:** The watershed adaptation allowing humans to function as symbolic and cultural beings was a revolutionary improvement in motor control, the "mimetic skill" required to rehearse and refine the body's movements in a voluntary and systematic way, to remember those rehearsals, and to reproduce them on command. Following this development, Homo erectus assimilated and reconceptualized events to create various prelinguistic symbolic traditions such as rituals, dance, and craft.

Taking note of the underlined words, we see that this first stage obviously correlates with Ordinal Action in the Natural Sequence schema, most specifically the Motion Center, which has to do with the behavior of the physical body.

- **Mythic cultures** arose as a result of the acquisition of speech and the invention of symbols. Mimetic representation serves as a preadaptation to this development.

It is not obvious from this brief description that this second stage equates with Ordinal Inspiration in the Natural Sequence schema, most specifically the Emotion Center, which has a lot to do with the socialization process in human cultures. In other schemas reviewed in this *Cosmogony* book, the correlation is much more obvious.

- **Technology-supported culture:** Finally, the cognitive ecology dominated by ephemeral face-to-face communication has changed for most of us as a result of the external memory-store that reading and writing permit. Computer technology intensifies these changes by offering even more extensive capacities for external storage and retrieval of information.

Taking note of the underlined words, we see that this third stage obviously correlates with Ordinal Expression in the Natural Sequence schema, most specifically the Intellect Center, which has to do with thinking processes.

Donald suggests that the increasing reliance on external memory media in this third stage, which applies in varying degrees to most people in the developed world, may have profound effects on our cognitive development and behavior:

The externalization of memory was initially very gradual, with the invention of the first permanent external symbols. But then it accelerated, and the numbers of external representational devices now available has altered how humans use their biologically given cognitive resources, what they can know, where that knowledge is stored, and what kinds of codes are needed to decipher what is stored.... When we study literate English-speaking adults living in a technologically advanced society, we are looking at a subtype that is not any more typical of the whole human species, than, say, the members of a hunter-gatherer group. What would our science look like if it had been based on a very different type of culture? The truth is, we don't know, but it would profit us greatly to find out, because the human cognitive system, down to the level of its internal modular organization, is affected not only by its genetic inheritance, but also by its own peculiar cultural history. (Donald, 1997, pp. 362-363) [https://en.wikipedia.org/wiki/Merlin_Donald <— retrieved 16 September 2022]

Considering how far this *Cosmogony* book has taken its readers up to this point, it should be obvious to readers that the three stages of human cognitive evolution conform to the Natural Sequence schema in the

usual way: the so-called “mimetic culture” correlates with Ordinal Action/Motion Center; the so-called “mythic culture” correlates with Ordinal Inspiration/Emotion Center; the so-called “technology culture” correlates with Ordinal Expression/Intellect Center. This preliminary identification will be made perfectly clear in the next section. We will also note in more detail that Dr. Donald is aware of what I refer to as the Holarchy Principle and the Dialectic Principle.

The Wikipedia article mentions that Dr. Donald was a professor at Case University. Their website hosts a document that describes his theory: ><https://case.edu/artsci/cogs/donald/precis1993partA.PDF><. The abstract says this:

This book proposes a theory of human cognitive evolution, drawing from paleontology, linguistics, anthropology, cognitive science, and especially neuropsychology. The properties of humankind’s brain, culture, and cognition have co-evolved in a tight iterative loop; the main event in human evolution has occurred at the cognitive level, however, mediating changes at the anatomical [‘below’ in the Holarchy] and cultural [‘above’ in the Holarchy] levels. During the past two million years humans have passed through three major cognitive transitions, each of which has left the human mind with a new way of representing reality and a new form of culture. Modern humans consequently have three systems of memory representation that were not available to our closest primate relatives: mimetic skill, language, and external symbols....

Note that Donald’s theory is consistent with several Principles of the Natural Sequence schema. The statement about “brain, culture, cognition” evolving in a “tight iterative loop” is the Dialectic Principle; the “transitions” are the Transition Principle and the Plateau Principle. (Recall that these embody the notion that there is a relatively unstable transition phase between relatively stable plateau phases. In other words, there are revolutions between evolutionary periods and there are evolutionary periods between revolutions.) The references to “anatomical and “cultural levels” are what I call the Holarchy Principle and Fractality Principle.

The point I want to emphasize here is that all of these related fields of study tell the same basic story, and that happens to be the story delineated in logical and mathematical precision by the Tao’s Template ontology. In addition to the contribution of Merlin Donald, I review the work of numerous other academic researchers who tell other parts of the story; my purpose in this *Cosmogony* book is to tell as many facets of that story as I have found.

The reader is invited to download and read that entire PDF document; it has much to say about subjects that I discuss in this and other chapters. For me to review that entire 27-page document in this chapter is a bit much for my purposes, so I sought other resources that would supplement what little is said above, and I found this: ><http://globeducate.s3.amazonaws.com/PDF%2FMerlin%20Donald.pdf><. Rather than review that document, I offer the following summaries found on the internet.

Description of Human Cognitive Evolution

Numerous reviews of Donald’s book were found on ><https://www.amazon.com/><. The first review is from Kirkus Reviews:

“The modern era, if it can be reduced to any single dimension, is especially characterized by its obsession with symbols and their management.” So says Donald (Psychology/Queen’s Univ., Kingston, Ontario), echoing the philosopher Ernst Cassirer a generation ago — with a difference. Whereas countless philosophers since Aristotle have attempted to define what is quintessentially human, Donald brings new knowledge of neuropsychology, ethology, and archaeology to propose a tripartite theory of the transition from ape to man. Using the fossil evidence of braincase size and tool-kit remains, Donald concludes that the australopithecines were limited to concrete/episodic minds: bipedal creatures able to benefit from pair-bonding, cooperative hunting, etc., but essentially of a seize-the-moment mentality. The **first** transition was to a “mimetic” culture: the era of Homo erectus in which mankind absorbed and refashioned events to create rituals, crafts, rhythms, dance, and other prelinguistic traditions [= Ordinal Action/Motion Center]. This was followed by the evolution to mythic cultures: the result of the acquisition of speech and the invention of symbols [= Ordinal Inspiration/Emotion Center]. The **third** transition carried oral speech to reading, writing, and an extended external memory-store seen today in computer technology [= Ordinal Expression/Intellect Center]. This summary, however, does not do justice to Donald’s careful analysis of rival theories as well as his mining of the neuroanatomical and neurological literature, presenting, for example, evidence of the distribution of language skills across both hemispheres. He gets high marks, too, for pointing out how often cognitive theories become caught up in the trap of the homunculus —

the little man in the brain who presides over all our conscious activities. Needless to say, his theory is open to challenge as well (the relation of mimesis to language; the constant reliance on computer metaphors; and, ultimately, the use of Western tradition as the paradigm of human evolution). Withal, a fine, provocative and absorbing account of what makes humans human. Copyright ©1991, Kirkus Associates, LP. All rights reserved. — This text refers to an out of print or unavailable edition of this title.

Another review on ><https://www.amazon.com>< is this one by Michael H. Barnes:

The shelves are crowded now with books on the origins of intelligence. Donald's 1991 book is still an excellent introduction. He begins with a fun though intense review of 19th and 20th century brain studies, exposing the workings of the human mind. Then he reaches back to our beginnings, examining chimpanzee intelligence for clues. After a look at various chimp talents, in socializing, politics, tool-making, and very limited vocalizing, he wonders how we humans got from there to here. Language has been central to human intelligence for many thousands of years. Donald speculates about a pre-language stage of physical mimicry and hand gestures. [Ordinal Action/Motion Center] Even now we gesticulate and grimace to enhance our verbal communication. Upon the three-stage pattern of development, from grunts to gestures to language, humans then added literacy. This changed our modes of thought significantly, teaching us to address our ideas to a wide absent audience, ordering the ideas logically, and thereby moving us towards a more objective and systematic way of thinking. Since Gutenberg literacy has given us external storage systems of knowledge, which once again shifted culture, as we not only amassed information but struggled with the task of inventing rational storage and retrieval systems. Donald's work is full of fascinating pieces of information, connected in a provocative framework. This book is wonderful in its own right; it also provides excellent background for grasping the significance of later work, by Gellner or Diamond or Pinker, on the evolution of human culture and the origin and power of language in human life.

Another review on ><https://Amazon.com>< is this one by Andy Blunden:

This is a book that will forever change your view of what it means to be a human being. It is a work of enormous scope, from the minutiae of neurophysiology to archaeology and anthropology to the curriculum of medieval schools and modern systems theory, and everywhere closely researched with evidence weighed with care and insight. The argument is broadly this: our evolutionary cousins, the apes, have brains which enable them to represent to themselves and remember "episodes" or events, something which their evolutionary predecessors either do not have or have only in a limited form. Homo erectus, the evolutionary link between us and the apes, extended this ability to perceive events, into "mimesis", a capacity to reproduce events they have perceived by use of their own body. [Ordinal Action/Motion Center] Donald shows how this ability, which involves no modifications of the body and relatively modest changes in the brain, allows for the voluntary representation and communication of events of the past and emotions not actually felt concerning things not actually present, a foundation for the later development of symbolic action. Homo erectus dominated the hominid world for a million years, adapting themselves to this "mimetic" culture.

According to Donald, mimetic representation remains with us as a vestige of our homo erectus ancestry, as a fully functioning, underlying mode of representation and intelligence. Homo sapiens in turn developed this ability into speech, with a radical adaption which occurred about 500,000 years ago. According to Donald, homo sapiens had a "mythic" culture hinged around the ability to tell stories, and this ability provided a means to make sense of the world and create a shared understanding of the world. This mythic culture survives to this day, constituting a crucial mode of understanding the world. [Ordinal Inspiration/Emotion Center]

Modern human beings, homo sapiens sapiens, emerged only about 50,000 years ago with a rapid accumulation of a myriad of forms of cultural artifacts, culminating in the beginning of writing about 8,000 years ago. This led to a "theoretic" culture for which symbols held in material forms outside the body, play an essential role.

According to Donald, human beings have evolved by biological adaptation to the culture it created and lived in and was crucial to its survival strategy. [Ordinal Expression/Intellect Center]

So much for book reviews of Donald's book.

This chapter in this *Cosmogony* book is obviously just a brief introduction to hominid evolution in three stages. I did not actually read this book or criticism of it, but for the final manuscript or the real book, I probably should. Therein I could expound on the description of the three stages and more clearly show their relationship to the Ordinal triad of the Natural Sequence schema. I could also relate Donald's work to Steven Mithen's work, presented in another chapter. These two guys might actually be talking about the same thing, which I would know if I were to read their books.





Chapter IV-x

② PAUL MACLEAN — TRIUNE BRAIN THEORY

One of the best realms of evidence for the Natural Sequence schema resides in our very own human brains. Recall from **Chapter II-3 in Part Two, in the section on** “The Seven Centers”, that we spend most of our waking life functioning in the three so-called “Ordinal Centers” of our personality, and the combinations of those three Centers, namely the so-called “Motion, Emotion, and Intellect” Centers. Recall that the Natural Sequence schema ranks these as #1 = Motion Center, #2 = Emotion Center, and #3 = Intellect Center. As it so happens, these three Centers exist and function because of certain brain structures that have evolved over the course of the biological evolution of vertebrate animals over the last few hundred million years.

Since childhood I have done a lot of reading in science magazines and books. I don’t remember when I first stumbled on information about the evolution of the human brain and its division into three basic systems with different functions. This chapter is intended to document the evolution of the so-called “triune” (three-part) brain, and those three parts happen to be about kinetic, emotional, and cognitive functions. After reading the preceding chapters in this Part you should not be surprised to learn that the development of this brain in the course of biological evolution followed the Natural Sequence schema. It could not have been any other way due to the structure of time itself, which governs the development of complex systems, each one built on the preceding one, and this includes the anatomy of the vertebrate brain from lower–earlier lifeforms to higher–later lifeforms.

Triune Brain Theory per Wikipedia

As usual, I turn to Wikipedia for a biography of Paul MacLean for an introduction to the topic of the chapter. As usual, I underline words and phrases for emphasis (pay attention here!), I intersperse some comments pertinent to the Natural Sequence in [brackets], and I include some explanatory paragraphs of commentary between the quoted paragraphs.

INTRODUCTION

The triune brain is a model of the evolution of the vertebrate forebrain and behavior, proposed by the American physician and neuroscientist Paul D. MacLean. The triune brain [allegedly] consists of the [#1, Motion Center] reptilian complex (or lizard brain), the [#2, Emotion Center] paleo-mammalian complex (limbic system), and the [#3, Intellect Center] neo-mammalian complex (neocortex), viewed each as independently conscious, and as structures sequentially added to the forebrain in the course of evolution.

Considering what is said in previous chapters in this Part, the correlations shown in brackets should cause zero surprise in the reader’s triune brain. The phrase, “as independently conscious”, is disputed in the next section, “Updated Model”.

Since the 1970s, in some circles of evolutionary and developmental neuroscience, the concept of the triune brain has been subject to criticism and is regarded as a myth. Due to its longevity, the triune brain idea has also been called “one of the most successful and widespread errors in all of science” as the hypothesis is no longer espoused by the majority of comparative neuroscientists in the post-2000 era. [Nevertheless,] The theory has been embraced by some psychiatrists and at least one leading affective neuroscience researcher.

Some of those criticisms are addressed below. Basically and briefly, the main criticism is that the Triune Brain Theory is an *over-simplification*, because the development of the vertebrate brain from #1-reptilian to #2-mammalian to #3-human has not been straightforward; it has been a convoluted journey, and there are some branches off the main line of development. However, with people who are not specialists in the details of brain evolution and structure and function, the theory has found a broad utility in the brains of the general

population and in the brains of some psychiatrists and neuroscientists. Its embrace by some psychiatrists is reviewed in **Chapter IV-x**, “Rational Emotive Behavior Therapy”.

MacLean originally formulated his model in the 1960s and propounded it at length in his 1990 book *The Triune Brain in Evolution*. The triune brain hypothesis became familiar to a broad popular audience through Carl Sagan’s Pulitzer-prize-winning 1977 book *The Dragons of Eden*.

An internet search on the phrase “Triune Brain Theory” reveals that the notion does indeed have a “broad popular audience”. Readers of those resources can make up their own minds about whether the information works for them, even if it does not work for some critics.

ASPECTS

Reptilian complex [= Motion Center]

The reptilian complex (also known as the “R-complex”, “reptilian brain”, or “lizard brain”) was the name MacLean gave to the basal ganglia, structures derived from the floor of the forebrain during development. The term derives from the idea that comparative neuroanatomists once believed that the forebrains of reptiles and birds were dominated by these structures. MacLean proposed that the reptilian complex was responsible for species-typical instinctual behaviors involved in aggression, dominance, territoriality, and ritual displays.

Reptiles, the “cold-blooded” animals, do not have much of a family life; they are mostly oriented toward the survival of the self and the reproduction of the species. One might say, using Process/Aspect System terminology, that reptiles are an instantiation of the Primitivism Worldview.

Paleomammalian complex [= Emotion Center]

This consists of the septum, amygdalae, hypothalamus, hippocampal complex, and cingulate cortex. MacLean first introduced the term “limbic system” to refer to this set of interconnected brain structures in a paper in 1952. MacLean’s recognition of the limbic system as a major functional system in the brain was widely accepted among neuroscientists, and is generally regarded as his most important contribution to the field. MacLean maintained that the structures of the limbic system arose early in mammalian evolution (hence “paleomammalian”, with paleo- meaning old) and were responsible for the motivation and emotion involved in feeding, reproductive behavior, and parental behavior.

Mammals, the “warm-blooded” animals, have a family life, and this factor provides an advantage in the evolutionary game of survival of the fittest, because cooperation has an advantage over competition in that game. One might say, using Process/Aspect System terminology, that mammals are an instantiation of the Traditionalism Worldview.

Neomammalian complex [= Intellect Center]

This consists of the cerebral neocortex, a structure found uniquely in higher mammals, and especially humans. MacLean regarded its addition as the most recent step in the evolution of the mammalian brain, conferring the ability for language, abstraction, planning, and perception.

Humans, with their mental capacities, upped the game that mammals started, so much so that they have out-competed and out-cooperated every other vertebrate species in the progress of evolution. One might say, using Process/Aspect System terminology, that humans are an instantiation of the Materialism Worldview.

STATUS OF THE MODEL

MacLean originally formulated the triune brain hypothesis in the 1960s, drawing on comparative neuroanatomical work done by Ludwig Edinger, Elizabeth C. Crosby, and Charles Judson Herrick early in the twentieth century. The 1980s saw a rebirth of interest in comparative neuroanatomy, motivated in part by the availability of a variety of new neuroanatomical techniques for charting the circuitry of animal brains. Subsequent findings have refined the traditional neuroanatomical ideas upon which MacLean based his hypothesis.

For example, the basal ganglia (structures derived from the floor of the forebrain and making up MacLean’s reptilian complex) were shown to take up a much smaller portion of the forebrains of reptiles and birds (together called sauropsids) than previously supposed, and to exist in amphibians and fish as well as mammals and sauropsids. Because the basal ganglia are found in the forebrains of all modern vertebrates, they most likely date to the common evolutionary ancestor of the vertebrates, more than 500 million years ago, rather than to the origin of reptiles.

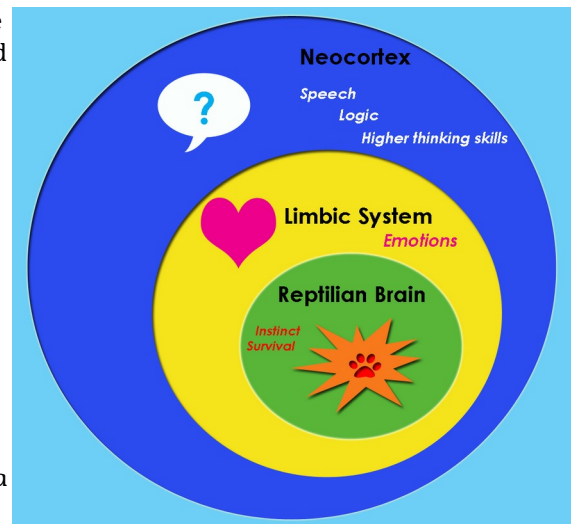
Some recent behavioral studies do not support the traditional view of sauropsid behavior as stereotyped and ritualistic (as in MacLean’s reptilian complex). Birds have been shown to possess highly sophisticated cognitive abilities, such as the toolmaking of the New Caledonian crow and the language-like categorization abilities of the

gray parrot. Structures of the limbic system, which MacLean proposed arose in early mammals, have now been shown to exist across a range of modern vertebrates. The “paleomammalian” trait of parental care of offspring is widespread in birds and occurs in some fishes as well. Thus, like the basal ganglia, the evolution of these systems presumably dates to a common vertebrate ancestor.

Finally, recent studies based on paleontological data or comparative anatomical evidence strongly suggest that the neocortex was already present in the earliest emerging mammals. In addition, although non-mammals do not have a neocortex in the true sense (that is, a structure comprising part of the forebrain roof, or pallium, consisting of six characteristic layers of neurons), they possess pallial regions, and some parts of the pallium are considered homologous to the mammalian neocortex. While these areas lack the characteristic six neocortical layers, birds and reptiles generally possess three layers in the dorsal pallium (the homolog of the mammalian neocortex). The telencephalon of birds and mammals makes neuroanatomical connections with other telencephalic structures like those made by neocortex. It mediates similar functions such as perception, learning and memory, decision making, motor control, conceptual thinking.

As it says there, all three basic types of brain structures are present in reptiles and mammals and humans (and fish and amphibians and birds), but, using Process/Aspect system terms, each type of animal emphasized one or the other of the Motion Center, the Emotion Center, or the Intellect Center, and there has been a progress over the course of vertebrate evolution from Motion > Emotion > Intellect, however messy that development was and is. The point of this chapter, as other chapters, is that the later brain structures are built on the foundations of earlier brain structures as necessary precursors, due to the structure of time itself.

The image at right, depicting the three nested brain functions of the triune brain theory — as one would expect from the Hierarchy Principle of the Natural Sequence schema — was borrowed from the Wikipedia article.



LAY INTEREST

The triune model of the mammalian brain is seen as an oversimplified organizing theme by some in the field of comparative neuroscience. It continues to hold public interest because of its simplicity. While inaccurate in many respects as an explanation for brain activity, structure, and evolution, it remains one of very few approximations of the truth we have to work with: the [#3 Intellect Center] “neocortex” represents that cluster of brain structures involved in advanced cognition, including planning, modeling, and simulation; the [#2 Emotion Center] “limbic brain” refers to those brain structures, wherever located, associated with social and nurturing behaviors, mutual reciprocity, and other behaviors and affects that arose during the age of the mammals; and the [#1 Motion Center] “reptilian brain” refers to those brain structures related to territoriality, ritual behavior and other “reptile” behaviors. The simple explanatory value makes this approximation engaging and may be a useful level of complexity for high-school students to begin engaging with brain research.

Howard Bloom, in his book *The Lucifer Principle*, references the concept of the triune brain in his explanations of certain aspects of human behavior. Arthur Koestler made MacLean’s concept of the triune brain the centerpiece of much of his later work, notably *The Ghost in the Machine*. English novelist Julian Barnes quotes MacLean on the triune brain in the foreword to his 1982 novel *Before She Met Me*. Peter A. Levine uses the triune brain concept in his book *Waking the Tiger* to explain his somatic experiencing approach to healing trauma.

Glynda-Lee Hoffmann, in her book *The Secret Dowry of Eve, Women’s Role in the Development of Consciousness*, references the triune theory explored by MacLean and goes one step further. Her theory about human behavior, and the problems we create with that behavior, distinguishes the prefrontal cortex as uniquely different from the rest of the neocortex. The prefrontal cortex, with its agenda of integration, is the part of the brain that can get the other parts to work together for the good of the individual. Hoffmann claims that in many humans the reptilian cortex (agenda: territory and reproduction; in humans that translates to power and sex) is out of control, and the amygdala stokes the fear that leads to more bad behavior. The prefrontal cortex, she believes, is the key

to our future if we can harness its power. [https://en.wikipedia.org/wiki/Triune_brain — retrieved 13 September 2022]

The point to be emphasized here is that even though the model is very simplistic in terms of structures of the brain and when they evolved in the course of biological evolution, it has a certain practical utility for helping people to understand themselves so that they can achieve an integrated state of “meta-cognition”; that notion is discussed in [Chapter IV-X](#), “Rational Emotive Behavior Therapy”. The other point that I want to emphasize is that the triune brain theory, although simplistic, is obviously yet another obvious instantiation of the ordering of the Ordinal Triad of the Natural Sequence schema. Yet another point that I want to make is that descriptions of the triune brain in the Wikipedia article are quite brief, and it seems useful to me to elaborate on it further, which I do in the section after the next section. In the next section, more is said about the brain that modifies what MacLean knew about in his heyday.

Updated Model

For those readers who prefer to review more current research, I suggest a lengthy scientific paper available on the internet at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9010774/>. The abstract says:

THE BRAIN IS ADAPTIVE NOT TRIUNE: HOW THE BRAIN RESPONDS TO THREAT, CHALLENGE, AND CHANGE

Theory impacts how research is conducted. A popular theory used to conceptualize brain functioning is the triune brain theory. The triune brain theory is an evolutionary theory of brain development that emphasizes three key brain regions consisting of the brainstem, the limbic system, and the cortex that function relatively independently in coping with stress via [#1 Motion Center] fight or flight, [#1 Emotion Center] emotion, and [#1 Intellect Center] cognition, respectively. However, modern neuroscience research demonstrates that the triune brain theory does not accurately explain how the brain functions in everyday life or during the stress response. Specifically, emotion and cognition are interdependent and work together, the limbic system is not a purely emotional center nor are there purely emotional circuits in the brain, and the cortex is not a purely cognitive [intellect] center nor are there purely cognitive circuits in the brain. We propose a new evolutionarily based model, the adaptive brain, that is founded on adaptive prediction resulting from interdependent brain networks using interoception and exteroception to balance current needs, and the interconnections among homeostasis, allostasis, emotion, cognition, and strong social bonds in accomplishing adaptive goals.

Note that the word “center” is used in this abstract of the paper. Using Process/Aspect System terminology, “homeostasis and allostasis” are the concern of the Physiology Center, “emotion” is obviously the concern of the Emotion Center, “cognition” is the concern of the Intellect Center, and “social bonds” are the concern of the Impulse Center, which is the Assimilation of all Centers. With the Motion Center, the social bond is merely sexual; with Emotion Center, the social bond includes familial and tribal nurturing and shared values; with the Intellect Center, the social bond includes shared beliefs.

One of the main objections to the triune brain theory expressed in this paper is not that there are not three main or general or broad functions — behavior, affect, cognition — but that further research has revealed that the various and different brain regions are less independent and more interconnected and interactive than MacLean proposed. Therefore, it seems to me that the broad outline of evolutionary development espoused in this *Cosmogony* book — in terms of Physiology Center > Motion Center > Emotion Center > Intellect Center > Impulse Center — has been confirmed and reinforced by more recent science.

By the way, chapters in Part One discuss what I call the Feedback Principle and what Karl Friston calls the Free Energy Principle. I see that that principle was mentioned in that Abstract, with the words, “interoception”, “exteroception” and “adaptive”. Basically and briefly, every ‘agent’ has an internal system, and it lives in an ‘arena’, which is a system external to the agent. According to the Feedback Principle, the agent constantly interocepts (monitors its internal) states via memory and imagination, and the agent constantly exterocepts (monitors its external) states, so that it reacts or responds as best it remembers and imagines in order to maximize its chances to survive and thrive.

From Tripartite to Septpartite

The following quotes were found with an Internet search for “Triune Brain Theory”. There are hundreds of hits, if any of you want to research it further than these few. Notice that regular educators as well as spiritual educators have adopted and adapted this systematic theory originally given by a mainstream scientist.

The notion that human experience is tripartite is not new:

Tripartite neuropsychologies have featured through two and half millennia of Western thought. They received a modern airing in Paul MacLean's well-known text *The Triune Brain*. This paper examines the origin of these triune psychophysiology. It is argued that the first such psychophysiology was developed in the fifth century BCE in [Plato's book] the *Republic* and its Pythagorean sequel, the *Timaeus*. Aristotle, Plato's pupil and colleague, developed a somewhat similar theory, though this time based on his exhaustive biological researches. Finally, a generation later, Herophilus and Erasistratus at the Alexandrian Museum put together a more anatomically informed tripartite theory that, somewhat modified by Galen in the second century AD, remained the prevailing orthodoxy for nearly fifteen hundred years until it was overturned by the great figures of the Renaissance. Nonetheless, as already mentioned, the notion that human neuropsychology is somehow best thought of as having a tripartite structure has remained remarkably resilient and has reappeared time and again in modern and early modern times. This paper investigates its origins and suggests that it is perhaps now time to move on. [<https://www.tandfonline.com/doi/abs/10.1080/09647040802601605> — retrieved 13 September 2022]

The evidence presented in this *Cosmogony* book is that it is indeed "time to move on" from tripartite neuropsychology. My suggestion is that a more complete neuropsychology would find that human experience consists of seven (or more) types, and that these types can be characterized with the Septenarian Attributes, and the types consist of a holarchy arranged per the Natural Sequence. Perhaps one step in the right direction is the work of Iain McGilchrist having to do with brain hemispheres, reviewed in [Chapter IV-x](#), and the work of Timothy Leary having to do with levels of consciousness, reviewed in [Chapter IV-x](#). See also the lengthy document at this web page: <http://www.peakstates.com/emergency.html> — "Spiritual Emergency and the Triune Brain", especially "Part 3: A Transpersonal Extension of the Triune Brain Model".

Summary and Concluding Comments on the Triune Brain Theory:

1. If you want to, you can research this topic further by pointing your web browser search engine to "triune brain". Doing more research on the subject will only make it more obvious that the development of the human brain during the course of biological evolution followed the Natural Sequence schema.
2. Appreciating the validity of the Natural Sequence schema is not just a theoretical and academic exercise that has no practical value. It can be very useful for understanding oneself and other people.
3. I called it the "Natural Sequence" because it appears in natural developmental sequences such as this, where each succeeding stage is built on the preceding stage. The reason behind this sequence is because it has to do with the very structure of Nature, of the Cosmos — motion, space/time, dimension.
4. In sources not quoted herein, we find that, not only is there an evolutionary developmental holarchy *up* through the Centers — Motion Center → Emotion Center → Intellect Center — but there is a strength hierarchy, with strongest (Motion Center) first, Emotion Center second, and Intellect Center third. This means that, when stressed or challenge — 'when push comes to shove' — people tend to devolve from the Intellect Center *down* to the Emotion Center, then *down* to the Motion Center, in that order. This phenomenon is reminiscent of Abraham Maslow's so-called Hierarchy of Needs, which is discussed in Part Four, "Developmental Psychology", in Chapter V-4.
5. This is an important point to get about the Natural Sequence, namely that in terms of development, each stage must be build upon the previous stage(s), and the sequence cannot vary. The Natural Sequence is a *necessary* holarchy. Note that the Intellect Center is naturally subservient to the Emotion Center, and the Emotion Center is naturally subservient to the Motion Center. For instance, elsewhere I have read (and experienced) that it is impossible to feel emotion when the body is completely relaxed. Meditation of various kinds is predicated on this phenomenon.
6. Even though various people are said to be Moving Centered or Emotionally Centered or Intellectually Centered, normally we want our Intellect Center to prevail over our Emotion Center to prevail over our Motion Center. If evolution has taught us anything, it should be that we and those around us benefit if we follow that sequence. Going even further, our enlightened minds — operating hopefully from Centers even higher than the Intellectual — do Good Work to monitor and circumvent negative thoughts, negative emotions and negative actions.
7. Scientific evidence of this sort of thing is the most compelling that I know of to validate and explain the Natural Sequence. It seems rather unambiguous and incontrovertible to me.

8. The Triune Brain Theory might be dismissed by some people as simplistic, but the question is, is it an oversimplification? I think not, because within its description it conforms to the Fractalicity Principle: it contains three 'links' in the Great Chain/Nest of Being. That is to say, it appears in three nested time tracks, namely the time structure of the evolution of the animal brain (biology), the stages of development of hominid culture (anthropology), and human behavior in general (psychology).
9. It is appropriate for us humans to respond to action situations from the Motion Center, to respond to emotional and social situations from the Emotional Center, and to respond to cognitive situations from the Intellectual Center. However, as I stated above, it is Good Work to monitor all of these from at least the Intellectual Center — and better yet from higher Centers. Brain structures for higher Centers are not a part of the Triune Brain Theory, but they are discussed in other theories, as discussed in other chapters of this *Cosmogony* book.
10. Additional recommended reading on the subject can be found at the following internet links:
><https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3505872/>< — “Neural and Mental Hierarchies”.
><https://www.alternative-therapeutics.com/blog/2020/9/15/understanding-the-triune-brain-and-trauma>< — “Understanding the Triune Brain and Trauma”.
><https://www.psychologytoday.com/us/blog/theory-of-knowledge/202303/what-is-the-triune-mind>< — “What is the Triune Mind”. This work by Gregg Henriques is the best of my recommendations, in my opinion; parts of his other work is reviewed in another chapter here in Part Four..





Chapter IV-x

② DARCIA NARVAEZ — MORAL DEVELOPMENT

In the previous chapter I introduced the Triune Brain Theory. As we saw in that chapter, many scientific-minded people have found that the Triune Brain Theory provides a simplified but nevertheless useful structural framework or paradigm in various related realms of inquiry having to do with understanding the human condition in terms of how we came to be what we are; it provides a map of the journey that brought us here. While following internet links on that theory, I discovered one of those realms of knowledge, specifically one that is focused on moral development in children. So, if one were to ask, what use is it to know about the Triune Brain Theory, then one answer has been provided by Darcia Narvaez: it is useful for the purpose of improving the quality of child-rearing practices.

This chapter could have been placed in Part Five, “Developmental Psychology”, but to me it seemed more appropriate to place it here in Part Four, because moral development is traced to its source in the biological development of the human species.

Biography of Narvaez

As usual, I turn to Wikipedia for some background information on this person of interest. As usual, underlined words are my emphasis, and [brackets] contain my clarifications to the quoted text, and my explanatory comments are interspersed between blocks of quoted material.

Darcia Narvaez (dar-sha narv-eyes) is a Professor of Psychology Emerita at the University of Notre Dame who has written extensively on issues of character, moral development, and human flourishing.

She ... earned a master of divinity degree from Luther Seminary in St. Paul and is a published poet. Narvaez earned her PhD in educational psychology from the University of Minnesota in 1993 and joined the College of Education and Human Development there in the Department of Curriculum and Instruction and the Department of Educational Psychology. In 2000, she joined the Department of Psychology at Notre Dame.

Narvaez’s work emphasizes moral development over a lifespan, and the interaction between implicit [internal] and explicit [external] processes in moral functioning [Dialectic Principle]. She emphasizes the importance of early experience in shaping moral capacities. Her current work is on the evolved developmental niche for young children (natural birth, extensive on-demand breastfeeding, frequent affectionate touch, caregiver responsiveness, self-directed social free play, multiple adult caregivers and extensive positive social support). She studies the effects of early life experience on sociality, morality, and thriving.

[>https://en.wikipedia.org/wiki/Darcia_Narvaez< — retrieved 12 September 2022]

More biographical information can be found at ><https://darcianarvaez.com/about><. She also maintains a website at ><https://evolvednest.org/><. She has written a book that incorporates the Triune Brain Theory with other scientific research on how morality evolved in and among humans: *Neurobiology and the Development of Human Morality — Evolution, Culture, and Wisdom* (2011). The point to be noted here is that her formal academic credentials are extensive and significant.

A Symposium Presentation

After discovering Narvaez on the internet, I found a document, a summary of some of Narvaez’s work. That short document is quite relevant to the Natural Sequence schema that I present in this *Cosmogony* book. As usual, for your convenience, I have underlined certain words and phrases for emphasis, I have inserted comments in [brackets], and I have interspersed explanatory comments between blocks of quoted material.

"The Neurobiological Roots of Our Multiple Moral Personalities" by Darcia Narvaez, University of Notre Dame. Notre Dame Symposium on Personality and Moral Character, Hosted by the Center for Ethical Education [2006]

There appear to be three types of affectively-based moral stances that persons can take: [1] one oriented to security (the **Ethic of Security**) and focused on self-preservation through safety, and personal and in-group dominance; [2] another oriented to emotional engagement with others (the **Ethic of Engagement**), particularly through caring relationships and social bonds; [3] and the third that I call the **Ethic of Imagination**, which is focused on creative ways to think and act socially. Perhaps the labels are not all inclusive but they seem to capture three different ways of co-existing with others in the social landscape.

As noted in the previous chapter, the Triune Brain Theory covers the biological roots of what are referred to as the three Ordinal Centers of the Process/Aspect System (PAS) 7x7 matrix. Reading this first paragraph, it might seem to be a bit of a stretch to correlate these three "Ethics" with (1) Ordinal Action/Motion Center, (2) Ordinal Inspiration/Emotion Center, and (3) Ordinal Expression/Intellect Center respectively, but the correlation becomes more obvious as the paper continues. Narvaez is focused on the moral and ethical realm of the human experience, the "affective" (emotional) realm, and I correlate that realm with the Inspiration Dimension (value system) of the PAS matrix — more so than to the Action Dimension (behavior system) or the Expression Dimension (belief system) — but this focus only slightly obscures the correlation of three types of moral development with the Natural Sequence schema.

Each ethic has neurobiological roots that are apparent in the biological structures and circuitry of the human brain. Triune Ethics theory derives its structure from MacLean's (1990) Triune Brain theory which proposes three basic formations in the human brain that reflect ancestral relations to lower-order species. Anatomically and biochemically, the three formations reflect the evolution of reptiles, early mammals, and late mammals. Although the theory is on its face simplistic in separating brain structures from one another, in fundamental ways animal and human research support MacLean's basic theory (Panksepp, 1998). Accumulating research in affective neuroscience not only confirms the general thrust of MacLean's triune brain theory, but points out the critical importance of early experience in gene expression in emotional circuitry (e.g., Champagne & Meaney, 2006), personality formation (Schoe, 1992; 1994), and cognition (Greenspan & Shanker, 2004). Animals have not only evolved brain functions that facilitate learning but have "psychobehavioral potentials that are genetically ingrained in brain development" as "evolutionary operants" (Panksepp, 1998, p. 55). These operants are inherited emotional command systems that help animals (and their ancestors) behave adaptively in the face of life challenges.

What I say in this chapter repeats what I have said in previous chapters and will say in subsequent chapters: our subjective experience of three so-called "Centers" (Motion, Emotion, Intellect) is based on the notion that the human brain evolved through stages that are broadly represented by (1) reptiles, (2) mammals, and (3) humans respectively. It is true that biological evolution has followed a path with many twists and turns and side-branches on the journey to us humans, but the "simple, fundamental, general, basic" (to borrow terms from the quotation) structure of the Natural Sequence schema has been established in many realm of scientific inquiry, so we should not let the diversity of 'trees' keep us from seeing the three types of 'forest' that we encounter as we retrace the journey. Narvaez, and the researchers referenced by her, have discerned the three types of 'forest'. One thing that I appreciate about Narvaez is that she describes the correspondences between the stages of animal evolution, the stages of socio-cultural development of humans in prehistory and history, and the stages of psychological development of humans during a lifetime; watch for that as you read the following. As the reader knows by now, I make the same correlations in this *Cosmogony* book.

The article continues with a description that is obviously referring to the Septenarian Attributes of Ordinal Action in general, and specifically the Motion Center, of the Natural Sequence schema. Notice the underlined words and you will see that this first stage has more to do with action, with behavior, rather than with emotion or with intellection:

I propose that three distinctive moral systems have evolved from our ancestors, propel human moral action on an individual and group level, and have aetiologies that are influenced by early and critical period experiences. According to MacLean (1990), the **FIRST** formation is the reptilian or R-complex (shared with an extinct reptile, the therapsid), which resides at the base of the forebrain, seated on top of the motor cortex, and relates to several forms of behavior in mammals, including territoriality, imitation, deception, struggles for power, the maintenance of routine, and following precedent. The **Ethic of Security** is based primarily in these instincts which revolve around survival and physical flourishing. Subcortically-riven instincts for seeking (autonomous

exploration) and emotional circuitry for fear and rage when autonomy or safety is thwarted are systems shared with all animals (Panksepp, 1998). The security ethic is oriented to physical factors in two senses. First, it maintains physical survival through self-protection and exploration. Second, the security ethic is attendant to physical flourishing through status enhancement (hierarchy or pecking order) and ingroup loyalty (purity). Self-protective behaviors and values protect the life of the individual and the ingroup. One learns to secure oneself and one's group against the competition or an "enemy". When the security ethic is explicitly triggered by personal or group threat, tribalism predominates, rivalry and the pecking order are stressed, and mob behavior can be set in motion (MacLean, 1990) as we become part of a super social organism...

An astute student of the Natural Sequence schema will recognize the similarity of the description of the Ethic of Safety to the Warrior Role and the Primitivism Worldview, Aspects other than the Motion Center that are discussed in Part One, "Introduction to the Natural Sequence". Also per the Natural Sequence schema and per developmental psychology research discussed in Part V, this Ethic is developed primarily in the Infancy Life-Stage.

A couple of paragraphs of the Symposium document are not reproduced here. Their point was to emphasize that this first step — doing whatever it takes to survive — is ethical in its own way, because without success at this first stage, there is no graduation to other higher-later stages.

The article continues with a description that is obviously referring to Ordinal Inspiration in general and specifically the Emotion Center of the Natural Sequence schema. Notice the underlined words and you will see that this second stage has more to do with emotional and social experiences than it has to do with behavioral or intellectual experiences:

The **SECOND** brain formation, identified by MacLean (1990) as central to mammalian functioning, brought about three signatory sets of behavior that did not exist in evolutionarily prior species: nursing and maternal care, audiovocal communication between mother and offspring, and play. What MacLean calls the neo-mammalian brain, the limbic system and related structures, is the seat of emotion, personal identity, the memory for ongoing experience, and the sense of reality and truth. These form the foundation of the **Ethic of Engagement**. For example, play, found only in mammals, promotes harmony and sociality. Sexual functioning radiates from the earliest to the latest brain structures. For example in mammals, genital display is a precursor to determining cooperative or aggressive interaction, behavior that both Darwin and MacLean consider to be foundational for altruism... The functionality of these systems, however, are co-constructed by the environment during an extended childhood.

Within psychology the development of mammalian emotional systems in the first years of life are captured by Bowlby's attachment theory, which is strongly influenced by ethological considerations. Attachment is fundamental to the functioning of the Engagement Ethic. Bowlby (1988, 1969) identified the hunter-gatherer context of our ancestors during the Pleistocene era as "the environment of evolutionary adaptedness," when an infant's processes for forming attachments and completing brain development evolved... Hewlett & Lamb (2005) summarize the type of child care in hunter-gatherer communities, most of which are peaceful (Knutson, 1968): "young children in foraging cultures are nursed frequently; held, touched, or kept near others almost constantly; frequently cared for by individuals other than their mothers (fathers and grandmothers, in particular) though seldom by older siblings; experience prompt responses to their fusses and cries; and enjoy multi-age play groups in early childhood" (Hewlett & Lamb, p. 15)...

An astute student of the PAS 7x7 matrix will recognize the similarity of the description of the Ethic of Engagement to the Server Role and the Traditionalism Worldview, Aspects other than the Emotion Center that are discussed in **Part One, "Introduction to the Natural Sequence"**. Also per the Natural Sequence schema and the Process/Aspect System matrix and per developmental psychology research discussed in Part V, this Ethic is developed primarily in the Childhood Life-Stage.

A paragraph of the Symposium document is not reproduced here. The point was to emphasize that an infant or child might survive physically, but it will not thrive emotionally and socially, if it is deprived of loving kindness by caregivers.

The article continues with a description that is obviously referring to Ordinal Expression in general and specifically the Intellect Center of the Natural Sequence schema. Notice the underlined words and you will see that this third stage has to do with mental and cognitive experiences, rather than with behavioral or emotional experiences:

According to MacLean (1990), the **THIRD** brain area is the neomammalian, referring to the neocortex and thalamic structures to which the neocortex is connected. It reaches its greatest size and complexity in humans. Focused primarily on the external world, the neomammalian brain provides the capacity for problem solving, memory and deliberative learning.

The third ethic, the **Ethic of Imagination** links more to these recently evolved parts of the brain, particularly the prefrontal lobes. The latter are the seat of executive functioning and are not fully developed until the early or mid-twenties (Giedd, Blumenthal & Jeffries 1999) and may be damaged by behavior choices made in the final phase of development during the college years (Bechara, 2005). The Ethic of Imagination is the source of our deliberative reasoning and imagination, which respond to the intuitions and instincts of the other ethics, able to countermand instincts with “free won’t” (Cotterill, 1999). Although humans have evolved to favor face-to-face relationships and have difficulty imagining those not present (such as future generations), the prefrontal lobes provide a means for a sense of community that extends beyond immediate relations. Humans are at their most moral when the ethic of engagement is linked with the ethic of imagination.

An astute student of the Natural Sequence schema will recognize the similarity of the description of the Ethic of Imagination to the Artisan Role and the Materialism Worldview, Aspects other than the Intellect Center that are discussed in Part One, “Introduction to the Natural Sequence”. Also per the Natural Sequence schema and per developmental psychology research discussed in Part V, this Ethic is developed primarily in the young adulthood Life-Stage.

Thereafter followed several paragraphs of elaboration on the implications of these three stages of moral development.

Throughout the brain, emotional systems are placed centrally in order to dynamically interact with more evolved cognitive structures and lower level physiological and motor outputs. As a result, there is no emotion without a thought and most thoughts evoke emotion. Further, there is no emotion without a behavioral or physiological outcome. “Emotive circuits change sensory, perceptual, and cognitive processing, and initiate a host of physiological changes that are naturally synchronized with the aroused behavioral tendencies characteristic of emotional experience” (Panksepp, p. 49). According to a hybrid model of emotional functioning, many of the emotional component systems in the brain come together as a function of learning:

“...emotions are learned states constructed during early social development from more elemental units of visceral-autonomic experiences that accompany certain behavior patterns” (p. 44-5, Panksepp, 1998). The basic neural-emotion systems “generate an animal’s egocentric sense of well-being with regard to the most important natural dimensions of life” (ibid, p. 48). These systems provide the animal with potential solutions to basic issues of survival (how do I stay intact? How do I get what I need? How do I keep what I need? How do I get and keep social supports?)

Recall that, in the PAS matrix, I refer to the Zeroth Center as the Physiology Center, which includes the sensory apparatus; I refer to the First Center as the Motion Center; I refer to the Second Center as the Emotion Center; I refer to the Third Center as the Intellect Center. These four Centers are ranked this way because this is the sequence in which they evolved in animals. As noted in the paragraph above, all four Centers interact with each other via elaborate feedback mechanisms. One of the major premises of Narvaez’s “moral development theory” is that, even though the Physiology Center is not under conscious control, there is an expectation among moral theorists that Intellect Center should regulate the Emotion and Motion Centers, reversing the order in which the Centers evolved. That is to say, for the sake of the health of the individual and the world around the individual, it is the ‘job’ of the higher-later Centers to say *yes* to the Positive Poles of the lower-earlier Centers and to say *no* to the Negative Poles of the lower-earlier Centers. **Chapter IV-x**, “Rational Emotive Behavior Therapy” has somewhat to say about that moral imperative.

Narvaez has some awareness of what are referred to in the Natural Sequence schema as the Positive and Negative Poles of the Centers. So that the reader might benefit from my book by applying its information psychotherapeutically, these Poles are pointed out in the following quotations. The point is that the Negative Poles are unhappy and unhealthy and immature and immoral and the Positive Poles are happy and healthy and mature and moral.

The three ethics are present in behavior, at least partially, from a young age, although deliberative moral reasoning lags far behind (this is not surprising since most of what we know is tacitly held; Keil & Wilson, 1999). Not only do the three ethics interact they each have both a dispositional aspect (“trait-like”), based on developmental experiences, and a situational aspect (primed by context). So, for example, if childhood

established healthy brain development (as manifested in secure attachment and functional empathy components), the person is able as a matter of course to reach out to others in empathy when they are in distress. In contrast, a person can have a foundational sense of insecurity, based on early childhood experiences of unmitigated distress, that drives their view of the world, as in attachment disorders. This foundational sense of insecurity may thwart feelings of empathy. Moreover, when a family or culture is focused on threat, individuals and groups may focus on the security ethic, suppressing the engagement ethic.

In the paragraph above, the Positive Poles are characterized with the words “healthy, secure, empathetic” and the Negative Poles are characterized with the words “insecurity, distress, disorder”.

Furthermore, what are called “dispositional” and “situational” aspects in that paragraph remind me of the Dialectic Principle, which refers to the interaction of internal and external, subjective and objective, realm of being/doing.

That paragraph also reminds me of the Me-We Principle in the Natural Sequence schema. That is to say, in the context of this chapter, there is an improvement in moral development in the direction of ego-centric focus to socio-centric focus, and then there is development even beyond Me-We: the Ethic of Security is primarily focused on Me, the Ethic of Engagement is primarily focused on We, and the Ethic of Imagination is primarily focused on the arena in which Me and We live and move and have our being. In the Natural Sequence schema, this development through ever-widening realms is codified in geometric figures: there is progress from the One-dimensionality of Me to the Two-dimensionality of We to the Three-dimensionality of context.

From a personological viewpoint, Sylvan Tomkins (Demos, 1995) offered concrete depictions of biosocial effects on personality. He suggested that early socialization sets up life orientations that the individual subsequently applies to many domains throughout life. The “ideo-affective posture” developed from early experience represents a socialized “set of loosely organized feelings and ideas about feelings” (Tomkins, 1965, p. 74) which resonate with particular organized ideologies, attracting individuals to particular viewpoints. A warm, supportive childhood leads a person to orient to an open, accepting posture (“humanistic”) while a harsh, restrictive childhood leads to a defended, rejecting posture (“normative”) towards people and towards life experiences in general.

Here again we are told about the creation of what are referred to in the Natural Sequence schema as the Positive Poles (“warm, supportive, open, accepting”) and the Negative Poles (“harsh, restrictive, defending, rejecting”) of the three Ordinal Centers. How a child is treated by their parents and others and the world in general can determine the type of person they become (ego-centric Me), and determine the groups (socio-centric We) that they gravitate toward in adult life, and determine how they regard the world in which they live, whether with friendliness or with hostility.

One might speculate on the characteristics of a person dominated by a particular ethic.

As you read the following three paragraphs, note that it is for the purpose of achieving consistency with the Natural Sequence schema that I suggest that the three Ethics have Negative and Positive Poles; Narvaez hints at that, but she is not explicit about it.

[First Ethic] A person dominated by the **Ethic of Security** likely has a “stressed brain” formation from trauma or neglect; poor attachment and bonding; lack of early embodied experience with reciprocity in social interactions; little sensori-motor memory for loving intimate interactions; compromised social abilities; domination by a defended, rejecting ideo-affective posture (Tomkins); some basic needs not fully or regularly met in childhood (e.g., Competence, Autonomy/Control, Belonging, Trustworthy world); and feelings of anger and contempt more accessible than positive feelings. Behavior is more ruthless and focused on self advantage covertly or overtly; they have a narrow ingroup orientation and value loyalty, hierarchy, control, purity (of self and of ingroup), freedom to seek (“liberty”). The [#2] engagement ethic is minimized and the [#3] imagination ethic is hijacked for security interests. An interesting example of the security ethic in ascendance is a report that 90% of members of an evangelical congregation left after the pastor began to preach an inclusive rather than an exclusive message, saying that the whole world would be saved not just those of their brand of faith (National Catholic Reporter, 2005). When a security ethic is a cultural norm, inclusivity is an unwelcome message.

All of that description, except perhaps for the positive behavior of seeking freedom, looks to me like the Negative Pole of Ordinal Action/Motion Center/Warrior Role/Primitivism Worldview/Infancy Life-Stage. In my opinion, the Positive Pole of the First Ethic is having confidence in one’s own abilities, and having respect for the abilities of others, such that the behavior of cooperation and coordination of the self with others moves the system as a whole toward ‘success’, however that may be defined in any particular situation. In other words,

the Ethic of Security is not only about the self “surviving”; it also about the self and the system “thriving”. In Narvaez’s view, cooperation does not happen until the Second Ethic [“Engagement”], but I suggest that it can happen in the First Ethic when individuals realize that their personal security is interdependent with the security of others. My suggestion is that that can happen prior to healthy development of the Positive Pole of the Emotion Center, described in the next paragraph.

[Second Ethic] A personality dominated by the **Ethic of Engagement** has strong attachment; sensorimotor [#1] memory for reciprocity and emotional [#2] intersubjectivity; strong empathic responses in mirror neurons; an open, accepting ideo-affective posture (Tomkins); feelings of empathy more accessible than feelings of anger. Primary values include compassion and tolerance. The security ethic [#1] is minimized and the imagination ethic [#3] is used for sociable ends.

All of that description, except for the negative emotion of anger, looks to me like the Positive Pole of Ordinal Inspiration/Emotion Center/Server Role/Traditionalism Worldview/Childhood Life-Stage. In Part V, which is about developmental psychology, the connection of emotionality and sociality is recognized in many models.

[Third Ethic] A personality dominated by the **Ethic of Imagination**, under a state of calm and [#2] engagement, considers outgroup members as deserving of full respect and rights, as well as empathy; is able to conceptualize alternative social systems, think impartially about moral problems, and counteract harmful instincts and intuitions with “free won’t” (Cotterill, 1999). However when threat is high and [#2] engagement low, a personality dominated by the [#3] imagination ethic will likely focus on maximizing safety and dominance, be prone to negative attributions, focus on ‘being strong,’ avoid emotional expression and respond to his/her worst instincts and intuitions.

All of that description, except for the “negative attributions”, and backsliding into the Negative Poles of the two lower-earlier Ethics, looks to me like the Positive Pole of Ordinal Expression/Intellect Center/Artisan Role/Materialism Worldview/Youth Life-Stage.

A particular ethic can be primed by the situation or other triggers. The [#2-Emotion Center] engagement ethic may, for most people, require an environment characterized by safety, caring, and belonging (indeed children in caring classrooms tend to be more prosocial) whereas the [#3-Intellect Center] imagination ethic may also require surrounds that promote hope and transcendence. The prevailing ethic likely will influence sensitivities to stimuli, preferred reasoning, susceptibilities (fallacies), motivations and goal direction, shifting perceived social affordances.

As you can see by the words that I underlined, that paragraph is mostly about what I refer to as the Dialectic Principle of the Natural Sequence schema, which is the notion that inner and outer states influence each other; there can be both positive and negative feedback. The challenge for all of us is to have enough positivity that we do not let a negative environment drag us down, but rather we pull the environment up.

In summary, I propose that there is a neurobiological substrate to moral personality evident from research on early epigenetic imprinting on brain structure and “wiring”, and the effects of emotional co-regulation or its absence (Greenspan & Shanker, 2002; Schore, 1992; 1994). The three neurobiological brain systems that underlie the three ethics may signal the features of development and lived experience that yield optimal functioning. One might consider these three ethics as goals for human optimization. **First**, children develop a sense of security through intersubjectivity — safe and nurturing rearing which designs a “morally-prepared” brain. **Second**, a child develops a sense of engaged enactive participation in social life, rooted in sensori-motor sensibilities for justice (Lerner) from extensive experiences of reciprocity and social exchange. **Third**, children are provided opportunities to engage the imagination for good ends. Caregivers provide in situ modeled and guided training of prosocial perception/action (enactive learning). Each person is built from a myriad of intelligent systems, from the biochemical reactions of the limbic system, to the neuronal networks that compete to win when stimuli are processed. The virtuous person is able to coordinate and focus the systems. Exemplar moral personality may require more than these basic pieces, such as imagination beyond the everyday; deep attachment to an inspiring caring person (or divine being) translated to deep concern for others; and a sense of calm, certainty or faith. ><http://cee.nd.edu/news/documents/NarvaezSummary.pdf>< —retrieved 12 September 2022]

That paragraph hints of levels of Ethics beyond these earliest-lowest three. That is certainly the case with the Natural Sequence schema, which has seven levels or stages. Levels of Ethics, and other aspects of being “beyond the everyday” are discussed in numerous chapters in this *Cosmogony* book.

General Comments on Narvaez

1. I quoted this seminar document as extensively as I did in order to inform you, yet again, about the various ways that the Natural Sequence schema shows up at various time scales: the evolution of the pre-human and human species, the evolution of human culture, and the evolution of human individuals.
2. However, Narvaez might or might not be aware that the Fractality Principle, the Great Chain/Nest of Being, proposes stages of development both lower–earlier and higher–later than the three noted in Item 1. There are septenarian stages all the way up and all the way down from the three that concern human development.
3. It may be that Narvaez, in publications unknown to me, correlates her stages of moral development with other models proposed by developmental psychologists that are discussed in Part Five, “Developmental Psychology”. Of course, if Moral Development is in fact a part of a septenary, then there are stages of Moral Development above and beyond these three. Consider this chapter a preview of Part Five in general, but note specifically the work of Lawrence Kohlberg, who also had a theory of moral development in six stages, and to the work of James Fowler, who had a theory of faith development in six stages. As you will see in those chapters, these developmental psychology models did not espouse the triune brain theory, but even so they did follow the Natural Sequence schema.

This chapter and previous chapters covered the left hemisphere Centers, in the next chapter we will look at the right hemisphere Centers.





Chapter IV-x

② IAIN MCGILCHRIST — BRAIN HEMISPHERE FUNCTIONS

The purpose of this chapter is to show that the function of the human left brain hemisphere correlates with Ordinality in the terminology of the Natural Sequence schema and Process/Aspect System matrix, and the function of the human right brain hemisphere correlates with Cardinality in the NS-PAS structure.

The reason that I include this information about the function of brain hemispheres is that, in other chapters here in Part Four, various sources present evidence for the evolution of what the NS-PAS refers to as the Ordinal triad of Centers (Motion, Emotion, Intellect), but not for the Cardinal triad of Centers (Concept, Sympathy, Excitation). When one takes into account the fact that the human brain has two hemispheres, and that the function of the hemispheres is different from each other in some ways even though they evolved at the same time, then we find evidence for the existence and function of the Cardinal Centers as understood in the NS-PAS structure. The descriptions of the functions of the hemispheres and the descriptions of the functions of the Centers are similar enough that we can be reasonably confident that there is a correlation between them. This helps to bolster my assertion throughout this *Cosmogony* book that the structure of the NS-PAS structure is instantiated in many realms of the Cosmos, the human brain being yet another one of them.

As you read this chapter, recall from chapters in Part Two, the sections on Centers as understood in the Gurdjieffian (Chapter II-3) and Michaelian (Chapter II-4) teachings, that the Centers are Aspects of the Process/Aspect System matrix (the personality structure) that process incoming sensory data in various ways, whether it be by thinking about it (Intellect Center), or feeling about it (Emotion Center), or acting about it (Motion Center). Those three Centers are the usual culprits, but there are four others that also have jobs to do, and I will point those out in the sections that follow.

Hemisphere Lateralization

When one does an internet search on human brain lateralization, one finds that it is a controversial subject. For instance, Wikipedia has an article on the subject, and this is what it says:

Broad generalizations are often made in popular psychology about certain functions (e.g. logic, creativity) being lateralized, that is, located in the right or left side of the brain. These claims are often inaccurate, as most brain functions are actually distributed across both hemispheres. Most scientific evidence for asymmetry relates to low-level perceptual functions rather than the higher-level functions popularly discussed (e.g. subconscious processing of grammar, not “logical thinking” in general). In addition to this lateralization of some functions, the low-level representations also tend to represent the contralateral side of the body.

The best example of an established lateralization is that of Broca’s and Wernicke’s Areas (language) where both are often found exclusively on the left hemisphere [= Intellect Center, Ordinal]. These areas frequently correspond to handedness however, meaning the localization of these areas is regularly found on the hemisphere opposite to the dominant hand. Function lateralization, such as semantics, intonation, accentuation, and prosody, has since been called into question and largely been found to have a neuronal basis in both hemispheres.

Perceptual information is processed in both hemispheres, but is laterally partitioned: information from each side of the body is sent to the opposite hemisphere (visual information is partitioned somewhat differently, but still lateralized). Similarly, motor control signals sent out to the body also come from the hemisphere on the opposite side. Thus, hand preference (which hand someone prefers to use) is also related to hemisphere lateralization.

In some aspects, the hemispheres are asymmetrical; the right side is slightly bigger. There are higher levels of the neurotransmitter norepinephrine on the right and higher levels of dopamine on the left. The right hemisphere is

more sensitive to testosterone. There is more white matter (longer axons) on the right and more grey matter (cell bodies) on the left.

Linear reasoning functions of language such as grammar and word production are often lateralized to the left hemisphere of the brain [= Intellect Center, Ordinal]. In contrast, holistic reasoning functions of language such as intonation and emphasis are often lateralized to the right hemisphere of the brain [= Concept Center, Cardinal].

Other integrative functions such as intuitive or heuristic arithmetic, binaural sound localization, etc. seem to be more bilaterally controlled. [https://en.wikipedia.org/wiki/Cerebral_hemisphere — retrieved 17 May 2024]

That last paragraph is the most relevant to this chapter because it mentions that the same phenomenon, language in this case, gets handled differently in the two hemispheres. McGilchrist has explored that fact to the max. McGilchrist is a mainstream academic, as we see in the next section, but, as we see in the sections after the next section, he has explored realms of the science and philosophy of brain lateralization that are a bit outside the mainstream viewpoint which was presented above.

Biography of Iain McGilchrist

As usual, I provide a brief biography of people whose ideas are featured in a chapter. If they have a Wikipedia article about them, it likely indicates that they have credentials to back up their ideas. Such is the case with McGilchrist:

Iain McGilchrist (born 1953) is a psychiatrist, writer, and former Oxford literary scholar. McGilchrist came to prominence after the publication [in 2009] of his book *The Master and His Emissary*, subtitled *The Divided Brain and the Making of the Western World*.

McGilchrist read [= “was a professor of”] English at New College, Oxford and published *Against Criticism* in 1982. He later trained in medicine and has been a neuroimaging researcher at Johns Hopkins University in Baltimore and a Consultant Psychiatrist at the Maudsley Hospital in south London. McGilchrist is a Fellow of the Royal College of Psychiatrists, and has been elected a Fellow of All Souls College, Oxford three times.

According to his web site, in 2009 at the time *The Master and His Emissary* was published, McGilchrist worked privately as a consultant psychiatrist in London. He still lives on the Isle of Skye, off the coast of Scotland and continues to write, and to deliver many lectures and interviews.

In 2021 McGilchrist published a new book of neuroscience, epistemology, and metaphysics called *The Matter with Things*. [https://en.wikipedia.org/wiki/Iain_McGilchrist — retrieved 17 May, 2024]

Obviously, based on that bio, one can reasonably believe that he knows a thing or two about brain science. If we read about his books, that opinion is confirmed, so let’s take a look.

The Master and His Emissary

McGilchrist’s personal and professional website is <https://channelmcgilchrist.com/>. On one of the pages of that website, namely <https://channelmcgilchrist.com/master-and-his-emissary/>, we find this brief introduction to his 2009 book on brain lateralization:

Most scientists long ago abandoned the attempt to understand why nature has so carefully segregated the hemispheres, or how to make coherent the large, and expanding, body of evidence about their differences. In fact to talk about the topic is to invite dismissal.

My endeavor throughout this *Cosmogony* book is to “make coherent” the “expanding body of evidence” for instantiations of the Natural Sequence schema, brain lateralization being one of those instantiations. Those scientists and philosophers who understand that the structure of the human brain is an instantiation of the structure of the Cosmos in terms of Ordinality and Cardinality are not at a loss to explain hemisphere lateralization in terms of the same dichotomy. Other chapters in this book explain the dichotomy of, for example, female and male genders, as other instantiations of the primordial dichotomy of Ordinality and Cardinality, of Yin and Yang.

Yet no one who knows anything about the area would dispute for an instant that there are significant differences: it’s just that no-one seems to know why. And we now know that every type of function — [of which here are a few examples:] including reason [Intellect Center], emotion [Emotion Center], language [Expression Centers, Intellect and Concept], and imagery [Concept Center] — is subserved not by one hemisphere alone, but by both.

McGilchrist's research led him to believe that the two hemispheres process the same input — whether it be of the Action Axis (Motion and Excitation Centers), the Inspiration Axis (Emotion and Sympathy Centers), or the Expression Axis (Intellect and Concept Centers), but in different ways:

This book argues that the differences lie not, as has been supposed, in the 'what' — which skills each hemisphere possesses — but in the 'how', the way in which each uses them, and to what end. But, like the brain itself, the relationship between the hemispheres is not symmetrical. The left hemisphere, though unaware of its dependence, could be thought of as an 'emissary' of the right hemisphere, valuable for taking on a role that the right hemisphere — the 'Master' — cannot itself afford to undertake. However it turns out that the emissary has his own will, and secretly believes himself to be superior to the Master. And he has the means to betray him. What he doesn't realize is that in doing so he will also betray himself.

McGilchrist makes much ado about the imbalance created when the 'mind' of the left hemisphere, the Ordinal side of the brain, believes it should always be in charge, and believes the right hemisphere, the Cardinal side of the brain, is inferior or irrelevant, and should just shut up and go away. My book makes little ado about that, but more is said about that in the next paragraph:

The book begins by looking at the structure and function of the brain, and at the differences between the hemispheres, not only in attention and flexibility, but in attitudes to the implicit, the unique, and the personal, as well as the body, time, depth, music, metaphor, empathy, morality, certainty, and the self. It suggests that the drive to language was not principally to do with communication or thought, but manipulation, the main aim of the left hemisphere, which manipulates the right hand. It shows the hemispheres as no mere machines with functions, but underwriting whole, self-consistent, versions of the world. Through an examination of Western philosophy, art and literature, it reveals the uneasy relationship of the hemispheres being played out in the history of ideas, from ancient times until the present. It ends by suggesting that we may be about to witness the final triumph of the left hemisphere — at the expense of us all.

Each hemisphere is structured such that it pays attention to and interprets and processes the input in different ways. Those two ways are not fully described above, but they are more fully described below, and there it becomes more obvious that they are the Ordinal way and the Cardinal way, "left brain" and "right brain" respectively.

The back-cover blurb for the book says this:

Why is the brain divided? The difference between right and left hemispheres has been puzzled over for centuries. Drawing upon a vast body of brain research, the renowned psychiatrist, author, and thinker Iain McGilchrist reveals that the difference between the two sides is profound — two whole, coherent, but incompatible ways of experiencing the world. The detail-oriented left hemisphere [Ordinal Centers] prefers mechanisms to living things and is inclined to self-interest, while the right hemisphere [Cardinal Centers] has greater breadth, flexibility, and generosity.

In the second part of his book, McGilchrist takes the reader on a journey through the history of Western culture, illustrating the tension between these two worlds as revealed in the thought and belief of thinkers and artists from the ancient to the modern, from Aeschylus to Magritte. He ultimately argues that, despite its inferior grasp of reality, the left hemisphere is increasingly taking precedence in today's world — with potentially disastrous consequences.

As with McGilchrist's book, this *Cosmogony* book is my contribution to the efforts of some scientists and philosophers to achieve a balance of the two hemispheres of the brain — the Ordinal and Cardinal perceptions and behaviors and values and beliefs — and thence to balance the society that results from the balanced functions of the hemispheres.

I am not quite finished with *The Master and His Emissary*.

"Ways of Attending: How our Divided Brain Constructs the World"

Readers of my books on *Cosmology* and *Cosmogony* will recognize that the human left brain hemisphere pays attention to the Ordinal Processes and Aspects of the Cosmos and the human right brain hemisphere pays attention to the Cardinal Processes and Aspects of the Cosmos. Note that word "attention".

The book titled in this section, published in 2018, is a 32-page summary of the main points made in *The Master and His Emissary*. This information supplements what was given above, and confirms my correlation brain lateralization with the Natural Sequence schema. The back-cover blurb says this:

Attention is not just receptive [passive], but actively [active] creative of the world we inhabit. How we attend makes all the difference to the world we experience. And nowadays in the West we generally attend in a rather unusual way: governed by the narrowly focused, target-driven left hemisphere of the brain.

The dichotomy between passivity and activity is discussed here and there in this Cosmogony book, but particular attention is paid in Part One, in **Chapter I-x** “Yin + Yang = Chi” in the section “Passive + Active = Action”.

Forget everything you thought you knew about the difference between the hemispheres, because it will be largely wrong. It is not what each hemisphere does — they are both involved in everything — but how it does it, that matters. And the prime difference between the brain hemispheres is the manner in which they attend. For reasons of survival we need one hemisphere (in humans and many animals, the left) to pay narrow attention to detail, to grab hold of things we need [the Ordinal Centers], while the other, the right, keeps an eye out for everything else [the Cardinal Centers]. The result is that one hemisphere is good at utilizing the world [the Ordinal Centers], the other better at understanding it [the Cardinal Centers].

Absent, present, detached, engaged, alienated, empathic, broad or narrow, sustained or piecemeal, attention has the power to alter whatever it meets. The play of attention can both create and destroy, but it never leaves its object unchanged. How you attend to something — or don’t attend to it — matters a very great deal. This book helps you to see what it is you may have been trained by our very unusual culture not to see.

The underlined words alternate between left brain functions and right brain functions, but not consistently. To help you discern which word refers to the function of which hemisphere, I include the next section.

Amazonian Book Reviews

I found the following book review by “gypsy”, dated 18 December 2010, on the Amazon web page of the *Master and His Emissary*. It seemed very helpful toward understanding the functions of the brain hemispheres and how they correlate with Ordinality and Cardinality.

The following paragraph is a good description of many instantiations of Ordinality reviewed in this *Cosmogony* book, not just brain hemispheres:

A very partial summary of the nature of the left hemisphere could be as follows: it has an emphasis on doing, on things mechanistic, of the “whatness” of things; it is interested purely in functions and can only see things in context. The LH is not interested in living things. It does not understand metaphor and deals with pieces of information but cannot see the gestalt of situations. It recognizes the familiar and is not the hemisphere that attends to the “new”, therefore it searches for what it already understands to categorize and nail down, often with (another of its characteristics) an unreasonable certainty of itself. Remember, it can’t observe anything outside of its own confines. Since it prefers the known, it attempts to repackage new information (if unaided by the RH) as familiar — a kind of re-presenting the experience. It positively prefers (and defends!) what it knows! The LH tends to deny discrepancies that do not fit its already generated schema of things. It creates “a sort of self-reflexive virtual world” according to McGilchrist. Additionally, it is “regional” and focuses narrowly. The metaphor for its structure is vertical [hierarchical]. It brings an attention that isolates, fixes and makes things explicit by bringing it under the spotlight of attention. It helps us to be grounded and “in life”, looks for repetition and commonality between things without which we would drift and be unable to understand our experiences since all would be continuously new. It is efficient in routine situations where things are predictable. Without benefit of the RH (seen in studies of people with hemispheric damage, for example), it also renders things inert, mechanical and lifeless.... But it allows us to “know” and learn and make things.

The following paragraph is a good description of many instantiations of Cardinality reviewed in this *Cosmogony* book, not just brain hemispheres:

The right hemisphere’s emphasis is on process, on the “how”, “the manner in which” or the “howness” as McGilchrist puts it. It is interested in “ways of being” which only living things have. I was amazed to learn that the RH does recognize one group of inanimate objects as belonging to the class of living entities, and that is musical instruments (!) It helps us resonate with other living beings and the natural world, seeing its ultimate interconnectedness. The RH can carefully see things out of their context, it is global rather than regional, is broad and flexible, and as mentioned above, understands metaphor. It sees the gestalt and the wholeness; it tolerates ambiguity and the unknown. Its structure metaphor is “horizontal”; it is spacious and helps us with enough distance so we can observe. In it, we experience the live, complex, embodied, world of individual, always unique beings, forever in flux, a net of interdependencies, forming and reforming wholes, a world with which we are

deeply connected. The RH is responsible for every kind of attention: divided, vigilant, sustained, and alertness — except for “focused”, the domain of the LH. It can direct attention to what comes to us “from the edges” of our awareness regardless of the hemisphere side. It alone detects new or novel experiences. It distinguishes old information from new better than the LH. Animals, like horses, perceive new and emotionally arousing stimuli with the left eye (which is governed by the RH). It is more capable of a frame shift; think “possibility”; it has flexibility when encountering the “new” and suppresses the immediate impulse to see it as “old”. It actively watches for discrepancies, more like a “devil’s advocate”. It approaches certainty with caution and humility. It says “I wonder” or “it might be” when confronted with information. But it also, without the LH, would create an experience that was always unique, forever in motion and unpredictable. “If all things flow, and there is never a repeated experience, then we can never step into the same river twice, and we would never be able to ‘know’ anything.” If nothing can ever be repeated, then nothing can be known.

Is the result of this growing LH dominance over the RH an increasingly dehumanized society where mechanism, bureaucracy, obsession with structure and with “what” predominates over a concern for living things and beings and their interconnectedness? You will be immersed in this question throughout this remarkable book.

While no doubt this book deepens our understanding of the brain and has vast implications for psychotherapy and the understanding of human psychology, it is far more than this. It isn’t possible to read this book without a continuing awareness of our political system, the growing dominance of our corporations, the weak assumptions of war, and the uncomfortably growing sense of the “dehumanization” of our world.

Another book review was focused on some of the many realms of the Cosmos that are instantiations of the Natural Sequence schema and the Process/Aspect matrix that exhibit the dichotomy of Ordinality and Cardinality. This review was by Søren and was dated 22 May 2021:

A tour-de-force, peerless in its breadth and depth of multi-disciplinary analysis of the divided nature of the brain, and the increasing cerebral lateralization in the history of ideas. (The devastating consequences of disproportionate left hemisphere dominance).

McGilchrist masterfully cross-fertilizes both domains, the sciences and humanities — the disciplines of psychiatry, cognitive and neuroscience, anthropology, with philosophy of mind, literature, music, language, and art — again with unsurpassed breadth, depth and sophistication — truly staggering.

In the latter part, he takes you on a tremendous journey through pivotal periods in Western civilization, explicating the ramifications of hemispheric balance with periods of flourishing (e.g., early Greek, Romantic zenith and Renaissance) and the disastrous effects when the left hemisphere takes on more than its due share, leading to overextending of empires and collapse. Left hemispheric dominance results in confining our attention to and conception of the world to a reductive, bloodless, mechanistic, bureaucratized, compartmentalized, devitalized view of the world as an aggregate of separate ‘things’, as opposed to a living, flowing, ongoing constellation of intrinsically interconnected processes and events in constant dialog with one another).

[><https://www.amazon.com/Master-His-Emissary-Divided-Western/dp/0300245920>< — retrieved 17 May 2024]

If I were to read the book, I would perhaps find other instantiations of the Natural Sequence schema to add to this *Cosmogony* book.

Concluding Comments on Iain McGilchrist

Most of the descriptions reviewed above are stated in terms of Left Hemisphere = Intellect Center and Right Hemisphere = Concept Center — the Expression Centers — but these descriptions mostly omit the functions of the Inspiration Centers (Emotion and Sympathy) and the functions of the Action Centers (Motion and Excitation) There is one hint in the quotations: “emotionally arousing stimuli”. In order for my model to be complete, the dichotomy of brain structures should apply not only to the Expression Centers, but also to the Sympathy Centers and the Action Centers. Perhaps it is an area of future research and study on my part to fulfill this deficit.

The work of psychologist Timothy Leary, documented in the next chapter, corroborates and embellishes the notion presented in this chapter, that the human brain has seven basic functions that can be mapped onto the Natural Sequence schema.





Chapter IV-x

TIMOTHY LEARY — EIGHT-CIRCUIT MODEL OF CONSCIOUSNESS

This is the third chapter in a series of chapters on “levels of consciousness” that are recognized by certain psychologists. Chapter IV-x, “Paul MacLean”, discussed three levels of consciousness; Chapter IV-x, “Iain McGilchrist”, added three more by making a distinction between left and right brain hemisphere functions. In this chapter, there is discussion of psychologist Timothy Leary’s eight levels of consciousness. In Part V there are chapters that discuss the work of more than a dozen developmental psychologists, some of whom characterize their schemas in terms of stages in the evolution of consciousness.

✓ Biography of Timothy Leary

In the mid- and late-20th Century, an academic psychologist, Dr. Timothy Leary, proposed a schema that has features that have an obvious correlation with components the Natural Sequence schema. For those of you who do not know about Leary, a search of the internet will likely tell as much as you might want to know. He became famous in the 1960s and 1970s as a psychedelic drug researcher and experimenter while he was a professor at Harvard University.

Following is an introduction to his biography on Wikipedia:

Timothy Francis Leary (October 22, 1920 – May 31, 1996) was an American psychologist and writer known for his strong advocacy of psychedelic drugs.... In 1950, Leary received a Ph.D. in clinical psychology from the University of California, Berkeley.... The new Ph.D. stayed on in the Bay Area as an assistant clinical professor of medical psychology at the University of California, San Francisco; concurrently, Leary co-founded Kaiser Hospital’s psychology department in Oakland, California and maintained a private consultancy.... From 1954 or 1955 to 1958, Leary directed psychiatric research at the Kaiser Family Foundation. In 1957, Leary published *The Interpersonal Diagnosis of Personality*. The Annual Review of Psychology exuberantly dubbed it the “most important book on psychotherapy of the year.” ... His work in academic psychology expanded on the research of Harry Stack Sullivan and Karen Horney, which sought to better understand interpersonal processes to help diagnose disorders. Leary’s dissertation developed the interpersonal circumplex model, later published in *The Interpersonal Diagnosis of Personality*. The book demonstrated how psychologists could use Minnesota Multiphasic Personality Inventory (MMPI) scores to predict how respondents might react to various interpersonal situations. Leary’s research was an important harbinger of transactional analysis, directly prefiguring the popular work of Eric Berne.... As a clinical psychologist at Harvard University, Leary worked on the Harvard Psilocybin Project from 1960–62 (LSD and psilocybin were still legal in the United States at the time), resulting in the Concord Prison Experiment and the Marsh Chapel Experiment.... Leary believed that LSD showed potential for therapeutic use in psychiatry. He used LSD himself and developed a philosophy of mind expansion and personal truth through LSD. After leaving Harvard, he continued to publicly promote the use of psychedelic drugs and became a well-known figure of the counterculture of the 1960s.... Leary developed the eight-circuit model of consciousness in his book *Exo-Psychology* (1977) and gave lectures, occasionally billing himself as a “performing philosopher”.
[>https://en.wikipedia.org/wiki/Timothy_Leary < — retrieved 06 June 2020]

Although Leary was obviously on a distinguished and promising academic career track, in the perception of his peers, he went ‘off the rails’ at some point by delving into what is called “transpersonal psychology”, which is the idea that there is more to the mind than just the biological processes of the physical brain. However, I would say that it is possible to see the value in the eight-circuit model of consciousness and still retain a belief that there is nothing supernatural going on in the mind, if one is so inclined.

Introduction to Octate Consciousness

Before we delve into the description of Leary's "eight circuit model of consciousness", a few preliminary comments are appropriate.

1. Leary said that he received some inspiration for his schema from the Hindu yogic teaching about the chakras. In the Hindu teaching, there are said to be seven major chakras; refer to [Chapter II-9 in Part Two](#), "The Seven Chakras", for more information about that. There you will see that the chakras are located on the human body, that they have specific functions for the body, and that they follow the Natural Sequence schema. They are named and arranged, from bottom to top: Sacral > Navel > Plexus > Heart > Throat > Brow > Crown. The chakras are correlated with the so-called "Centers" of another teaching (see next); the Centers are to functions of the mind as the chakras are to functions of the body:
2. In [Chapter II-3 in Part Two](#), in a section titled "The Seven Centers", there is discussion of the "Centers", which were a component of a teaching by a Russian mystic name Georges Gurdjieff. The Centers are described as types of conscious experience that are arranged in space-like levels and time-like stages. The Centers follow the Natural Sequence schema. My names for the Centers are arranged this way: Motion > Emotion > Intellect > Impulse > Concept > Sympathy > Excitation. Of the various septenaries reviewed in this *Cosmogony* book that Leary's Circuits can be correlated with, the Centers are the closest equivalent, even more so than chakras are.
3. Because Leary departed from where he started out, high and mighty in mainstream academic psychology — which tends to have a materialistic predilection — into spiritual matters, I considered putting this Chapter in [Part Three](#), "Modern Day Spiritual Teachings". Leary's Circuits also fits in with other mainstream psychological theories of the developmental type, which are reviewed in [Part Five](#), "Developmental Psychology". However, I decided to put it here because it provides a bridge between the septenaries presented in [Parts Two and Three](#) and the developmental psychology (DevPsy) models presented in [Part Five](#), because:
4. Leary also makes correlations of his Circuits with 1) stages of biological evolution, 2) stages of cultural evolution, and 3) stages of developmental psychology. There are chapters in this *Cosmogony* book that do the same thing; those chapters point to the Natural Sequence schema as the archetypal structure underlying them all, so I will direct the reader to other chapters in this book at appropriate places in the following descriptions of the Circuits. My working hypothesis is that there is only one true foundational system, and it provides the logical and mathematical structure of these various schemas, and that is the Natural Sequence schema. A table at the end of this section shows the correlations of these seven circuits with these other instantiations of the Natural Sequence schema.
5. By his own admission, Leary was a bit of a trickster, and one of the trickster things he did was switch one of the Circuits in his numbered sequence from the Natural Sequence of the chakras and Centers. In one of the quotations referenced below, we find this: "In the book *The Game of Life* Leary hints that he reversed the natural order of one of the circuits in relationship to another one. He suggested he did this as a 'test', and any true adept delving into these realms would be able to reverse it to its proper location." It just so happens that, in order to conform to the Natural Sequence schema, all that needs to be done is to [switch Leary's "fifth" and "sixth" Circuits](#). Does this make me into a "true adept"?
6. It is beyond the scope of this book to delve into the depth and breadth of the details of the Circuit theory, which is extensive; it is sufficient to clinch the correlation of its stages with the other instantiations of the Natural Sequence schema that I document in this book. It is sufficient to compare and contrast the Circuit theory with these other septenaries, just enough to suggest that interested readers can pursue more information, if they are so inclined.

The correlation table that shows septenaries relevant to Leary's Circuits is as follows:

Table IV-xa: CHAKRAS, CENTERS, CIRCUITS, ETC.							
RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
DIALECTIC	–ORDINAL–			=NEUTRAL=	+CARDINAL+		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATI'N	EXPRESSION	INSPIRATION	ACTION
DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
PROCESS → ASPECT ↓	TERMINATION	INVOLUTION	ANALYSIS	COMBINATI'N	SYNTHESIS	EVOLUTION	ORIGINATION
CENTER	+Endurance MOTION –Activity	+Sensibility EMOTION –Sentimental'ty	+Thought INTELLECT –Reason	+Intuition IMPULSE –Instinct	+Integration CONCEPT –Fantasy	+Empathy SYMPATHY –Sensitivity	+Vitality EXCITATION –Arousal
CHAKRA	SACRAL	NAVEL	PLEXUS	HEART	THROAT	BROW	CROWN
CIRCUIT	BIO- SURVIVAL	EMOTIONAL	SYMBOLIC	DOMESTIC	NEURO- SOMATIC	NEURO- ELECTRIC	NEURO- GENETIC
LIFE-STAGE	+Coordination INFANCY –Clumsiness	+Socialization CHILDHOOD –Codependence	+Independence YOUTH –Irresponsibility	+Authenticity MIDDLE AGE –Falseness	+Legacy SENIORITY –Self-indulgenc	+Gratitude ELDERHOOD –Regret	+Anticipation DYING –Disengagement
CULTURE	Paleolithic Hunter-Gatherer	Neolithic Agricultural	Bronze-Iron Civilization	Scientific Informational	Philosophical (future)	Spiritual (future)	Utopian (future)
EVOLUTION	Plant	Animal	Human				

My comments on this table are as follows:

1. ATTRIBUTES: The first five rows (Rank, Dialectic, Axial, Dimension, Direction) show the Attributes of the Natural Sequence schema. These are explained and described in Chapter I-x in Part One, “Attributes of the Natural Sequence”.
2. PROCESS: The sixth row shows the names of the so-called “Processes” of the Natural Sequence schema and the Process/Aspect System matrix. These are the seven fundamental ways that the Cosmos changes over time.
3. ASPECT: The names of five so-called “Aspects” of the Natural Sequence schema and the Process/Aspect System matrix. These are the seven fundamental forms that the Cosmos manifests in space.
4. CENTER: The seventh row shows the seven so-called “Centers”. Centers are discussed at length in Chapter II-3 in Part Three, in a section titled “The Seven Centers”. The Centers have a healthy manifestation, which is shown as a word with a “+” sign, and Centers have an unhealthy manifestation, which is shown as a word with a “–” sign. These words are shown in this table because sometimes they bolster the correlation of Centers with Circuits. The correlation of Centers with Circuits are noted in the sections that follow.
5. CHAKRA: As we will see in subsequent sections, Leary indicated that he got some of his ideas for his Circuits from the chakra system of Hindu esotericism. Refer to Chapter II-9 in Part Two, “The Seven Chakras”, for more information. Chakras are to the body as Centers are to the Personality.
6. CIRCUIT: The ninth row shows the names that Leary gave to the Circuits.
7. LIFE-STAGE: Leary compares his Circuits to stages studied in the field of developmental psychology. In the eighth row of the table, I show my names for the so-called “Life-Stages” of the Natural Sequence schema. These are stages that normal healthy people in normal healthy environments go through during the course of a full lifetime from birth to death. There are cases of so-called “arrested development”, where people gets stuck at some Life-Stage along the way, or they move on from it in the so-called “Negative Pole” (shown with an “n-dash” before the –Name), which inhibits or distorts

their expression of subsequent stages as they move forward in life. Other people do not stop at some “ceiling” during their ascent through the Life-Stages; they continue to evolve until they die. Life-Stages are discussed at length in Chapter V-15 in Part Five, “The Seven Life-Stages”.

8. CULTURE: Leary compares his Circuits to stages studied in the field of cultural anthropology. Psychological maturity considered as a whole is influenced by the environmental and social milieu in which the ‘growing up’ on other time tracks takes place. Many DevPsy researchers have recognized the similarity and correspondence of stages of psychological maturity over the course of a lifetime to stages of socio-cultural-economic-political evolution over the course of human history thus far, and they speculate about future stages of socio-cultural evolution that correlate with stages of individual development. It takes thousands of years to advance through a stage. Humanity as a whole appears to be somewhere in the transition from Stage 3, “Civilization”, to Stage 4, “Science/Information”. Transitions from stage to stage can be traumatic. If humanity makes it through this current transition intact, then it presumably will move on to the Cardinal stages at some future time. This particular growing-up track is mentioned in this Part of the *Cosmogony* book with respect to some DevPsy models, and it is discussed at length in **Chapter Xx in Part X**, “Socio-cultural Evolution”. In the chapters that follow, the name of this ‘growing up’ track is simplified to “Culture”.
9. EVOLUTION: Leary compares his Circuits to stages studied in the field of biological evolution.

So now let’s explore the eight circuits of consciousness.

Leary’s Eight-Circuit Model

The following excerpts were copied verbatim from two sources. One of them is my usual source, namely Wikipedia, >http://en.wikipedia.org/wiki/8-Circuit_Model_of_Consciousness< (WP), and the other source is PsychologyWiki, specifically >https://psychology.fandom.com/wiki/8-Circuit_Model_of_Consciousness< (PW). The latter presents information that adds to the Wikipedia article, and that I regard as helpful to my project of correlating this and other septenaries with the Natural Sequence schema. Between blocks of the following quoted material I have interspersed some explanatory comments, and I have placed a few comments in [brackets] within the quoted material, and I have underlined some words in order to draw attention to information that I comment on specifically.

The eight-circuit model of consciousness is a hypothesis by Timothy Leary, and later expanded on by Robert Anton Wilson and Antero Alli, that “suggested eight periods (circuits) and twenty-four stages of neurological evolution”. The eight circuits, or eight “brains” as referred by other authors, operate within the human nervous system, each corresponding to its own imprint and direct experience of reality. Leary and Alli include three stages for each circuit that details developmental points for each level of consciousness. [WP]

With the words “evolution” and “developmental” we see that Leary’s model is therefore a developmental psychology. However, Leary’s model has a different feel to it than the other DevPsy models reviewed in **Part Five**, so it seemed to me to fit best here in this **Part Four**, “Natural Evolution”.

The 8-Circuit Model of Consciousness is a model of consciousness proposed by Dr. Timothy Leary. Leary believed the mind is best viewed as a collection of 8 “circuits”, also called “gears” or “mini-brains”. Each stage is claimed to represent a higher stage of evolution than the one before it. Some of his ideas may be viewed as protoscience but others may view it as pseudoscience. [PW]

That each stage is built on previous stages is a restatement of what I refer to as the Holarchy Principle. Sometimes non-mainstream ideas fall into the proto-science category (ideas that are ahead of their time), and sometimes non-mainstream ideas fall into the pseudo-science category (in the long run they prove to be junk ideas). My inclination is to suggest that Leary’s model is proto-science, as is my suggestion that the Natural Sequence schema is proto-science, not (yet) a part of the mainstream understanding. In this book, we discuss many other people who make similar claims about the veracity of their model that Leary made about his model, and the models are compared. The fact that so many other broad and deep thinkers and researchers have independently come to a similar staged theory about the structure of the Cosmos and subsets of the Cosmos might or might not lead hard-headed scientists to question their belief that the material level of reality is all that there is.

Leary presented a model based on the lateralization of brain function but taking his conclusions further than orthodox neuropsychology warrants. The first four levels, which Leary presumed to reside in the left lobe of the cerebrum, are concerned with the survival of organisms on earth; the other four, which Leary suggested are

found in the right lobe, are for use in the future evolution of humans, and remain dormant in the majority of human beings. There is no scientific evidence for these assertions — indeed, scientific evidence would appear at this stage to contradict them. [PW]

Refer to **Chapter IV-x — “Iain McGilchrist: Brain Hemisphere Functions”** for a discussion about the idea that brain hemisphere functions reflect the difference between Ordinality and Cardinality in the Natural Sequence schema. Basically and briefly, McGilchrist’s book *The Master and His Emissary* makes a strong scientific case that brain lateralization is not a bogus notion, as this wiki claims. Furthermore, in McGilchrist’s view, the right-brain functions are active now (although usually subdued or unrecognized except by creative people), not waiting for some activation in the future as claimed by Leary. One of the aims of my books is to reconcile the natural and the supernatural by showing that they both emerge from the same logical and mathematical pattern, which counts for “scientific” evidence in some ways and with some people.

The next two Parts of this Cosmogony book document and discuss so-called “humanistic psychology” and “transpersonal psychology”. Leary’s Circuit model could be regarded as a bridge between these two branches of psychology:

The first four circuits concern themselves with life on Earth, and the survival of the human species. The last four circuits are post-terrestrial, and concern themselves with the evolution of the human species as represented by so-called altered states of consciousness, enlightenment, mystical experiences, psychedelic states of mind, and psychic abilities. The proposal suggests that these altered states of consciousness are recently realized, but not widely utilized. Leary described the first four as “larval circuits”, necessary for surviving and functioning in a terrestrial human society, and proposed that the post terrestrial circuits will be useful for future humans who, through a predetermined script, continue to act on their urge to migrate to outer space and live extra-terrestrially. Leary, Wilson, and Alli have written about the idea in-depth, and have explored and attempted to define how each circuit operates, both in the lives of individual people and in societies and civilizations. [WP]

As we will see further on, the first four Circuits are the three Ordinal and the Neutral Centers of the Natural Sequence schema, and the last four Circuits are the three Cardinal Centers and a transpersonal Center, which might equate with what is commonly referred to as the “soul”.

The term “circuit” is equated to a metaphor of the brain being computer hardware, and the wiring of the brain as circuitry. The comparison of the brain to computer hardware and wiring has been replaced with models describing the different functions of brain networks and how they interact with each other.

Leary uses the eight circuits along with recapitulation theory to explain the evolution of the human species [#2 = “Culture”], the personal development of an individual [#3 = “Life-Stages”], and the biological evolution of all life [#1]. [WP]

Wikipedia has an article on recapitulation theory: >https://en.wikipedia.org/wiki/Recapitulation_theory<. Basically and briefly, this is the notion in evolutionary biology that the development on an embryo follows the same stages as the development of the species. This is just another name for what I refer to as the Fractality Principle. “Recapitulation theory” is documented and discussed in Part One, **Chapter I-x**, “Principles of the Natural Sequence”. The numbers in brackets represent the longest, the middle, and the shortest septenaries. These three realms of instantiations of the Natural Sequence are discussed in various chapters in various Parts of this *Cosmogony* book. Note in particular that Spiral Dynamics (discussed in a Chapter V-10 and V-11 in Part Five), which was in development at the same time as Leary’s Circuit model, proposes the same correlation of these three time scales.

Each circuit listed has each name from Leary’s book “Exo-Psychology” after the preface, and Wilson’s book *Quantum Psychology*, pp. 196–201. Note: In other books from Leary, Wilson, and Alli, the eight circuits have different names due to different interpretations and findings of each author. Please reference bibliography section for other works on labeling of each circuit. [WP]

Expositors of various structured models, including the eight-circuit model of consciousness, generally have varying interpretations, partly because they do not agree on the underlying structure that generates the model and similar models. Leary said (see below) that he used the chakra system as a template for the eight-circuit model. That is not good enough to be scientifically and philosophically authoritative, unless one knows that the chakra system follows Tao’s Template and its derivative, the Natural Sequence schema, which Leary did not. Chakras are documented and discussed in Part Two, in **Chapter II 9**, “The Seven Chakras”. There you learn that there are varying interpretations of the chakra system, but there you also learn that the chakra system correlates nicely with the Natural Sequence schema. Thus, the Natural Sequence schema puts the

chakra system and the eight-circuit system and other septenarian developmental systems on a firmer foundation.

I say this here, at this stage in my commentary, because I have issues with the following descriptions that are resolved by a clarification of the chakra system in the light of the Natural Sequence schema. One of the discrepancies in interpretation of the chakra system has to do with the lower chakras; expositors typically opine that there are three chakras below the Heart Chakra, but locations and descriptions vary, as described in Chapter II-9. In order to reconcile those variations, I propose that there is a “zeroth” chakra, as described and explained in that chapter. Likewise, I propose here that there is a Circuit #0, and I call it the “Physiology Circuit”. (This also solved a problem with reconciling Maslow’s Hierarchy of Needs with the Natural Sequence schema, Maslow’s HON being also derived from the chakra system; see Chapter V-4 in Part Five.) Much of what is said about Circuit #1 — see below — actually belongs in the Circuit #0.

Criticism

Many researchers believed that Leary provided little scientific evidence for his claims. Even before he began working on psychedelics, he was known as a theoretician rather than a data collector. His most ambitious pre-psychedelic work was *Interpersonal Diagnosis Of Personality*. The reviewer for The British Medical Journal, H. J. Eysenck, wrote that Leary created a confusing and overly broad rubric for testing psychiatric conditions. “Perhaps the worst failing of the book is the omission of any kind of proof for the validity and reliability of the diagnostic system”, Eysenck wrote. “It is simply not enough to say” that the accuracy of the system “can be checked by the reader” in clinical practice. In 1965, Leary co-edited *The Psychedelic Reader*. Penn State psychology researcher Jerome E. Singer reviewed the book and singled out Leary as the worst offender in a work containing “melanges of hucksterism”. In place of scientific data about the effects of LSD, Leary used metaphors about “galaxies spinning” faster than the speed of light and a cerebral cortex “turned on to a much higher voltage”. [WP]

If one has the clarity of the Natural Sequence schema, and numerous instantiations of it, in mind as one reads the following descriptions, one will indeed find the descriptions of the Circuits to be ambiguous and often mis-categorized. Even so, I regard it as yet another instantiation thereof.

That being said by way of introduction, let’s get on with the description of the eight circuits.

Circuit #1 = Motion Center

1. (Leary) The vegetative-invertebrate circuit; (Wilson) The oral bio-survival circuit

This circuit is concerned with nourishment, physical safety, comfort and survival, suckling, cuddling, etc. It begins with one spatial dimension, forward/back[ward]. [PW]

The metaphor of “spatial dimensions” is explained in **Part One, “The Derivation of the Natural Sequence”**. I think it is remarkable that Leary realized the geometric basis of his theory in the same way that the Natural Sequence schema does. In the Natural Sequence schema, Circuit #1 is an instantiation of the primordial principle of One-Dimensional Ordinal Action. The concern at this stage of development is establishing a behavior system hierarchy in the environment in which one finds oneself; behavior is sought that maximizes chances for survival. In other words, this is where the Darwinian struggle known as “survival of the fittest” plays out; this is where a “pecking order” is determined; this is where one’s status on the “totem pole” is negotiated; this is where the dichotomies of life versus death, strength versus weakness, health versus sickness, activity versus passivity, pleasure versus pain, and friendly versus hostile, are realized. This is a bit different from the description given by Leary, which I believe overlaps Circuit #0 and Circuit #1; I make a distinction between the physiology of the body and the activity of the body which Leary does not make, based on Natural Sequence considerations.

This circuit is imprinted early in infancy. The imprint will normally last for life unless it is re-imprinted by a powerful experience. Depending on the nature of the imprint, the organism will tend towards one of two basic attitudes:

- A positive imprint sets up a basic attitude of trust. The organism generally considers the environment benign and accepts and approaches. This is equivalent to a default life position of “you’re ok” in the ‘life positions’ model of Transactional Analysis.
- A negative imprint sets up a basic attitude of suspicion. The organism generally regards the environment as hostile and flees and avoids. This is equivalent to a default life position of “you’re not ok” in the ‘life positions’ model of Transactional analysis. [PW]

In my understanding, the use of the word, “organism”, would be better applied to Circuit #0, “Physiology” — primitive stimulus and response — than here.

This circuit is said to have appeared in the earliest evolution of the invertebrate brain and corresponds to the reptilian brain of triune brain theory. This circuit operates in essentially the same way across mammals, reptiles, fish, primates, and humans.

Robert Anton Wilson equated this circuit with the oral stage in the Freudian theory of psychosexual development, and proposed that this circuit is activated in adults by strong opioids. [PW]

I agree that this circuit corresponds to the reptilian stage of biological development, the hunter-gatherer stage of anthropological development, and the infancy stage of a human life. In infants, it is indeed difficult to distinguish physiology from behavior, but the existence of these other alleged instantiations of Circuit #1 argues against including physiological factors in pure Circuit #1.

The Bio-survival Circuit is concerned with the earliest modes of survival and the basic separation of objects into either harmful or safe. This circuit is said to have first appeared in the earliest evolution of the invertebrate brain. It is the first to be activated in an infant’s mind. Leary says this circuit is stimulated by opioid drugs. This circuit introduces a one-dimensional perception: forward and backward (i.e., forward towards food, nourishment and that which is trusted as safe, and backwards — away from danger and predators). [PW]

Some of this is okay with the Natural Sequence scheme, and some is not. In my view, the physiology of the organism belongs to step “0”, here and in some of the other septenaries reviewed in this *Cosmogony* book. I would refer to step “0” as the “Physiology Circuit”, and state that part of that circuit is the dichotomy of stimulus versus response and pleasure versus pain due to pre-conscious sensations of organ systems of the physical body. Step “1”, the Motion Center in the Natural Sequence schema, refers to the movements of the physical body. Infants must first learn to move their body, then learn to move their body in their environment, motivated as mentioned in the quotation. In my understanding of the Natural Sequence schema, “forward” versus “backward” has to do with the dichotomy of life versus death, strength versus weakness, friend versus enemy, harmful versus safe. These take place at the conscious personality level and involve actions and behaviors mediated in the Reptilian Brain (refer to Chapter X-x, “The Triune Brain”). In the Natural Sequence schema, this first circuit correlates with the Attribute that I refer to as Directionality and the “x” axis of the Cartesian Coordinate System

Circuit #2 = Emotion Center

2. (Leary) The emotional-locomotion circuit; (Wilson) The anal territorial circuit

The emotional-territorial circuit is imprinted in the toddler stage. It is concerned with domination and submission, territoriality, etc. [WP]

With the phrase, “emotional-locomotion”, the description of Circuit #2 confuses value and behavior, the function of the Emotion Center versus the function of the Motion Center, the function of the reptilian brain versus the function of the mammalian brain. In the Natural Sequence, territoriality and similar activities are properly placed in Circuit #1. It does not say so here, but in a quotation from another website (see below), it is said that Circuit #2 adds a second spatial dimension to Circuit #1, and the axis is perpendicular to the Circuit #1 axis, namely metaphorically “upward” versus “downward” rather than “forward” versus “backward”. In conformity to Natural Sequence theory, Circuit #2 is an instantiation of the primordial principle of Two-Dimensional Ordinal Inspiration. The concern at this stage of development is establishing a value system hierarchy in the social environment of other people (more so than the physical environment as in Circuit #1) in which one finds oneself. Life is not so much a matter of physical survival in a challenging world; rather behavior is sought that maximizes chances for social well-being and status within one’s immediate family, beginning as a toddler, as it says here. In other words, Circuit #2 is where “family values”, clannishness, and tribalism is most prominent; this is where the dichotomies of good versus evil, pleasantness versus unpleasantness, glory versus shame, morality versus immorality, are realized, because that is what the toddler is taught by other people.

The imprint on this circuit will trigger one of two states:

- Dominant, aggressive behavior. This imprint creates an ‘alpha’ social attitude. Equivalent to the ‘top dog’ position in the model of Fritz Perls, to ‘I’m OK’ in the ‘life positions’ model of Transactional analysis, and to master morality in the model of Friedrich Nietzsche.

- Submissive, co-operative behavior. Equivalent to the 'bottom dog' position in the model of Fritz Perls, to 'I'm not OK' in the 'life positions' model and to Nietzschean 'slave morality'. [WP]

These two bullet points are consistent with my preference that pure Circuit #2, in theory, be limited to social morality rather than striving for physical survival as in pure Circuit #1. Of course, in practice there is an infinite mixture of circuits in various proportions.

This circuit is activated by depressant drugs such as alcohol, barbiturates, and benzodiazepines. This circuit appeared first in territorial vertebrate animals and is preserved across all mammals. It corresponds to the mammalian brain of triune brain theory. Robert Anton Wilson equated this circuit with the anal stage in the Freudian theory of psycho-sexual development. [WP]

The use of depressants — “downers” — is consistent with the metaphorical meaning of Circuit #2: the upward versus downward spatial axis. Repression, aka “holding oneself down”, and restriction of free expression, is commonly imposed by the family and the clan during development of the child in the Circuit #2 stage of life.

The first and second circuits both imprint in a binary fashion: trust/suspicion and dominance/submission. Thus there are four possible ways of imprinting the first two circuits:

- Trusting 1st circuit and dominant 2nd circuit. I'm OK; you're OK. Friendly strength in the Interpersonal Circumplex. Fire in the four elements model. Choleric in the four humors model.
- Trusting 1st circuit and submissive 2nd circuit. I'm not OK; you're OK. Friendly weakness. Water in the four elements model. Phlegmatic humor.
- Suspicious 1st circuit and dominant 2nd circuit. I'm OK; you're not OK. Unfriendly strength. Air in the four elements model. Sanguine humor.
- Suspicious 1st circuit and submissive 2nd circuit. I'm not OK; you're not OK. Unfriendly weakness. Earth in the four elements model. Melancholic humor. [WP]

Here again, I would just clarify the situation by making a distinction in Circuit #1 physical and behavioral environment versus Circuit #2 social and emotional environment. Without the guidance of the Natural Sequence, it might be easy to confuse these influences and responses to influences.

It says in this quotation that Circuit #2 correlates with the mammalian stage of biological development, which is consistent with the Natural Sequence schema. It does not say so in this quotation, but it also correlates with the so-called “neolithic” age in anthropology, aka the agricultural-pastoral phase of socio-cultural development.

The Emotional Circuit is concerned with raw emotion and the separation of behavior into submissive and dominant. This circuit appeared first in vertebrate animals. In humans, it is activated when the child learns to walk. Leary associates this circuit with alcohol. This circuit introduces a second dimension, up-down, linked with territorial politics and tribal power games (up, as in swelling one's body in size to represent dominance, and down, as in the cowering, tail-between-the-legs submissive stance). [PW]

In my understanding of the Process/Aspect System matrix, “upward” versus “downward” has to do with the dichotomy of good versus evil, heaven versus hell, satisfaction versus suffering. “Totem Pole” and “Pecking Order” dominance versus submission Actions do affect one's emotions such as feeling good or bad about oneself, but in the Process/Aspect System matrix, the dimension of Actions belong in Circuit #1; the dimension of Inspirations belongs here in Circuit #2.

Circuit #3 = Intellect Center

3. (Leary) The laryngeal-manual symbolic circuit; (Wilson) The semantic time-binding circuit

This circuit is imprinted by human symbol systems. It is concerned with language, handling the environment, invention, calculation, prediction, building a mental “map” of the universe, physical dexterity, etc.

This circuit is activated by stimulant drugs such as amphetamines, cathinones, cocaine, and caffeine. This circuit supposedly appeared first when hominids started differentiating from the rest of the primates. [WP]

The story of the evolutionary emergence of Circuit #3 humans from Circuit #2 mammals is told in previous chapters of this *Cosmogony* book.

Robert Anton Wilson, being heavily influenced by General Semantics, writes of this circuit as the ‘time-binding circuit’. This means that this circuit's contents — including human know-how, technology, science, etc. — are

preserved memetically and passed on from generation to generation, constantly mutating and increasing in sophistication. [WP]

The Symbolic Circuit is concerned with logic and symbolic thought. Leary said this circuit first appeared when hominids started differentiating from the rest of the primates. Leary believed this circuit is stimulated by caffeine, cocaine, and other stimulants. This circuit introduces the third dimension, left and right, related to the development of dextrous movement and handling “artefacts”. (Also called by Leary *The Dexterity-Symbolism Circuit*; called by Robert Anton Wilson the *Semantic Circuit*.) [PW]

The description of Circuit # 3 is much more congruent with the description of the corresponding Ordinal Expression Intellect Center, than the previous two circuits were with their correlates. This circuit is said to add a “third dimension” to the previous two, perpendicular to the other two, which means that it is concerned with the inward versus outward dichotomy. As such, Circuit #3 correlates with the “z” axis of the Cartesian coordinate system. It also correlates with the human stage of biological development, and the civilization stage of socio-cultural development.

The first three Circuits are relatively easy to correlate with the Natural Sequence schema, whereas the remaining Circuits are relatively difficult to correlate. The correlates of the so-called “terrestrial Circuits” are easily discerned in many chapters of this *Cosmogony* book precisely because they are relatively easier to discern than the so-called “extra-terrestrial” Circuits and their correlates.

Circuit #4 = Impulse Center

4. (Leary) The socio-sexual domestication circuit; (Wilson) The socio-sexual circuit

This fourth circuit is imprinted by the first orgasm-mating experiences and tribal “morals”. It is concerned with sexual pleasure (instead of sexual reproduction), local definitions of “moral” and “immoral”, reproduction, rearing of the young, etc. The fourth circuit concerns itself with cultural values and operating within social networks. This circuit is said to have first appeared with the development of tribes. [WP]

This description takes Circuit #4 out of alignment with other septenaries that are instantiations of the Natural Sequence. Other descriptions, from other sources, are more in alignment; refer to next section. This description is pretty good for Circuit #2. With some Procrustean cutting and stretching, I can point to the underlined phrase about c

The Domestic Circuit. This circuit is concerned with operating within social networks and the transmission of culture across time. This circuit is said to have first appeared with the development of tribes. Leary never associated a drug with it. This fourth circuit deals with moral-social/sexual tribal rules passed through generations and is the introduction to the fourth dimension — time. (Also called by Leary and Wilson the *Socio-Sexual Circuit*). [PW]

Circuit #5 = Concept Center

It is with this Circuit, the first of the spiritual Circuits, that the numerical sequence varies, depending on the sequecer. The same phenomenon happens with the ‘higher’ chakras, and for the same reason, namely because they are rarely experienced, and even when they are, the experience overlaps chakras and Circuits. My suggestion is that if sources knew of the Natural Sequence schema, they would do a better job of putting stuff in the proper order.

6. (Leary) The neuro-electric circuit; (Wilson) The metaprogramming circuit

Note: Timothy Leary lists this circuit as the sixth, and the neurogenetic circuit as the seventh. In *“Prometheus Rising”*, Robert Anton Wilson reversed the order of these two circuits, describing the neurogenetic circuit as the sixth circuit, and the metaprogramming circuit as the seventh. In the subsequently published *“Quantum Psychology”*, he reverted this back to the order proposed by Leary.

The fact that the original experts differ in their opinion about the proper sequencing of the Circuits indicates to me that they might have come to a consensus if they had known about the Natural Sequence schema and its many instantiations in the Cosmos. The fact of expert disagreement also allows me to switch Circuits to conform to the Natural Sequence schema, but instead of switching #6 and #7, I switch #5 and #6.

This circuit is concerned with re-imprinting and re-programming all earlier circuits and the relativity of “realities” perceived. The sixth circuit consists of the nervous system becoming aware of itself. Leary says this circuit enables telepathic communication and is activated by low-to-moderate doses of LSD (50-150 µg), moderate doses of

peyote, psilocybin mushrooms and meditation/chanting especially when used in a group or ritual setting. This circuit is traced by Leary back to 500 BC. [WP]

I suspect that what Leary is referring to is the so-called “Axial Age”, which happened around 500 BC:

Axial Age (also Axis Age, from the German *Achsenzeit*) is a term coined by the German philosopher Karl Jaspers. It refers to broad changes in religious and philosophical thought that occurred in a variety of locations from about the 8th to the 3rd century BCE. [https://en.wikipedia.org/wiki/Axial_Age — retrieved 21 May 2024]

Psychedelics were used by the Delphic Oracle and other shamanic establishments and ceremonies. I place the Axial Age in the middle of the third stage of socio-cultural development, which I call the Civilization Culture.

Philosophy and philosophizing is a product of the Concept Center, so that is the main reason that I switched this from #6 per Leary to #5 per the Natural Sequence schema. Another clue is the description of self-awareness, or what is often called meta-cognition. Otherwise the brief description is too ambiguous to make the correlation.

Circuit #6 = Sympathy Center

5. (Leary and Wilson) The neurosomatic circuit

This is concerned with neurological-somatic feedbacks, feeling high and blissful, somatic reprogramming, etc. It may be called the rapture circuit.

When this circuit is activated, a non-conceptual feeling of well-being arises. This has a beneficial effect on the health of the physical body.

The fifth circuit is consciousness of the body. There is a marked shift from linear visual space to an all-encompassing aesthetic sensory space. Perceptions are judged not so much for their meaning and utility, but for their aesthetic qualities. Experience of this circuit often accompanies an hedonistic turn-on, a rapturous amusement, a detachment from the previously compulsive mechanism of the first four circuits.

This circuit is activated by ecstatic experiences via physiological effects of cannabis, Hatha Yoga, tantra and Zen meditation. Robert Anton Wilson writes, “Tantra yoga is concerned with shifting consciousness entirely into this circuit” and that “Prolonged sexual play without orgasm always triggers some Circuit V consciousness”.

Leary describes that this circuit first appeared in the upper classes, with the development of leisure-class civilizations around 2000 BC. [WP]

The Neurosomatic Circuit is the first of the right-brain, “higher” circuits which are usually inactive in most humans. It allows one to see things in multi-dimensional space instead of the 4 dimensions of Euclidean space-time, and is there to aid in the future exploration of outer space. It is said to have first appeared with the development of leisure-class civilizations around 2000 BC. It is associated with hedonism and eroticism. Leary says this circuit is stimulated by cannabis and tantric yoga, or simply by experiencing the sensation of free fall at the right time. [PW]

The Neuroelectric Circuit is concerned with the mind becoming aware of itself independent of the patterns imprinted by the previous five circuits. It is also called “metaprogramming” or “consciousness of abstracting”. Leary says this circuit enables telepathic communication, and that this circuit is impossible to explain to those who have only left-brain activity and is difficult to explain to those with active fifth circuits. It is said to have appeared in 500 BC, in connection with the Silk Road. Leary associates this circuit with peyote and psilocybin. (Robert Anton Wilson called this circuit *The Metaprogramming Circuit*.) [PW]

Circuit #7 = Excitation Center

7. (Leary) The neurogenetic circuit; (Wilson) The morphogenetic circuit

This circuit is the connection of the individual’s mind to the whole sweep of evolution and life as a whole. It is the part of consciousness that echoes the experiences of the previous generations that have brought the individual’s brain-mind to its present level.

It deals with ancestral, societal and scientific DNA-RNA-brain feedbacks. Those who achieve this mutation may speak of past lives, reincarnation, immortality etc. It corresponds to the collective unconscious in the models of Carl Jung where archetypes reside.

Activation of this circuit may be equated with consciousness of the Great God Pan in his aspect as Life as a whole, or with consciousness of Gaia, the biosphere considered as a single organism.

This circuit is activated by higher doses of LSD (200-500 µg), higher doses of peyote, higher doses of psilocybin mushrooms, yoga and meditation.

The circuit first appeared among the Hindus in the early first millennium and later reappeared among the Sufi sects. [WP]

The Neurogenetic Circuit allows access to the genetic memory contained in DNA. It is connected to memories of past lives, the Akashic Records, and the collective unconscious, and allows for essential immortality in humans. This circuit first appeared among Hindu and Sufi sects in the early first millennium. This circuit is stimulated by LSD, and Raja Yoga. (Robert Anton Wilson called this circuit *The Morphogenetic Circuit*.) [PW]

Circuit #8 = Etheric Body

8. (Leary) The neuro-atomic metaphysiological; (Wilson) The non-local quantum circuit

The eighth circuit is concerned with quantum consciousness, non-local awareness (information from beyond ordinary space-time awareness which is limited by the speed of light), illumination. Some of the ways this circuit can get activated are: the awakening of kundalini, shock, a near-death experience, DMT, high doses of LSD and according to Robert Anton Wilson almost any dose of ketamine. This circuit has even been compared to the Buddhist concept of Indra's net from the Avatamsaka Sutra. [WP]

The Psycho-atomic Circuit allows access to the intergalactic consciousness that predates life in the universe (characterized as God, the Overmind or aliens), and lets humans operate outside of space-time and the constraints of relativity. This circuit is associated with Ketamine and DMT by Leary. (Called also by Leary *The Neuro-Atomic Circuit* or *The Metaphysiological Circuit*. Robert Anton Wilson called this circuit *The Quantum Non-Local Circuit*.) [PW]

Leary's Contribution

Leary stated "They [the theories presented in *Info-Psychology*] are scientific in that they are based on empirical findings from physics, physiology, pharmacology, genetics, astronomy, behavioral psychology, information science, and most importantly, neurology."

Leary called his book "science fiction" or "psi-phy" and noted he had written it "in various prisons to which the author had been sentenced for dangerous ideology and violations of Newtonian and religious laws".

Although Leary propounded the basic premise of eight "brains" or brain circuits, he was inspired by sources such as the Hindu chakra system. [WP]

Refer to **Chapter II-9**, "The Seven Chakras", for more about how the chakra system correlates with the Natural Sequence schema. The correlation of chakra system with the Natural Sequence schema is more obvious than Leary's model is.

Leary claimed that among other things this model explained the social conflict in the 1960s, where the mainstream was said to be those with four circuits active and characterized by Leary as tribal moralists and clashed with the counter-culturists, who were then said to be those with the fifth circuit active and characterized as individualists and hedonists.

There again we see a recognition of what in the Natural Sequence schema is referred to as the Fractality Principle, which is, the notion that the same septenarian stages are found at various scales of evolution or development.

Leary's first book on the subject, *Neurologic*, only included seven circuits when it was published in 1973. *Exo-Psychology*, published in 1977, expanded the number of circuits to eight and clarified the subject. In it, he puts forward the theory that the later four circuits are "post terrestrial"; intended to develop as we migrate off this

planet and colonize others. Once we begin space migration, according to Leary, we will have more ready access to these higher circuits. *Exo-Psychology* was re-published as revised by Timothy Leary with additional material in 1989 under the title *Info-Psychology* (New Falcon Publishing). [https://en.wikipedia.org/wiki/Eight-circuit_model_of_consciousness — retrieved 06 June 2020]

Comments on Wikipedia:

- Notice attempts at syncretism of various levels of development in various systems: biological evolutionary, socio-cultural, individual psychological development, and spiritual. This is similar to my Natural Sequence project.

Psychology Wiki

Leary claims that this model explained, among other things, the social conflict in the 1960s, where the mainstream, said to be those with circuit 4 active and characterized as tribal moralists by Leary, clashed with the counter-culturists, said to be those with circuit 5 active and characterized as individualists and hedonists.

Leary's model was not widely accepted among scientists, in part because it addresses primarily human traits, because no precise anatomical basis for the model was identified, and because the theory fails to account for the role of other neural structures in basic levels of consciousness such as wakefulness.

Leary's ideas heavily influenced the work of Robert Anton Wilson. Wilson's book *Prometheus Rising* is an in-depth, highly detailed and inclusive work documenting Leary's eight-circuit model of consciousness. In the book *The Game of Life* Leary hints that he reversed the natural order of one of the circuits in relationship to another one. He suggested he did this as a 'test' and any true adept delving into these realms would be able to reverse it to its proper location. To Leary's thinking, Robert Anton Wilson's book places the circuits in their proper order.

When reading Leary's ideas for the first time, I did not know this reversal thing, but in order to correlate with features of the Process/Aspect matrix, particularly the Centers, **I thought this gave me the permission to arrange the Circuits as I saw fit.**

Leary's book on the subject was called *Exo-Psychology*, and has been republished with additional material in recent years under the title *Info-Psychology* (New Falcon Publishing) [Covritten by Robert Anton Wilson as well as their book *Neuropolitique*. Author Antero Alli has continued to refine/add to the 8 Circuit Model of Consciousness in his books *AngelTech: A Modern Shaman's Guide to Reality Selection*. [Introduction by Robert Anton Wilson] & *The Eight-Circuit Brain: Navigational Strategies for the Energetic Body*. Alli taught a course on his book *AngelTech* at Robert Anton Wilson's Maybe Logic Academy in 2006.

[[Maybe review some more stuff, such as Don Dulchinos: <https://medium.com/neurosphere-technologies/tim-leary-robert-anton-wilson-and-developmental-psychology-362e4134384>]]

Tunnel-Realities and Imprints

[[show correlation of this with Attributes of the Process/Aspect System, particularly Centers]]

written by Robert Anton Wilson

Let's try Dr. Leary's perspective on these mysteries.

To understand neurological space, Dr. Leary assumes that the nervous system consists of eight potential circuits, or "gears," or mini-brains. Four of these brains are in the usually active left lobe and are concerned with our terrestrial survival; four are extraterrestrial, reside in the "silent" or inactive right lobe, and are for use in our future evolution. This explains why the right lobe is usually inactive at this stage of our development, and why it becomes active when the person ingests psychedelics.

We will explain each of the eight "brains" briefly.

I. THE BIO-SURVIVAL CIRCUIT

This invertebrate brain was the first to evolve (2 to 3 million years ago) and is the first activated when a human infant is born. It programs perception onto an either-or grid divided into nurturing-helpful Things (which it approaches) and noxious-dangerous Things (which it flees, or attacks). The imprinting of this circuit sets up the basic attitude of trust or suspicion which will ever after trigger approach or avoidance.

This is obviously the Kinetic Center of the Michaelian teachings and the Reptilian Brain of the Triune Brain theory.

II. THE EMOTIONAL CIRCUIT

This second, more advanced bio-computer formed when vertebrates appeared and began to compete for territory (perhaps 500,000,000 B.C.). In the individual, this bigger tunnel-reality is activated when the DNA master-tape triggers the metamorphosis from crawling to walking. As every parent knows, the toddler is no longer a passive (bio-survival) infant but a mammalian politician, full of physical (and psychic) territorial demands, quick to meddle in family business and decision-making. Again the first imprint on this circuit remains constant for life (unless brainwashed) and identifies the stimuli which will automatically trigger dominant, aggressive behavior or submissive, cooperative behavior. When we say that a person is behaving emotionally, egotistically or 'like a two-year-old,' we mean that s/he is blindly following one of the tunnel-realities imprinted on this circuit.

This is obviously the Emotional Center of the Michaelian teachings and the Mammalian Brain of the Triune Brain theory

III. THE DEXTERITY-SYMBOLISM CIRCUIT

This third brain was formed when hominid types began to differentiate from other primate stock (circa 4-5 million B.C.) and is activated for the linear left-lobe functions of the brain, determines our normal modes of artifact-manufacture and conceptual thought, i.e., third circuit 'mind.' It is no accident, then, that our logic (and our computer-design) follows either-or, binary structure of these circuits. Nor is it an accident that our geometry, until the last century, has been Euclidean. Euclid's geometry, Aristotle's logic and Newton's physics are meta-programs synthesizing and generalizing first brain forward-back, second brain up-down and third brain right-left programs.

This is obviously the Intellectual Center of the Michaelian teachings and the Human Brain of the Triune Brain theory.

IV. THE SOCIAL-SEXUAL CIRCUIT

The fourth brain, dealing with the transmission of tribal or ethnic culture across generations, introduces the fourth dimension, time.

The description here of the fourth "circuit" is so brief that it is difficult to positively correlate it with the Instinctive Center of the Michaelian teachings. I can only say that the fourth circuit transpersonal factors ("tribal or ethnic culture across generations") are reminiscent of instinctive behavior as found in animals (which is like the Negative Pole of the Instinctive Center), or perhaps Carl Jung's collective unconscious (which is like the Positive Pole of the Instinctive Center).

Since each of these tunnel-realities consists of biochemical imprints or matrices in the nervous system, each of them is specifically triggered by neuro-transmitters and other drugs. Notice how drugs that stimulate the first four circuits, which are already activated, tend to be dangerously addictive, roughly ordered ascending from the first circuit.

To activate the first brain take an opiate. Mother Opium and Sister Morphine bring you down to cellular intelligence, bio-survival passivity, the floating consciousness of the newborn. (This is why Freudians identify opiate addiction with the desire to return to infancy.)

To activate the second tunnel-reality, take an abundant quantity of alcohol. Vertebrate territorial patterns and mammalian emotional politics immediately appear when the booze flows, as Thomas Nashe intuitively realized when he characterized the various alcohol states by animal labels: "ass drunk," "goat drunk," "swine drunk," "bear drunk," etc.

To activate the third circuit, try coffee or tea, a high-protein diet, speed or cocaine. The specific neurotransmitter for circuit four has not been synthesized yet, but it is generated by the glands after pubescence and flows volcanically through the bloodstreams of adolescents.

This comment is support for my contention in a previous section that the Third Life-Stage (adolescence) is the development of the Intellectual Center per the Natural Sequence.

None of these terrestrial drugs change basic biochemical imprints.

The behaviors which they trigger are those which were wired into the nervous system during the first stages of imprint vulnerability. The circuit II drunk exhibits the emotional games or cons learned from parents in infancy. The circuit III "mind" never gets beyond the permutations and combinations of those tunnel-realities originally imprinted, or abstractions associated with the imprints through later conditioning. And so forth.

But all this Pavlovian-Skinnerian robotism changes drastically and dramatically when we turn to the right lobe, the future circuits and extraterrestrial chemicals.

There are references in the transcriptions of the original Michael group channeling sessions about experiencing the Cardinal Centers through psychedelic drugs. Michael recommended against regular use, but said drugs can show you what the Cardinal Centers are like, so that you know that they are worth the trouble to learn how to access them without drugs, and so that you can know what to look for by non-drug methods.

The four evolving future 'brains' are:

V. THE NEUROSOMATIC CIRCUIT

When this fifth "body-brain" is activated, flat Euclidean figure-ground configurations explode multi-dimensionally. Gestalts shift, in McLuhan's terms, from linear visual space to all-encompassing sensory space. A hedonic turn-on occurs, a rapturous amusement, a detachment from the previously compulsive mechanism of the first four circuits. I turned this circuit on with pot and Tantra.

This fifth brain began to appear about 4,000 years ago in the first leisure-class civilizations and has been increasing statistically in recent centuries (even before the Drug Revolution), a fact demonstrated by the hedonic art of India, China, Rome and other affluent societies. More recently, Ornstein and his school have demonstrated with electroencephalograms that this circuit represents the first jump from the linear left lobe of the brain to the analogical right lobe.

The opening and imprinting of this circuit has been the preoccupation of "technicians of the occult" — Tantric shamans and hatha yogis. While the fifth tunnel-reality can be achieved by sensory deprivation, social isolation, physiological stress or severe shock (ceremonial terror tactics, as practiced by such rascal-gurus as Don Juan Matus or Aleister Crowley), it has traditionally been reserved to the educated aristocracy of leisure societies who have solved the four terrestrial survival problems.

About 20,000 years ago, the specific fifth brain neurotransmitter was discovered by shamans in the Caspian Sea area of Asia and quickly spread to other wizards throughout Eurasia and Africa. It is, of course, cannabis. Weed. Mother Mary Jane.

It is no accident that the pot-head generally refers to his neural state as "high" or "spaced-out." The transcendence of gravitational, digital, linear, either-or, Aristotelian, Newtonian, Euclidean, planetary orientations (circuits I-IV) is, in evolutionary perspective, part of our neurological preparation for the inevitable migration off our home planet, now beginning. This is why so many pot-heads are STAR TREK freaks and science fiction adepts....

The extraterrestrial meaning of being "high" is confirmed by astronauts themselves; 85% of those who have entered the free-fall zero gravity describe "mystic experiences" or rapture states typical of the neurosomatic circuit. "No photo can show how beautiful Earth looked," raves Captain Ed Mitchell, describing his Illumination in free-fall. He sounds like any successful yogi or pot-head. No camera can show this experience because it is inside the nervous system.

Free-Fall, at the proper evolutionary time, triggers the neurosomatic mutation, Leary believes. Previously this mutation has been achieved "artificially" by yogic or shamanic training or by the fifth circuit stimulant, cannabis. Surfing, skiing, skin-diving and the new sexual culture (sensuous massage, vibrators, imported Tantric arts, etc.) have evolved at the same time as part of the hedonic conquest of gravity. The Turn-On state is always described as "floating," or, in the Zen metaphor, "one foot above the ground."

The description of the "fifth circuit" resembles the sixth Center, "Sympathy", in the Process/Aspect System far more than it does the fifth Center, "Concept". I believe that he has this and the next circuit numerically reversed. I have experienced this circuit at the sixth chakra = third eye. More was said about this in [Chapter 2x](#) in Part Two, "The Chakras".

VI. THE NEUROELECTRIC CIRCUIT

The sixth brain consists of the nervous system becoming aware of itself apart from imprinted gravitational reality-maps (circuits I-IV) and even apart from body-rapture (circuit V). Count Korzybski, the semanticist, called this state "consciousness of abstracting." Dr. John Lilly calls it "metaprogramming," i.e., awareness of programming one's programming. This Einsteinian, relativistic contelligence (consciousness-intelligence) recognizes, for instance, that the Euclidean, Newtonian and Aristotelian reality-maps are just three among billions of possible programs or models for experience. I turned this circuit on with Peyote, LSD and Crowley's "magick" metaprograms.

This level of brain-functioning seems to have been reported first around 500 B.C. among various “occult” groups connected by the Silk Route (Rome-North India). It is so far beyond the terrestrial tunnel-realities that those who have achieved it can barely communicate about it to ordinary humanity (circuits I-IV) and can hardly be understood even by fifth circuit Rapture Engineers.

The characteristics of the neuroelectric circuit are high velocity, multiple choice, relativity, and the fission-fusion of all perceptions into parallel science-fiction universes of alternate possibilities.

The mammalian politics which monitor power struggles among terrestrial humanity are here transcended, i.e., seen as static, artificial, an elaborate charade. One is neither coercively manipulated into another’s territorial reality nor forced to struggle against it with reciprocal emotional game-playing (the usual soap-opera dramatics). One simply elects, consciously, whether or not to share the other’s reality-model.

Tactics for opening and imprinting the sixth circuit are described and rarely experienced in advanced rajah yoga, and in the hermetic (coded) manuals of the medieval-Renaissance alchemists and Illuminati.

No specific sixth circuit chemical is yet available, but strong psychedelics like mescaline (from my 1962-63 “sacred cactus,” peyote) and psilocybin (from the Mexican “magic mushroom,” teonactl) open the nervous system to a mixed-media series of circuit V and circuit VI channels. This is appropriately called “tripping,” as distinguished from straight-forward fifth circuit “turning on” or “getting high.”

The suppression of scientific research in this area has had the unfortunate result of turning the outlaw drug culture back toward fifth circuit hedonics and pre-scientific tunnel-realities (the occult revival, solipsism, Pop Orientalism)... Most underground alchemists have given up on such challenging and risky self-work and restrict their trips to fifth circuit erotic tunnels.

The evolutionary function of the sixth circuit is to enable us to communicate at Einsteinian relativities and neuro-electric accelerations, not using third circuit laryngeal-manual symbols but directly via feedback, telepathy and computer link-up. Neuro-electric signals will increasingly replace “speech” (hominid grunts) after space migration.

When humans have climbed out of the atmosphere-gravity well of planetary life, accelerated sixth circuit contelligence will make possible high-energy communication with “Higher Intelligences,” i.e., ourselves-in-the-future and other post-terrestrial races.

It is charmingly simple and obvious, once we realize that the spaced-out neural experiences really are extraterrestrial, that getting high [Sympathy Center] and spacing out [Concept Center] are accurate metaphors. Circuit V neurosomatic rapture is preparation for the next step in our evolution, migration off the planet. Circuit VI is preparation for the step after that, interspecies communication with advanced entities possessing electronic (post-verbal) tunnel-realities.

Circuit VI is the “universal translator” often imagined by science-fiction writers, already built into our brains by the DNA tape. Just as the circuits of the future butterfly are already built into the caterpillar.

The description of the sixth circuit resembles the fifth (Concept) Center far more than the sixth (Symoathy) Center. Notice the references to mental telepathy, for instance, because one of the names for the Negative Pole of the Concept Center is -Telepathy.

VII. THE NEUROGENETIC CIRCUIT

The seventh brain kicks into action when the nervous system begins to receive signals from within the individual neuron, from the DNA-RNA dialogue. The first to achieve this mutation spoke of “memories of past lives,” “reincarnation,” “immortality,” etc. That these adepts were recording something real is indicated by the fact that many of them (especially Hindu and Sufis) gave marvelously accurately poetic vistas of evolution 1,000 or 2,000 years before Darwin, and foresaw Superhumanity before [Friedrich] Nietzsche.

The “akashic records” of Theosophy, the “collective unconscious” of [Carl] Jung, the “phylogenetic unconscious” of [Stan] Grof and [Ken] Ring, are three modern metaphors for this circuit. The visions of past and future evolution described by those who have had “out-of-body” experiences during close-to-death episodes also describes the trans-time circuit VII tunnel-reality.

Specific exercises to trigger circuit VII are not to be found in yogic teaching; it usually happens, if at all, after several years of the kind of advanced rajah yoga that develops circuit VI facility.

The specific circuit VII neurotransmitter is, of course LSD. (Peyote and psilocybin produce some circuit VII experiences also.)

Circuit VII is best considered, in terms of 1977 science, as the genetic archives, activated by anti-histone proteins. The DNA memory coiling back to the dawn of life. A sense of the inevitability of immortality and interspecies symbiosis comes to all circuit VII mutants; we now see that this, also, is an evolutionary forecast, since we stand right now on the door-step of extended longevity leading to immortality.

The exact role of the right-lobe circuits and the reason for their activation in the 1960s cultural revolution now becomes clear. As sociologist F.M. Esfandiary writes in *UPWINGERS*, "Today when we speak of immortality and of going to another world we no longer mean these in a theological or metaphysical sense. People are now traveling to other worlds. People are now striving for immortality. Transcendence is no longer a metaphysical concept. It has become reality."

The evolutionary function of the seventh circuit and its evolutionary, aeon-spanning tunnel-reality is to prepare us for conscious immortality and interspecies symbiosis.

I don't see a way to argue a case for this "circuit" correlating with the seventh Center, Excitation. The next circuit is also off the charts, so to speak, so far as I can tell.

VIII. THE NEURO-ATOMIC CIRCUIT

Hold on to your hats and breathe deeply — this is the farthest-out that human intelligence has yet ventured.

Consciousness probably precedes the biological unit or DNA tape-loop. "Out-of-body experiences," "astral projection," contact with alien (extraterrestrial?) "entities" or with a galactic Overmind, etc., such as I've experienced, have all been reported for thousands of years, not merely by the ignorant, the superstitious, the gullible, but often by the finest minds among us (Socrates, Giordano Bruno, Edison, Buckminster Fuller, etc.). Such experiences are reported daily to parapsychologists and have been experienced by such scientists as Dr. John Lilly and Carlos Castaneda. Dr. Kenneth Ring has attributed these phenomena to what he calls, very appropriately, "the extraterrestrial unconscious."

Dr. Leary suggests that circuit VIII is literally neuro-atomic — infra, supra and meta-physiological — a quantum model of consciousness and/or a conscious model of quantum mechanics by the turned-on physicists discussed previously (Prof. John Archibald Wheeler, Saul-Paul Sirag, Dr. Fritjof Capra, Dr. Jack Sarfatti, etc.) indicates strongly that the "atomic consciousness" first suggested by Leary in [his book] *The Seven Tongues of God* (1962) is the explanatory link which will unite parapsychology and parapsysics into the first scientific empirical experimental theology in history.

When the nervous system is turned on to this quantum-level circuit, space-time is obliterated. Einstein's speed-of-light barrier is transcended; in Dr. Sarfatti's metaphor, we escape "electromagnetic chauvinism." The contelligence within the quantum projection booth IS the entire cosmic "brain," just as the micro-miniaturized DNA helix IS the local brain guiding planetary evolution. As Lao-tse said from his own Circuit VIII perspective, "The greatest is within the smallest."

Indra's Net = the maximum One (Quantum) and the minimum One (quantum) are identical = the Ouroboros Principle = Cardinal Pole and the Ordinal Pole join end to end = Roger Penrose's conformal cyclical cosmology

Circuit VIII is triggered by Ketamine, a neuro-chemical researched by Dr. John Lilly, which is also (according to a wide-spread but unconfirmed rumor) given to astronauts to prepare them for space. High doses of LSD also produce some circuit VIII quantum awareness.

This neuro-atomic contelligence is four mutations beyond terrestrial domesticity. (The current ideological struggle is between circuit IV tribal moralists-or-collectivists and circuit V hedonic individualists.) When our need for higher intelligence, richer involvement in the cosmic script, further transcendence, will no longer be satisfied by physical bodies, not even by immortal bodies hopping across space-time at Warp 9, circuit VIII will open a further frontier. New universes and realities. "Beyond theology: the science and art of Godmanship," as Alan Watts once wrote.

It is therefore possible that the mysterious "entities" (angels and extraterrestrials) monotonously reported by circuit VIII visionaries are members or races already evolved to this level. But it is also possible, as Leary and Sarfatti more recently suggest, that They are ourselves-in-the-future.

The left-lobe terrestrial circuits contain the learned lessons of our evolutionary past (and present). The right-lobe extraterrestrial circuits are the evolutionary script for our future.

Thus far, there have been two alternative explanations of why the Drug Revolution happened. The first is presented in a sophisticated way by anthropologist Weston LaBarre, and in an ignorant, moralistic way by most anti-drug propaganda in the schools and mass media. This explanation says, in essence, that millions have turned

away from the legal DOWN drugs to illegal HIGH drugs because we are living in troubled times and many are seeking escape into fantasy.

This theory, at its best, only partially explains the ugliest and most publicized aspect of the revolution — the reckless drug abuse characteristic of the immature. It says nothing about the millions of respectable doctors, lawyers, engineers, etc., who have turned away from second circuit intoxication with booze to fifth circuit rapture with weed.

Nor does it account at all for the thoughtful, philosophical sixth circuit investigations of persons of high intelligence and deep sensibility, such as Aldous Huxley, Dr. Stanley Grof, Masters-Houston, Alan W. Watts, Carlos Castaneda, Dr. John Lilly and thousands of scientific and lay researchers on consciousness.

A more plausible theory, devised by psychiatrist Norman Zinberg out of the work of Marshall McLuhan, holds that modern electronic media have so shifted the nervous system's parameters that young people no longer enjoy "linear" drugs like alcohol and find meaning only in "non-linear" weed and psychedelics.

This is certainly part of the truth, but it is too narrow and overstates TV and computers without sufficiently stressing the general technological picture — the ongoing Science-Fiction Revolution of which the most significant aspects are Space Migration, Increased Intelligence and Life Extension, which Leary has condensed into his SMIPLE formula.

Space Migration plus Increased Intelligence plus Life Extension means expansion of humanity into all space-time.
 $SM + I^2 + LE = \text{infinity}$.

Without totally endorsing Charles Fort's technological mysticism ("It steam-engines when it comes steam-engine time"), it is obvious that the DNA metaprogram for planetary evolution is far wiser than any of our individual nervous systems — which are, in a sense, giant robots or sensors for DNA. Early science-fiction of brilliant writers like Stapledon, Clarke, Heinlein; Kubrick's 2001 — all were increasingly clear DNA signals transmitted through the intuitive right lobe of sensitive artists, preparing us for the extraterrestrial mutation.

It is scarcely coincidental that mainstream "literary" intellectuals — the heir of the Platonic-aristocratic tradition that a gentleman never uses his hands, monkeys with tools or learns a manual craft — despise both science-fiction and the dope culture. Nor is it coincidental that the WHOLE EARTH CATALOGS — created by Stewart Brand, a graduate of Ken Kesey's Merry Pranksters — are the New Testament of the rural drop-out culture, each issue bulging with tons of eco-technological information about all the manual, dextrous, gadgety know-how that Plato and his heirs consider fit only for slaves. Not surprisingly, Brand's latest publication, CO-EVOLUTION QUARTERLY, has been devoted to publicizing Prof. Gerard O'Neill's space-habitat, L5.

Nor is it an accident that dopers seem to prefer science-fiction to any other reading, even including the extraterrestrial-flavored Hindu scriptures and occult-shamanic circuit VI-VIII trip-poets like Crowley and Hesse.

The circuit VI drugs may have contributed much to the metaprogramming consciousness that has led to sudden awareness of "male chauvinism" (women's liberationists), "species chauvinism" (ecology, Lilly's dolphin studies), "type-G star chauvinism" (Carl Sagan), even "oxygen chauvinism" (the CETI conference), etc. The imprinted tunnel-realities which identify one as "white-male-American-earthian" etc. or "black-female-Cuban" et cetera are no longer big enough to enclose our exploding contelligence.

As TIME magazine said on November 26, 1973, "Within ten years, according to pharmacologists, they will have perfected pills and cranial electrodes of providing life-long bliss for everyone on Earth." The 1960s hysteria about weed and acid was just the overture to this fifth circuit break-through. Nathan S. Kline, M.D., predicts real aphrodisiacs, drugs to speed up learning, drugs to foster or terminate any behavior.... Those who were jailed or beaten by cops in the 1960s were forerunners of the Revolution of Inner Technology.

STAR TREK is a better guide to the emerging reality than anything in the NEW YORK REVIEW OF BOOKS. The life-support and defense-system engineer, Scotty (circuit I), the emotional-sentimental Dr. McCoy (circuit II), the logical science officer Mr. Spock (circuit III) and the alternately paternalistic and romantic Captain Kirk (circuit IV) are perpetually voyaging through our future neurological history and encountering circuit V, VI, VII, and VIII intelligences, however crudely presented.

In short, the various levels of consciousness and circuits we have been discussing, and illustrating, are all biochemical imprints in the evolution of the nervous system. Each imprint creates a bigger tunnel-reality. In the Sufi metaphor, the donkey on which we ride becomes a different donkey after each imprint. The metaprogrammer continually learns more and is increasingly able to be aware of itself operating. We are thus evolving to intelligence-studying-intelligence (the nervous system studying the nervous system) and are more and more capable of accelerating our own evolution.

Leary now symbolizes intelligence-studying-intelligence by the mark, I². On the lower levels, you see with one "I", so to speak. On the higher levels, you see with many "I's", and space-time shifts from three Euclidean dimensions to non-Euclidean multi-dimensionality.

Source: *Cosmic Trigger*, 1977 [<http://www.timothyleary.info/8circuit.html>] — 07 June 2020]

Fusion Anomaly

This Circuits theory has been a subject of interest to many, as one can discover with an internet search. Each person interprets Leary's theory within their own framework of understanding (as do I). Following is one that I found interesting, and you might also find it interesting. Much of it is a repeat of what we have seen above, but some of it is not.

The following is from ><http://fusionanomaly.net/8.html>< and was retrieved on 06 June 2020.

TIMOTHY LEARY'S 8-CIRCUIT BRAIN MODEL

1st circuit: Survival/security

Things are okay or they're not, or somewhere in between. This is connected to the first source of these things: nursing at Mom's nipple. People who take an imprint that things aren't safe all the time may compensate by eating, especially sweet things, pudding, 'nursery food' that makes them feel better for a while. This imprint is taken very early, in nursing. It's what's known in developmental psychology as 'oral'.

2nd circuit: Territorial/Emotional

This is a very particular definition of "emotional" — are you feeling up or down? Are you on top of the world or down in the dumps? This is related to basic primate pecking order stuff — who's the big tough dog and who's the little submissive dog? Later, when you get your own turf where you can be a little king, you can defend it against others by throwing shit at each other (in the form of words, lawsuits, horn honking, or however you prefer to 'dump on' people).

This corresponds to the 'anal' stage, and the first imprints are taken during toilet training — this develops greatly when the kid starts playing with other kids and finding out where they stand — big kids are always telling little kids what to do.

3rd circuit: Conceptual

This kicks in even before school — kids are hungry to learn. This circuit is the ability to make mental models of things, which help you 'figure things out' and 'be clever'. The imprint you take is whether you feel smart or stupid (which is different from BEING smart or stupid!) Sometimes people who have a bad time in other circuits compensate in 3rd circuit — actually, that can happen with any of them. Note also that there are different KINDS of intelligence — verbal, mathematical, visual/spatial, musical, etc, etc... but as Robert Anton Wilson says, "...the people with the verbal intelligence have control of the language, so they call themselves THE intellectuals." My father, who is a clinical psychologist, always mentions a particular basketball player (I forget who) whom he claims is a genius in spatial/motor intelligence, regardless of the fact that the guy probably reads on a 7th grade level.

4th circuit: Social/Sexual

Whereas 2nd circuit deals with who bosses who, 4th deals with who is cool. What this comes down to is that depending on whether someone is cool or not, you'd let them get close to you or not, running a spectrum from not talking to someone at all (the snub) to having sex with them, with many subtle shades in between. It goes both ways — how cool are you? Are there people that you aren't cool enough to talk to? "Oh, I could never ask HER/HIM out..." The imprint you take here is how cool you feel, and how hard you have to work to feel that way.

Everyone has these circuits, but some people get stuck on one or another of them, usually because they've got some problem to work out in that area. Often one circuit gets to be a surrogate for another (especially if the other is underdeveloped) — the classic example is the pathetic (i.e. poor 2nd circuit imprint) nerd who tries to out-talk his buddies to show how smart he is (3rd circuit), in order to be an authority to them (2nd circuit dominance).

One of the ideas that came up in LSD research was the idea that you reach a state of flux in which new imprints can be taken. This is very much in agreement with ideas about set and setting, but as most people who have taken LSD agree, while everything seems to change after the experience, after a while you slip back into the old patterns (witness all the flower children who, unlike the few with real dedication, slipped back to become businessmen of the 1980s).

Whether this slipback is really inherent in the function of the LSD trip is not certain, though — it may be caused by going back into one's regular environment, which has been shaped by everything one was before. Under the pressure of conformity to the old status quo, one slips back.

Leary felt that the goal was to work out the circuits so that one had imprints that led to a happy, healthy life, but without having to always have things one way — people who have to always be on top never learn about service, those who always have to feel secure never learn to take risks, etc. Ultimately, the circuits would be there to plug into and out of at Will, while one navigated through the upper circuits:

The upper circuits deal with mystical, psychic, or paranormal consciousness. They are built on the foundation of the lower circuits, almost as 'overdriven' versions of them. Interestingly, they correspond well with ideas from many spiritual traditions.

5th circuit: Bliss/Healing, Neurosomatic Feedback

When 1st circuit security gets great enough, it becomes bliss, as one becomes aware of one's sensation of pleasure and learns to generate those sensations at the source. This is the SF brainbox that directly stimulates one's pleasure centers, only the box is also your brain! This feedback loop gets going, and one may remain in the state until kicked out for some reason (the world makes demands, or the chemical that boosted you into the state wears off). Ever seen a picture of a meditating yogi in bliss? In this state, you realize you can make yourself feel bliss just as easily as you can move your muscles or keep still. When this awareness is applied to others, the 5th circuit energy works to help their 1st circuit state — this is the principle of healing.

6th circuit: Psychic

This is awareness of the great information network in which we swim.

7th circuit: Mythical Intelligence

This is the realm of the shaman, of spirit animals, Gods and Goddesses. It is the Dreamtime. 3rd circuit draws models of specifics in the conscious world. 7th circuits draws models of the patterns of archetype that make up the unconscious world. It does this by telling stories that illustrate the patterns that arise from these archetypes. When 7th circuit awareness is working, one realizes how these patterns are being played out, and instead of just acting in the world, one is at the same time coming into direct contact with the archetypal.

8th circuit: Out-of-Body Experiences, and ????

This is the far reaches, and not much is really understood about it. Since 4th circuit has to do with letting others get close and even (especially in the case of sexuality) merging with them, it makes sense that 8th might have to do with overcoming the obstacle of one's physical boundaries.

As usual, my intention is to clarify the correlation of the Circuits with the Natural Sequence schema.

Table 3xx — CIRCUITS, CHAKRAS, LIFE-STAGES, CULTURES

DIALECTIC	ORDINAL			NEUTRAL		CARDINAL	
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIMENSION							
DIRECTION							
CENTER	MOTION	EMOTION	INTELLECT	IMPULSE	CONCEPT	SYMPATHY	EXCITATION
RANK	1	2	3	4	5	6	7
CIRCUIT							
CHAKRA							
LIFE-STAGE							
CULTURE							
BRAIN	Reptilian	Mammalian	Human				

Comments on Octate Consciousness

1. Notice that the levels of consciousness are explicitly said to be *developmental*, not *deploymental*. Humankind, in terms of biological evolution and childhood development, ascends through the levels in a specific order.
2. The proper sequence of the first three “circuits” was obvious to Dr. Leary, and it follows the Natural Sequence, same as the other realms of development documented in this book. These lower circuits are readily available for study and that is why their proper sequence is so obvious. The proper sequence of the latter circuits does not follow the Natural Sequence, but one wonders upon what basis they were sequenced anyway.
3. Notice that the first seven circuits are of the physical body and the eighth circuit is beyond the physical body. Therefore the cosmology of sevenness is preserved in Dr. Leary’s system.
4. As for the Roles of the original Star-Trek cast, I would identify helmsmen Sulu and Chekov as Warriors, nurse Chappel as Server, engineer Scotty as Artisan, science officer Spock as Scholar, communications officer Uhuru as Sage, conscientious Dr McCoy as Priest, and Captain Kirk as King.
5. Timothy Leary’s sequence is very similar to Abraham Maslow’s Hierarchy of Needs, which is covered in Chapter 3x, “Maslow’s Hierarchy of Needs”. I do not know if one copied from the other, or if they were independently developed, but it would be worth finding out. If they are independent, it speaks more strongly to confirm the validity of the Natural Sequence.
6. Leary gives credit to the chakra system for some of his ideas. Refer to Chapter 2x, “The Seven Chakras”, for more information about them. Comparing what you see there and what you see here, I believe you will agree with me that the chakra system, as it was understood in Leary’s day, was a bit primitive and ambiguous. With the correlating help of the logical and mathematical underpinnings of the structure of the PAS/NAS, both systems can be clarified. Particularly, the higher chakras and the higher number circuits need help, and by help, I refer to the understanding of the Axial Attributes and Dimensionality of the Ordinal and Cardinal as the mirror image of each other.





Chapter IV-x

SOCIO-CULTURAL EVOLUTION

[[Remove most references to Michaelian teachings stuff.]]

It is being said by many socio-cultural anthropologists that humankind is passing through another revolutionary phase. This implies that there were times in history and pre-history – after the original ensoulment with presumably Infant Souls — when humankind passed from Infant Soul majority to Baby Soul majority, and another time when humankind passed from Baby Soul majority to Young Soul majority. I had done a significant amount of reading about early humankind, and it seemed obvious to me that the hunter-gatherer phase was Infant Soul, the agricultural-pastoral phase was Baby Soul, and the civilization phase was Young Soul. The question being addressed in this section: Is this per the Michael Math Sequence or the Natural Sequence. Early in my understanding of the Natural Sequence, it dawned on my that the early history of humans after ensoulment followed the Natural Sequence.

After the ensoulment of homo many tens of thousands of years ago, the first culture was the hunter-gatherer phase that lasted for a few tens of thousands of years. The prevailing lifestyle was to live in nomadic or semi-nomadic extended families rather than tribes. They did not necessarily have permanent settlements, and they foraged-hunted for food wherever they could find it, surviving as best they could. Protection from nature and taking from nature rather than working with and tending to nature was the rule. I regard this as the Infant-Soul Ordinal-Action phase.

This was followed, after about 10,000 BC, by a few thousands of years of the agricultural-pastoral phase where tribes lived in settled villages, often allied with other nearby villages. The beginning of this phase is often referred to as the “Agricultural Revolution” because for the first time in history humans raised crops and tended herds of livestock animals. The prevailing lifestyle was Tribal, although tribalism may have had its roots in the hunter-gatherer phase. Because they raised (“nurtured”) most of their own food and had permanent or semi-permanent settlements, this made a social life (what is called “the common good, the collective”) more likely. I regard this as the Baby-Soul Ordinal-Inspiration phase.

Then with the first rise of “civilization” (“civil” meaning “of cities”) about 5000 years ago, the Young-Soul Ordinal-Expression phase began. This is when individuality apart from the Tribe became important. This was when nation-states with big cities at their centers were formed. This is when buildings, roads, infrastructure, writing, mathematics, and so on came to the fore. The prevailing lifestyle wrought by civilization was a move from the village with farm to the big city. We have one clue, what the Michaels regard as the nature of the Young Soul phase of humankind. They were “the architects of civilization” (MFM p. 72). This is not a description that goes as well with Warriors. Their technologies and crafts made city-state government and commerce with neighboring city-states possible by giving Warriors something better to do than track animals and kill strangers and steal their women as in hunter-gatherer days. Technological cultures are more about diversity: there is specialization of tasks. Diversification is the essence of Ordinal Expression.

At the present time in history, we are supposedly at the very beginning of the Mature-Soul Scholarish Neutral-Assimilation Fourth-Chakra phase of planetary cultural development. Some time long after that, when humankind evolves from Mature Soul perceptivity to Old Soul perceptivity, civilization will be primarily “philosophical” (MFM, p.67), and that goes well with #5 Sageness Cardinal-Expression Fifth-chakra.

So let's look at a description of these eras more closely in the following quotations. As usual, I interject my interpretation in *[[bracketed comments]]*.

Lewis H. Morgan, an anthropologist whose ideas have had much impact on sociology, in his 1877 classic *Ancient Societies* differentiated between three eras: savagery, barbarism, and civilization, which are divided by technological inventions, like fire, bow, pottery in savage era *[[Ordinal Action]]*, domestication of animals, agriculture, metalworking in barbarian era *[[Ordinal Inspiration]]* and alphabet and writing in civilization era *[[Ordinal Expression]]*. Thus Morgan introduced a link between the social progress and technological progress. Morgan viewed the technological progress as a force behind the social progress, and any social change – in social institutions, organizations or ideologies have their beginning in the change of technology.

Emile Durkheim, another of the “fathers” of sociology, has developed a similar, dichotomous view of social progress. His key concept was social solidarity, as he defined the social evolution in terms of progressing from mechanical solidarity to organic solidarity. In mechanical solidarity, people are self-sufficient, there is little integration and thus there is the need for use of force and repression to keep society together. In organic solidarity, people are much more integrated and interdependent and specialization and cooperation is extensive. Progress from mechanical to organic solidarity is based first on population growth and increasing population density *[[Ordinal Action]]*, second on increasing “morality density” (development of more complex social interactions) *[[Ordinal Inspiration]]* and thirdly, on the increasing specialization in workplace *[[Ordinal Expression]]*. To Durkheim, the most important factor in the social progress is the division of labor.

[>http://en.wikipedia.org/wiki/Cultural_evolution< — retrieved ???]

George Lenski, a sociologist, differentiates societies based on their level of technology, communication and economy: (1) hunters and gatherers, *[[ordinal action]]* (2) simple agricultural, (3) advanced agricultural, (4) industrial, and now (6) virtual. This is somewhat similar to the system earlier developed by anthropologists Morton H. Fried, a conflict theorist, and Elman Service, an integration theorist, who have produced a system of classification for societies in all human cultures based on the evolution of social inequality and the role of the state. This system of classification contains four categories:

Hunter-gatherer bands, which are generally egalitarian. *[[Ordinal Action]]*

Tribal societies in which there are some limited instances of social rank and prestige. *[[Ordinal Inspiration]]*

Stratified structures led by chieftains. *[[Ordinal Inspiration]]*

Civilizations, with complex social hierarchies and organized, institutional governments. *[[Ordinal Expression]]*

Over time, some cultures have progressed toward more-complex forms of organization and control. This cultural evolution has a profound effect on patterns of community. Hunter-gatherer tribes settled around seasonal foodstocks to become agrarian villages. Villages grew to become towns and cities. Cities turned into city-states and nation-states. [>http://en.wikipedia.org/wiki/Society#Evolution_of_societies< — retrieved ???]

STAGE 1— HUNTER-GATHERER CULTURE = Primitivism Worldview / Ordinal Action (Warrior-ish)

Hunter-gathering is of course what all animals do, but in terms of human culture/society, it prevailed all the way up to the “Neolithic Revolution” about 12,000 years ago.

<http://en.wikipedia.org/wiki/Hunter-gatherer>

A hunter-gatherer society is one whose primary subsistence method involves the direct procurement of edible plants and animals from the wild, foraging and hunting without significant recourse to the domestication of either. The demarcation between hunter-gatherers and other societies which rely more upon domestication (see [Wikipedia articles on] agriculture and pastoralism and neolithic revolution) is not a clear cut one, as many contemporary societies use a combination of both strategies to obtain the foodstuffs required to sustain themselves. Hunting and gathering was presumably the only subsistence strategy employed by human societies for more than two million years, until the end of the Mesolithic period [about 12,000 years ago]. The transition into the subsequent Neolithic period is chiefly defined by the unprecedented development of nascent agricultural practices. Hunter-gatherer societies tend to be relatively mobile or nomadic... Their population densities tend to be lower than those of agriculturalists.... Individual bands tend to be small in number... Hunter-gatherer societies also tend to have non-hierarchical, egalitarian social structures... Thus, full-time leaders, bureaucrats, or artisans are rarely supported by these societies... At the 1966 "Man the Hunter" conference, anthropologists Richard Borshay Lee and Irven DeVore suggested that egalitarianism was one of several central characteristics of nomadic hunting and gathering societies because mobility requires minimization of material possessions throughout a population; therefore, there was no surplus of resources to be accumulated by any single member.

[><http://en.wikipedia.org/wiki/Hunter-gatherer>< — retrieved ???]

STAGE 2 — TRIBAL CULTURE = *Traditionalism Worldview / Ordinal Inspiration (Server-ish)*

The Neolithic Revolution was the first agricultural revolution — the transition from nomadic hunting and gathering communities and bands, to agriculture and settlement. It occurred in various independent prehistoric human societies between 10-12 thousand years ago. The term refers to both the general time period over which these initial developments took place and the subsequent changes to Neolithic human societies which either resulted from, or are associated with, the adoption of early farming techniques, crop cultivation, and the domestication of animals. The Neolithic Revolution is notable primarily for developments in social organization and technology. The changes most often associated with the Neolithic Revolution include an increased tendency to live in permanent or semi-permanent settlements, a corresponding reduction in nomadic lifestyles, the concept of land ownership, modifications to the natural environment, the ability to sustain higher population densities, an increased reliance on vegetable and cereal foods in the total diet, alterations to social hierarchies, nascent “trading economies” using surplus production from increasing crop yields, and the development of new technologies. The relationship of these characteristics to the onset of agriculture, to each other, their sequence and even whether some of these changes are supported by the available evidence remains the subject of much academic debate, and seems to vary from place to place. [http://en.wikipedia.org/wiki/Neolithic_Revolution — retrieved ???]

http://www.amazon.com/Inside-Neolithic-Mind-Consciousness-Cosmos/dp/0500051380/ref=cm_cr_pr_sims_t

The transition from hunter-gatherer Ordinal Action (Warriorish, Motion Center) culture to agricultural-pastoral Ordinal Inspiration (Serverish, Emotion Center) culture is made clear in the following quotation from the March 2021 edition of *Scientific American*, in an article named “The Origin of Home”, authored by Annalee Newitz. It is about archaeological excavations at Çatalhöyük, which is on the Anatolian Peninsula (modern-day Turkey), and which is one of the earliest known cities in the world:

The Neolithic [“New Stone Age”] was a period of rapid change for humanity, especially when it came to defining what it meant to be at home. Before about 12,000 years ago, very few people lived in agricultural settlements year-round — most were nomadic or semi-nomadic, living in small groups as hunter-gatherers who moved from site to site according to seasonal changes in food availability. So when people finally did begin to build permanent houses and form larger settlements, they had to figure out new ways of living in one place, cheek by jowl with their neighbors.

Mostly they did it by building those homes together — sharing the backbreaking labor but also the joys of community. John S. Allen, an anthropology researcher at Indiana University Bloomington, is author of the 2015 book *Home: How Habitat Made Us Human*. “A home is a space you have an emotional attachment to, through habitual use, he says. Humans create homes by forming an association between their *community* and a specific place, he adds. This might be one reason graves at Çatalhöyük lay just below the floors of homes. “A burial signifies a special place for family and friends,” Allen suggests, underscoring the idea of a home as an emotional space as well as a practical one.

STAGE 3 — TECHNOLOGICAL CULTURE = *Materialism Worldview / Ordinal Expression (Artisanish)*

<http://en.wikipedia.org/wiki/Civilization>

The earliest known civilizations (as defined in the traditional sense) developed from proto-civilized cultures... The inhabitants of these areas built cities, created writing systems, learned to make pottery and use metals, domesticated animals, and created complex social structures with class systems. Proto-civilized cultures developed as a late stage of the Neolithic Revolution, and pioneered many of the features later associated with civilizations... “Civilization” can also describe the culture of a complex society, not just the society itself. Every society, civilization or not, has a specific set of ideas and customs, and a certain set of items and arts, that make it unique. Civilizations have even more intricate cultures, including literature, professional art, architecture, organized religion, and complex customs associated with the elite. Civilization is such in nature that it seeks to spread, to have more, to expand, and the means by which to do this.

CULTURAL EVOLUTION

Somewhat has been said lately by Michael that human consciousness on average on this planet at this time in history is shifting from “Young Soul” perceptions to “Mature Soul” perceptions. Other channeled sources say

something similar, but maybe in different words. Ra for instance say we are moving from “third density” to “fourth density”. I probably don’t need to point out that “Young Soul” Age is the “third” in the series and “Mature Soul” Age is the “fourth” in the series, but if your brain is really tired you might not get the connection. The question is, as humankind transitions from Young Soul to Mature Soul perceptivity and predominance, are we moving out of the Warrior phase of cultural development per the MMS, or out of the Artisan phase per the Natural Sequence.

I am not a cultural anthropologist or historian, so my opinions are somewhat uninformed. However, those subjects have been of more than casual interest to me over the decades of reading books and magazines. I think I know the broad, basic trends of anthropology and history. The known archaeological evidence seems to suggest that the human species was ensouled several tens of thousands of years ago, about 60,000 BC, with perhaps Neanderthal Man and for sure Cro Magnon Man. They buried their dead and painted their cave walls and so on — things the apparently unensouled pre homo-sapiens did not do. After the ensoulment, the notable stages mentioned by anthropologists are as follows. For a few tens of thousands of years these early humans lived as “hunter-gatherers”. The men were the hunters and the women were the gatherers. Living in caves and survival-on-the-run was a constant challenge. Then came the “agricultural-pastoral” phase, otherwise known as the “neolithic phase” or “agricultural revolution”, about ten to twelve thousand years ago in various parts of the world. Humans developed animal husbandry, horticulture, and agriculture and this lasted for a few thousands of years. Women were the agriculturalists and the men were the shepherds/cowherds. They were settled into villages; home and hearth were the hallmarks of their lifestyle. Then about five thousand years ago, humans began to develop “civilization” with all its megalithic construction and writing and technology and such. Do you not see where I am going with this? It seems very natural to me to correlate the hunter-gatherer-wanderer-cave stage with the Warrior Role and Infant Soul Age. It seems very natural to me to correlate the agricultural-husbandry-village stage with the Server Role and Baby Soul Age. It seems very natural to me to correlate the civilization stage with the Artisan Role and Young Soul Age. Now at this time in history we are coming into what is often referred to by pundits as the “information age”, and of course this correlates with the Mature Soul Age and Scholar Role according to the Michaelian teachings. My perception is that the human experience in general is developing along the Natural Sequence. Of course all these cultures still exist in various parts of the world, but when and where there is development, it typically follows the Natural Sequence schema. Development requires building on previous foundations, and the Natural Sequence is hierarchical that way.

Quotes on Cultural Anthropology

[[Yet to be researched, selected, and edited.]]

Comments on Cultural Anthropology

All the Roles are present during all these phases of the development of culture, perhaps even in the proportions stated by Michael. Servers and Artisans and all the other Roles are doing their thing all the time. They are not absent in the “Warriorish” phase, whether that be the one at the beginning of ensoulment or the one said to be ending now. It is the nature/prevaling theme of the pervasive/predominant world culture that seems to have developed over thousands of years.

My Scholar soul and Artisan Role would like to research and write a book taken up with footnotes and bibliography to bolster this evidence and the evidences for the other points. I hope to get to that some day now that I am retired.

Of course scientific investigation and presentation (Scholar function, Fourness, Mature Soulness) has been present from the beginning of ensoulment. But I think it took a major leap about 400 years ago with the “scientific revolution” — Copernicus and Galileo and such, along with the Renaissance and the Reformation. Maybe that shift was just a precursor to the present alleged shift from a Young Soul culture to a Mature Soul culture.

Trifunctional Hypothesis

At some point in my researches I stumbled upon the notion named in the title of this section. Reading about it in Wikipedia, it was not difficult for me to correlate the hypothesized “three societal functions” with the three Axes (Action, Inspiration, Expression) of the Process/Aspect System matrix:

The trifunctional hypothesis of prehistoric Proto-Indo-European society postulates a tripartite ideology (“idéologie tripartite”) reflected in the existence of three classes or castes — priests [Inspiration Axis], warriors [Action Axis], and [miscellaneous] commoners (farmers or tradesmen) [Expression Axis] — corresponding to the three functions of the sacral, the martial, and the economic, respectively. The trifunctional thesis is primarily associated with the French mythographer Georges Dumézil, who proposed it in 1929 in the book *Flamen-Brahman*, and later in *Mitra-Varuna*.

Readers who are familiar with the PAS matrix will immediately recognize that the names “priest” and “warrior” are identical to the names of two Roles of the PAS matrix. It takes a more thorough description (see below) to recognize that the third category a catch-all category (commoner) fits well enough with the Expression and Assimilation Roles of the PAS matrix.

THREE-WAY DIVISION

According to Georges Dumézil (1898–1986), Proto-Indo-European society had three main groups, corresponding to three distinct functions:

[1] Sovereignty, which fell into two distinct and complementary sub-parts:

one formal, juridical and priestly but worldly; [in the PAS matrix, these = the King Role]

the other powerful, unpredictable and priestly but rooted in the supernatural world. [= the Priest Role]

[2] Military, connected with force, the military, and war.

[3] Productivity, herding, farming and crafts; ruled by the other two. [= Artisans, Servers, Sages, and Scholars]

In the Proto-Indo-European mythology, each social group had its own god or family of gods to represent it and the function of the god or gods matched the function of the group. Many such divisions occur in the history of Indo-European societies:

- Southern Russia: Bernard Sergent associates the Indo-European language family with certain archaeological cultures in Southern Russia and reconstructs an Indo-European religion based upon the tripartite functions.
- Early Germanic society: the supposed division between the king, nobility, and regular freemen in early Germanic society.
- Norse mythology: Odin (sovereignty), Týr (law and justice), the Vanir (fertility). Odin has been interpreted as a death-god and connected to cremations, and has also been associated with ecstatic practices.
- Classical Greece: the three divisions of the ideal society as described by Socrates in Plato’s *The Republic*. Bernard Sergent examined the trifunctional hypothesis in Greek epic, lyric, and dramatic poetry.
- India: the three Hindu castes, the Brahmins or priests; the Kshatriya, the warriors and military; and the Vaishya, the agriculturalists, cattle rearers, and traders. The Shudra, a fourth Indian caste, is a peasant or serf. Researchers believe that Indo-European-speakers entered India in the Late Bronze Age, mixed with local Indus Valley civilization populations and may have established a caste system, with themselves primarily in higher castes.

With the use of the word “complementary”, the Trifunctional Hypothesis hints at what the PAS matrix declares explicitly, namely that there are Ordinal and Cardinal poles of the Action, Inspiration, and Expression Axes.

The Hindu caste system is reviewed in more detail in a subsequent section, and found to be more consistent with the PAS matrix than hinted at above.

RECEPTION

Supporters of the hypothesis include scholars such as Émile Benveniste, Bernard Sergent and Iaroslav Lebedynsky, the last of whom concludes that “the basic idea seems proven in a convincing way”.

The hypothesis was embraced outside the field of Indo-European studies by some mythographers, anthropologists and historians such as Mircea Eliade, Claude Lévi-Strauss, Marshall Sahlins, Rodney Needham, Jean-Pierre Vernant and Georges Duby.

On the other hand, Allen concludes that the tripartite division may be an artifact and a selection effect, rather than an organizing principle that was used in the societies themselves. Benjamin W. Fortson reports a sense that Dumézil blurred the lines between the three functions and the examples that he gave often had contradictory characteristics, which had caused his detractors to reject his categories as nonexistent. John Brough surmises that

societal divisions are common outside Indo-European societies as well and so the hypothesis has only limited utility in illuminating prehistoric Indo-European society. Cristiano Grottanelli states that while Dumézilian trifunctionalism may be seen in modern and medieval contexts, its projection onto earlier cultures is mistaken. Belier is strongly critical.

The hypothesis has been criticized by the historians Carlo Ginzburg, Arnaldo Momigliano and Bruce Lincoln as being based on Dumézil's sympathies with the political right. Guy Stroumsa sees those criticisms as unfounded. [https://en.wikipedia.org/wiki/Trifunctional_hypothesis — retrieved 27 March 2021]

see also https://en.wikipedia.org/wiki/Triple_deity

Max Weber: Social Action

[[Check into the work of sociologist Max Weber: “Traditional Action, Affective Action, Value-rational Action, Technical-rational Action. ><https://www.yourarticlelibrary.com/sociology/types-of-social-action-according-to-max-weber/43755><. See also >https://en.wikipedia.org/wiki/Social_actions< and also see ><https://revisesociology.com/2017/01/26/max-webers-social-action-theory/>< and see also ><https://www.historylearningsite.co.uk/sociology/theories-in-sociology/social-action-theory/>< .]]

Duane Elgin — Awakening Earth

The follow quotations were copied from the Amazon listing for the book *Awakening Earth* by Duane Elgin and published in 1993. All of them were retrieved in January 2021. Elgin's basic premise in this book is the same as this chapter of this *Natural Sequence* book, namely that socio-cultural development during human history is a real thing that happens in fairly identifiable stages, and that the characteristics of future stages are somewhat predictable. My presumption is that the predictability is a consequence that the Natural Sequence governs evolutionary developments of all kinds, all up and down the Great Chain/Nest of being.

In this first quotation, I have placed numbers and names in brackets to show the correlation of Elgin's system with the Natural Sequence. Although Elgin posits seven stages, the same as the Natural Sequence, his work does not correlate exactly with my work in that I separate what he refers to as the “agrarian” stage from the “civilization” stage, and I include the “scientific-industrial” stage in with the “communications/global” stage.

A stimulating, though not elegantly expressed, vision of the evolution of the Cosmos — and of our role in its future. California social-scientist Elgin (*Voluntary Simplicity*, 1981 — not reviewed) draws on ancient spiritual traditions and modern scientific insights to form a picture of where we're going in the universe. The present, he argues, is crucial, since advances in technology and communications suggest a new expansion of human consciousness even as ecological problems cast doubt on any “sustainable future.” Elgin discerns three decisive stages in the development of consciousness: the era of [1-Ordinal Action] hunter-gatherers, beginning roughly 35,000 years ago and marked by limited self- reflection; the era of [2-Ordinal Inspiration] agrarian-based [3-Ordinal Expression] civilizations, beginning about 10,000 years ago; and our own [4-Neutral Assimilation] scientific-industrial era, begun in the 1700's. He contends that now we're entering a new era, one in which mass communications make possible the beginning of a global consciousness, as well as hoped-for reconciliations among ourselves and between us and our planet. Looking forward, Elgin projects three further stages: [5-Cardinal Expression] “bonding,” in which community and viable future can be built; [6-Cardinal Inspiration] “surpassing,” which will foster free creativity; and [7-Cardinal Action] “maturity,” a wisdom-culture of enlightenment and cosmic consciousness. The author claims that his thinking isn't New Age, since he envisages a process involving matter as well as consciousness – a process he terms “co-evolution.” Elgin's stress on human responsibility avoids the determinism of many evolutionary views, and his suggestions that the ideal world government will resemble that dictated in the US constitution, and that ultimate reality is “democratic,” will please patriots. But Elgin's final vision is of consciousness being freed from matter, and his concept of an eternal “Meta-universe” seems to align him with the Taoists or pre-Socratic Greeks. Moreover, it's difficult to see how personal individuation has a place in his view of the fully evolved consciousness. An ambitious and provocative call to greater awareness, marred by sometimes tortuous turns of expression and thought. — Copyright ©1993, Kirkus Associates, LP. All rights reserved.

In his book *Up from Eden*, Wilber outlines how the spiritual evolution (called spirit-in-action) has unfolded up through the history of humanity through different stages of consciousness. This evolutionary development in history has been recognized by several theorists, including Jean Gebser (1905-1973) who influenced Wilber in his

theories about cultural development. He was one of the first to research and detect the various psycho-historical structures of consciousness that have emerged in the course of history. He called these stages of cultural development for the archaic [= Primitivism Worldview], the magic, the mythic [= Traditionalism Worldview], the mental [= Materialism Worldview], and the integral [= Collectivism Worldview] and it is visualized by Brad Reynolds (2006: 263) [<http://www.integralworld.net/sorensen2.html>, – retrieved 25 February 2021]

[[Comment on developmental psychologists who compare the development of humans over a lifetime to the development of cultures over the lifetime of humanity in general.]]

NOTES TO SELF: There is a certain class of Mature souls who are perpetual “seekers” in that they work hard to make the breakthrough to cosmic consciousness — these are late Level Mature. Early Level Mature Souls tend to be iconoclastic if they find themselves in a socio-cultural environment that is predominantly Young Soul or younger. Early Level Old Souls are not such compulsive seekers because in some sense they have already made the breakthrough; they have arrived at enlightenment or liberation. The first four colors/categories of Gravesian SD in the First Tier fit well with the Soul Age info of the MT, Theosophy, and Meher Baba. To make the correlation, the four Stages are divided in two in order to fit with two Ages, and this is done by dividing the Ages into early (Ordinal/Cardinal) and late (Cardinal/Ordinal) Levels. The fifth stage (‘Orange’) does fit well with Young Soul, and the SD sixth stage (‘Green’) fits well with Mature Soul. The seventh SD stage (‘Yellow’) fits well with the description of the Old Soul in the MT and elsewhere. It would have been tidy if SD First Tier entirely correlated with Infant, Baby, and Young souls, and if Second Tier exactly matched the MT description of Mature Souls, and the SD Third Tier exactly matched the description of Old Souls. That did not happen; something has to be adjusted. In the mix will be the difference between Yarbrow and non-Yarbrow perceptions of Mature and Old Souls. Another thing to consider for purposes of correlation of SD with MT is the SD estimation of when the Stages began, which differs from the MT perception. Personally, I place the Infant Soul as the paleolithic (hunter-gatherer) stage of human socio-cultural evolution; the Baby Soul Age with the neolithic (pastoral-agricultural) stage of human socio-cultural evolution (in lower and higher levels); Young Soul Age with the rise of civilization. Wild Speculation: the Infinite and Transcendental Souls might initiate each Level during a Soul Age, thus: Krishna initiated First Level Young (~3100 BC); ____ initiated Second Level Young; Ikhnaton (and Zarathustra?) (~1350 BC) initiated Third Level Young; Rama (?) & Buddha (IS) & Socrates (TS) & Lao Tsu (IS) & Confucius (TS) initiated Fourth Level Young (~600 BC); Jesus (IS) initiated Fifth Level Young (~33 AD); Mohammad (TS) initiated Sixth Level Young (~600 AD); Gandhi (TS) initiated Seventh Level Young. There was a bunch of mystics in the late Middle Ages before the Renaissance; could they have initiated a Level of the Young Soul Age.

Ken Wilber: *Up From Eden*

David Sloan Wilson — Multi-Level Cultural Evolution:

><https://pubmed.ncbi.nlm.nih.gov/37036975/><

General Comments on Socio-cultural Evolution

1. Obviously the development of humankind so far is just the first three stages of the full septenary. Ostensibly humankind will develop thru the remaining four stages in the millennia to come.
2. The typical Michael student might not easily recognize the similarity of these three stages to the Roles and Ages that I correlated. As the descriptions of other septenaries is presented in this document, the similarities will become clearer. Meaning, the other Natural Sequence septenaries discussed in this manuscript are more similar in description to these descriptions of socio-cultural evolution than they are to Roles and Ages.
3. For instance, in the evolution of animals, the (kinetic-centered) reptilian phase (taking care of self) is most easily correlated with the hunter-gather phase, the (emotional-centered) mammalian phase (taking care of family) is most easily equated with the agricultural-pastoral phase, and the

(intellectual-centered) human phase (taking care of society) is most easily equated with the civilization phase.

4. Notice that human societies became more complex with each stage. This is reminiscent of the increasing complexity in terms of the alleged “Inputs” of the Roles: Warrior = 1 input, Server = 2 inputs, and Artisan = 5 inputs.
5. Notice that human societies develop along a natural arc, each built on what has gone before. In the hunter-gatherer phase, humans had to learn how to acquire food by moving about in the Infant Soul Age of humanity. Then in the next phase they had to learn how to care for and tend to nature to provide their food during the Baby Soul Age of humanity. Then in the next phase when they had an over abundance of food they could devote their time to superfluous pursuits as part of complex societies in the Young Soul Age of humanity. Indications are that humanity might be entering the Mature Soul Age, starting with the Twentieth Century.
6. In the story of Adam and Eve, when they ate of the fruit of the Tree of Knowledge, they knew that that were naked, they were cast out of the Garden of Eden (Paradise), and thereafter had to toil in the soil. This story might be a metaphor for the transition from hunter-gatherer culture to agricultural-pastoral culture, but at a deeper level it is also a metaphor for the recursive reflection of the Meta Principle, in this case, the meta-cognition that happens from one Transition Principle to the next higher-later phase.





Chapter IV-x

LENE RACHEL ANDERSEN — CULTURAL SENSIBILITIES

[[This chapter might not work well enough to finish and keep.]]

✓ Different anthropologists have various perspectives on alleged stages in the development of human cultural sensibilities, starting from prehistoric times and lasting up to the present day. This chapter documents one of those alternative perspectives that characterizes and categorizes the stages of human cultural evolution somewhat, but not entirely, differently from the interpretation given in a previous chapter, “Socio-Cultural Evolution”.

This chapter covers the work of Lene Rachel Andersen, who has a theory about what she refers to as the evolution of human “cultural sensibilities”. As usual, I provide a brief biography that includes her credentials, and then I provide a brief description of her theory, and then describe and explain how her theory is yet another instantiation of the Natural Sequence schema.

✓ Biography

As usual, I look to Wikipedia to give us a brief biography of the subject of the chapter.

Lene Rachel Andersen (born May 15, 1968) is a Danish author, economist, futurist, and philosopher. She was born and raised in Taastrup, a suburb west of Copenhagen, Denmark. Her first books formed the series *Baade-Og [Both-And]*. Her books in English are *The Nordic Secret* (2017), *Metamodernity* (2019), *Bildung* (2020), *What is Bildung?* (2021, online), and *Libertism* (2022). In 2018, Andersen co-founded the Copenhagen based think-tank Nordic Bildung and the folk-Bildung association Fremvirke. In 2019, she was the main initiator of European Bildung Day, and in 2020 [she was] the co-founder of the European Bildung Network. Since January 2019, Andersen has been a member of the Club of Rome. [https://en.wikipedia.org/wiki/Lene_Rachel_Andersen] — retrieved 02 November 2023]

“Bildung” is a German language word that has a history in philosophy, and refers to the notion that people do well to continue to educate and cultivate and improve themselves in every way during their adulthood after formal education ceases: <https://en.wikipedia.org/wiki/Bildung>. This notion follows naturally from the observation that the story arc of human prehistory and history follows the same pattern of stages as the development of people during the story arc of their lives from birth to death (as documented in Part Five, “Developmental Psychology”), namely the Natural Sequence schema. Being informed about human history helps us to be informed about our personal history, and *vice versa*. Also, the more informed we are the better choices we can make, now and in our personal future.

Furthermore, speaking of practical implications of one’s academic studies, “The Club of Rome is a nonprofit, informal organization of intellectuals and business leaders whose goal is a critical discussion of pressing global issues.” (https://en.wikipedia.org/wiki/Club_of_Rome) There are practical implications that arise from understanding the evolution of cultural sensibilities. What we have here is not just a matter of satisfying academic curiosity. The point is that, knowing the history of humanity helps us predict and deal effectively with the present and future of humanity.

Gregg Henriques on Lene Rachel Andersen

Henriques’s work is discussed in [Chapter IV-x](#), “Tree of Knowledge”. He is familiar with the work of Andersen, and he had somewhat to say about her theory of “human cultural sensibilities” in a blog that he posted to the Psychology Today website, to wit:

FIVE PHASES IN THE EVOLUTION OF HUMAN CULTURAL SENSIBILITIES

Tracing the evolution of human consciousness and culture in five phases

Posted October 4, 2019

This blog was co-authored by Lene Rachel Andersen and Joe Michalski.

[Abstract:] In her book, *Metamodernity: Meaning and Hope in a Complex World*, Lene Rachel Andersen traces the evolution of culture and human knowledge and self-consciousness across five phases of sensibilities (i.e., [#1] indigenous, [#2] pre-modern, [#3] modern, [#4] postmodern, and [#5] metamodern). Her conception of these “cultural codes” and how they have evolved align closely with how the [Henriques] ToK [Theory of Knowledge] System conceptualizes the evolution of Culture, defined as large-scale systems of justification [interpretation, rationalization]. This blog combines the two perspectives [Henriques + Andersen] to describe the evolution of human cultural sensibilities in five stages.

As you read the following, it will be obvious — if you have been paying attention to what is said in previous Parts and chapters and sections of this *Cosmogony* book — how the Henriques–Anderson schema is yet another instantiation of the Natural Sequence schema, but, for your convenience, I show my suggested correlation in [brackets] in the quotations that follow. (If you are more learned in this realm of knowledge than I am, you might have a different correlation.) The corresponding Septenarian Attributes of the Natural Sequence schema are given first, and then the Natural Sequence version of Culture is given second, and then the Natural Sequence version of Worldview is given third, and then the Natural Sequence version of Center is given last.

Before we review the stages of this theory, a couple of ideas should be kept in mind:

- The stages of the evolution of “cultural sensibilities” in the theory discussed in this chapter are not exactly the same as the stages of “socio-cultural evolution” discussed in [Chapter IV-X](#).
- The numbering of these “cultural sensibilities” shown in the quoted text do not match the numbering of the Natural Sequence schema that I espouse. I suggest that this is explained by my perception that different sources have a different view of where to place the Transitions (per the Transition Principle) between the stages: what some sources regard as primary might be regarded as secondary or nonexistent by other sources. In the Natural Sequence schema, per the Fractality Principle, there is a primary transition between stages and a secondary transition between the Ordinal triad of sub-stages and the Cardinal triad of sub-stages. The “cultural sensibilities” theory has not noted this distinction, but I will note it below.

The quotation continues:

Stage I: Premodern, Indigenous Social-Tribal Sensibility (50,000+ years ago)

To my way of thinking, Andersen’s Stage One is Ordinal Action, Hunter-Gatherer Culture, Primitivism Worldview, and Motion Center.

By 50,000 years ago, a remarkable transition in human culture and consciousness had taken place. Following [Merlin] Donald [see [Chapter IV-x](#)], the archeological evidence suggests that a transformation occurred such that human communication had gone from a fractured “mimetic [gesture] system” into an open language system with syntactical rules that enabled the emergence of abstract reasoning, symbolic thought, and the ability to pose questions. The central insight of JUST [Henriques’s Justification Theory] is that the capacity to ask questions created the adaptive problem of social justification and the emergence of feedback loops. We can call such systems the first systems of “social epistemology”. This is what Donald refers to as “mythic” knowledge, or the intersubjective linguistically mediated socio-cultural construction of knowledge.

In other words, human brain function had evolved to the capacity where humans began to explain themselves to each other in words, not just gestures, and this interaction provoked a growth spurt that launched humanity into ever-more knowledge, and bumped them up to the next level of complexity.

The quotation continues:

When exactly the transition into this mode of being and perceiving happened is unclear. However, many things are shared across human indigenous cultures that separate us from the other great apes such as language, music, animism, shamanism, art, and complex tools. During this period, all culture was oral and thus stored knowledge in other symbols, such as rituals, body ornaments, song, and dance. In addition, indigenous cultures are mainly hunter-gatherers, do not amass more artifacts and tools than can be carried around, and do not differ much in material wealth. The day-to-day groups are no bigger than a few dozen people, power differences are small, and everybody can talk to everybody, though wise elders and shamans / medicine (wo)men have higher status than

others. Hunter-gatherers tend to nature as animated by spirits, with humans thought of as an integral part of nature.

That stage of Andersen's cultural sensibilities does not differ from the Hunter-Gatherer Culture discussed in **Chapter IV-x**, "Socio-cultural Evolution". However, the next stage spans from the advent of the Agricultural-Pastoral Culture to the middle of the Civilization Culture discussed in **Chapter IV-x**, "Socio-cultural Evolution".

[Stage 1.5?] An Emerging Transition: The Seeds of Formal Thought (10,000+ years ago)

To my way of thinking, Andersen's Stage 1.5 is Ordinal Inspiration, Agricultural-Pastoral Culture, Traditionalism Worldview, Emotion Center, plus the Ordinal triad of Ordinal Expression, Civilization Culture, Materialism Worldview, and the Intellect Center.

Approximately 10 to 12,000 years ago a massive shift in human behavior emerged. Humans in the Middle-East (and gradually elsewhere) transitioned from a hunter-gatherer and sporadic horticultural culture to an agrarian way of life. This coincided with a major climate change 11,000 years ago, which quite abruptly ended the last ice age as Earth entered the Holocene [the current geologic epoch].

In *God: A Human History*, [Reza] Aslan argues that it may well have been humanity's search for meaning and the idea of God [or gods] that drove the construction of temples and thereby the emergence of cities. One such example is the site at Göbekli Tepe. Such temples required the alignment of investment practices, technology, and meaning making. Whatever the ultimate cause of agriculture, the net result was that people formed permanent settlements and created new social arrangements. Although the new lifestyle presented new challenges, it set the stage for human organization on a much larger scale than ever before.

Superstition is the spirituality of Stage One, organized religion is the spirituality of Stage Two (and materialism is the spirituality of Stage Three, see further on).

Humans began accumulating resources and wealth, while engaging in systematic trade practices. The need to record such practices set the stage for the earliest forms of writing. However, once writing emerged, it added to the technological mix, and spurred another massive transition. Writing is external memory. Its importance can be seen when we consider that the term "history" really references human written history.

The transitions from one lifestyle to another (#1 Hunter-Gatherer > #2 Agricultural-Pastoral > #3 Civilization) are gradual and they progress at different times in different locations, but the stages of the progression are consistent no matter the place or the schedule: in Natural Sequence terms, they have the characteristics of 1) Ordinal Action > 2) Ordinal Inspiration > 3) Ordinal Expression in that order.

Andersen says that Stage Two begins in what I regard as the middle of Stage Three in the Culture septenary of the Natural Sequence schema. One way to understand this discrepancy is that Stage One was said to start when the human brain was fully able to communicate in verbal language, which is itself a Stage Three (Ordinal Expression) phenomenon in the Natural Sequence schema. Culture Stage #3, Civilization, really took off when writing was invented.

Stage II: The Axial Age and the Emergence of Pre-Modern, Formal Sensibilities (2500+)

To my way of thinking, Andersen's Stage Two, the Axial Age, is the transition (Neutral Assimilation) phase between the Ordinal triad and the Cardinal triad of sub-stages of Ordinal Expression, Civilization Culture, Materialism Worldview, and Intellect Center.

Andersen's schema does not account for the ambiguous but significant transition from the Agricultural-Pastoral lifestyle to the Civilization lifestyle that happened in the Middle East at about 3000 BCE. My guess is that in her schema there is no major conceptual revolution between 50,000 years ago to 2500 years ago, although there was a Cultural revolutions after #1 Hunter-Gatherer.

The philosopher Karl Jaspers coined the term Axial Age to describe the climate belt from Italy across Asia to China from about the 8th to the 3rd century BCE. He argued that it was a "pivotal age" because new ways of thinking emerged in Persia, India, China and the Greco-Roman world in religion and philosophy. In the language of the ToK, there emerged "formal" systems of justification [interpretation, rationalization], which likely related to the size of the civilizations and the development of writing and elite literacy. Mathematics also emerged which played a crucial role in the transition from a purely social epistemology to a more formal-analytic epistemology. The teachings of Socrates, Plato, and Aristotle played a central role in the development of Western philosophy. Via analytic questioning, Socrates plants the idea that social epistemology is (potentially) analytically vacuous. Plato and Aristotle take up the mantle to develop formal-analytical philosophies that attempt to withstand Socratic-like philosophical criticism. In the Western lineage, this is the beginning of formal, refined academic knowledge as

separate from common social epistemology. From 400 AD onward, Europe saw the blend of this way of thinking with the Judeo-Christian tradition.

There was what might be called a “philosophical or conceptual revolution” in the Axial Age — the few hundred years around about 500 BCE in Europe and Asia — but there was no technological revolution, or socio-cultural revolution, or lifestyle revolution at that time. Some chapters in this Part of this Cosmogony book indicate that revolutions in different realms of human experience happen at different times in prehistory and history and in different regions of the planet. Andersen’s schema is all about thinking, not all about lifestyle (“Culture” in the Natural Sequence schema).

Andersen’s Stage Three is still in the Civilization Culture of the Natural Sequence schema, although it is obvious to historians that there was a major conceptual revolution at the time of the European Renaissance:

Stage III: The Scientific Revolution and the Modern Enlightenment Sensibility (500+)

To my way of thinking, Andersen’s Stage Three is the Cardinal Expression level of the Ordinal Expression stage of Cultural evolution.

By the 16th century, European intellectuals had divided the natural and supernatural domains and determined the former could be investigated systematically. This set the stage for the invention of the empirical method. Although Aristotle and others encouraged systematic investigation, modern science nevertheless gave rise to a new form of justification [intersubjective feedback]. This was not least due to the technological development during the Renaissance that allowed new kinds of measurements.

The Enlightenment was marked by the idea that reason and liberty could produce ultimate truth and generate human progress. Via the work of scientists like Newton, Maxwell, Darwin and Einstein, the power of reason shined. In addition, powerful philosophical works from Hume, Kant and Hegel saw a golden age of synthetic visions and progress, while liberal democracy spread throughout the West.

[Stage 3.5?] 100+ years ago: The Foundations of Modernism Start to Crack

To my way of thinking, this stage is the Cardinal Inspiration level of Ordinal Expression stage of Cultural evolution.

Despite its remarkable success and the explosion of human technological development in the industrial age, the modernist sensibility did not deliver a fully adequate picture of humanity and our place in the Cosmos. Nietzsche’s critique stood as a powerful force that demonstrated potential cracks in the modernist tradition. By the beginning of the 20th Century, a clear break is forming between the pure analytic philosophy traditions and the synthetic traditions. The tragic horrors of WWII and other authoritarian regimes, arguably predicted by Nietzsche, offered a powerful challenge to the idea that humanity was on a linear path to progress ensured by a pristine rational vision. As the horror of brutal oppression via racist categories becomes seared into human consciousness, movements for civil rights are sparked across the globe.

Stage IV: A Postmodern Sensibility (50+ years ago)

To my way of thinking, Andersen’s Stage Four is the Cardinal Action level of the Ordinal Expression Stage of Cultural Evolution.

Massive social movements emerge in the 1960s as people demand changes in the existing power structures. Civil rights, feminism, and protests of the Vietnam War rock North American and European sensibilities. A transformation also occurs in the academic focus of philosophers, one that begins to challenge the capacity for a singular rational vision. The later Wittgenstein embraces the fact that language systems operate as tools and thus the construction of knowledge of everyday life is inevitably contextual. He notes that we are “language game” players. The sociologists Berger and Luckmann chart the social construction of reality, while Irving Goffman illustrates the power of micro-sociology.

The argument that there is an inevitable fusion of truth with social power is consolidated by postmodern/post-structuralists like Derrida, Feyerabend, and Foucault. In 1979, Lyotard captures the essence of the postmodern sensibility as being the absence of the grand narrative. The postmodern sensibility offers a critical, skeptical critique of modernist knowledge and concludes that it is always contextual. Although key elements of this critique carry validity, if taken to its logical extreme, it results in unworkable conclusions regarding the impossibility of authentic knowledge. The fracturing of knowledge plays a central role in the modern meaning crisis.

Stage IV of Andersen's schema is the last Sub-stage of the Stage 3 Civilization Culture of the Natural Sequence schema. What I am seeing in the intellectual/philosophical zeitgeist and elsewhere is that during the 21st Century there will be a phase of radical transformation, qualitatively different from all that has gone before in human prehistory and history. Stage V of Andersen's schema is the first Sub-stage of Stage 4 Information Culture in the Natural Sequence schema.

Stage V?: Seeds of a Metamodern, Meta-Cultural Consciousness (10+ Years ago)

To my way of thinking, Andersen's Stage Five is the beginning of Neutral Assimilation, Information Culture, Collectivism Worldview, and Impulse Center of Cultural Evolution.

"Metamodernity", according to its own name, is said to point to a cultural phenomenon that is qualitatively, not just quantitatively, 'above and beyond' the previous stages of modernity and postmodernity. This is numbered Stage 4 in the Natural Sequence schema.

Since 2010, a "metamodern" movement has gained steam. It seeks to transcend the fragmented pluralism and explore an integrated pluralism that allows for positive, constructive work on a post postmodern grand meta-narrative. This emerging movement consists of blogs, conferences, festivals, and political manifestos. With its unifying framework and emphasis on a consilient meta-language between objective science, subjective phenomenology, and a universalist, intersubjective moral vision toward the ultimate good, the ToK System framework is clearly a metamodern theory for the 21st Century.

Lene Rachel Andersen's *Metamodernity* offers a clear articulation of the metamodern sensibility. She characterizes metamodernity as an alternative to both modernity and postmodernism, a cultural code that presents itself as an opportunity if we work deliberately towards it. Such a sensibility includes the indigenous, premodern, modern, and postmodern codes that preceded it and thus it provides a kind of "meta-cultural consciousness" that allows for a moral tapestry that weaves together intimacy, spirituality, practical religion, science and self-exploration at the same time. In short, it is about developing a new system of understanding that will function as integrated pluralistic justification system that scales from the individual to the globe.

[><https://www.psychologytoday.com/us/blog/theory-knowledge/201910/5-phases-in-the-evolution-human-cultural-sensibilities>< — retrieved 02 November 2023] Also:

[>https://wiki.p2pfoundation.net/Lene_Rachel_Andersen_on_the_Five_Phases_in_the_Evolution_of_Human_Cultural_Sensibilities<]

Tabulation of Cultural Codes

The first I heard of Lene Rachel Andersen was from a YouTube video by Brendan Graham Dempsey, namely ><https://www.youtube.com/watch?v=eKXNtu7oGtg><. One of the slides in his show was a tabulation of her work on five levels of "increasing social complexity". The following table is my redrawing of Dempsey's slide:

Table IV-Xa: LENE RACHEL ANDERSEN'S "CULTURAL CODES"				
Increasing societal complexity → → → →				
INDIGENOUS	TRADITIONAL PRE-MODERN	MODERN	POST-MODERN	META-MODERN
Stage I: ~50,000+	Stage II: ~500 BC+	Stage III: ~1500 AD+	Stage IV: ~1960+	Stage V: ~2010+
Egalitarian	Patriarchy	Egalitarian	Ad-hoc	Multi-layered
Order vs chaos	Hierarchical	Democratic	Chaotic	Network
Magical	Religious	Secular	Feeling	Relational
Pragmatic	Dogmatic	Doubting	Irony	Seeking
Belief	Faith	Science	Information	Knowledge
Myth	Truth	Facts	Identity & Feelings	Combining
Tribe / clan	Town / city	Nation	No boundaries	Global
Given	Unified	Unifying	Deconstruction	Creating
Circular understanding	Linear understanding	Newtonian cause-and-effect understanding	Relativizing understanding	Network understanding
Spirits are everywhere and uphold order in the world	God(s) interfere(s) with the world and human life	Physical world only	Individual reality and McBuddhism	Openness towards different kinds of reality, depending on context

My comments on this table are as follows:

Summary and Conclusions

[[Research "historical transitions" and "technological transitions" and "socio-technical change".]]

In the Natural Sequence schema, every Stage in a developmental septenary is made up of seven Sub-stages. Anderson's schema does not align as well with that notion as some other historical trends reviewed in this Part. , the three Cardinal Stages of the Culture septenary of the Natural Sequence schema. The substages of the pre-modern cultures are not as easy to distinguish as the Cardinal substages of the modern culture





Chapter IV-x

EVOLUTION OF HUMAN COMMUNICATION

While researching and writing Chapter IV-x on “Hominid Evolution” and Chapter IV-x on “The Triune Brain” and Chapter IV-x on “Socio-Cultural Evolution” as documentary evidence of the Natural Sequence schema in nature, I stumbled upon some information about the evolution of language. Unsurprisingly — to me at least — it turns out that this development also can be understood as following the Natural Sequence schema, but only in the Ordinal triad thus far. The same as with those other instantiations of the Natural Sequence schema that are documented in those other chapters, it might be easiest to relate the development of human communication to the Natural Sequence schema as following the order of the Ordinal Centers, namely Motion > Emotion > Intellect. This works well for the instantiations reviewed in those previous chapters, and it works well here in this chapter.

[[I need to intersperse my comments to point out the Natural Sequence in the development of human communication. Basically, hominid communication evolved from mere gestures (from the Kinetic Center in pre-Neanderthal hominids) to vocalizations that convey emotions (Emotional Center in Neanderthals), to words and symbols and abstract concepts (Intellectual Center in Cro-Magnons).]]

Stage One Communication: Gesture

Because we modern humans were not there to watch and record what happened during hundreds of thousands of years of human evolution, the evidence is a bit sketchy along the way, but take a look at the following and see if it does not make sense to you.

In the *Scientific American* Magazine issue of July 2008, in the article “The Neuroscience of Dance”, written by Steven Brown and Lawrence M. Parsons, it says on page 83 that:

Unlike music, however, dance has a strong capacity for representation and imitation, which suggests that dance may have further served as an early form of language. Indeed, dance is the quintessential gesture language. It is interesting to note that during all the movement tasks in our study, we saw activation in a region of the right hemisphere corresponding to what is known as Broca’s area in the left hemisphere. Broca’s area is a part of the frontal lobe classically associated with speech production. In the past decade research has revealed that Broca’s area also contains a representation of the hands.

This finding bolsters the so-called gestural theory of language evolution, whose proponents argue that language evolved initially as a gesture system before becoming vocal. Our study is among the first to show that leg movement activates the right-hemisphere homologue to Broca’s area, which offers more support for the idea that dance began as a form of representational communication.

So, here we have the rudiments of language in what the Process/Aspect System matrix refers to as the Motion Center. So where does it go from there? If the Natural Sequence is valid, one would suppose that the development of language goes through the Emotion Center before moving on to the Intellect Center, where it mostly is in fully modern humans. But how can this be? I was actually quite surprised when I stumbled upon a book about “singing Neanderthals” that bridges the gap between the Motion Center (gestural) phase of language and the Intellectual Center (verbal) phase of human communication.

Here is what I stumbled on:

Stage Two Communication: Song

The Singing Neanderthals: The Origins of Music, Language, Mind and Body (Hardcover)

by [Steven J. Mithen](#) (Author)

[From Scientific American](#)

Early hominids largely looked and acted like apes. With one key difference: they stood and walked upright. This change in posture and mobility had profound implications for our evolution and “may have initiated the greatest musical revolution in human history.” That is the ironic conclusion of Reading University archaeologist Steven Mithen, who continues his search for the essence of human behavior in his latest book, *The Singing Neanderthals*. Particularly within the past two million years, early humans refined the ability to walk, run and jump. With big brains and bottoms, spring-loaded legs, and sophisticated sensorimotor control, they could also dance, Mithen argues, if not sing. With a fascinating blend of neurology, anatomy, archaeology, developmental psychology and musicology, Mithen seeks the source of our propensity for making music, a universal human feature that has been strangely neglected compared with the origin of language. Darwin, naturally, touched on the topic, positing that unable to woo with words, our ancestors “endeavored to charm each other with musical notes and rhythm.” Essential to both bipedal locomotion and music, rhythm plays a pivotal role as well in language. Music and language share other intriguing attributes. Both can move or manipulate us. Both can be spoken, written or gestured. Both possess hierarchical structure. And both seem to activate multiple regions of our brains. Mithen takes on linguist Steven Pinker’s assertion that music is just an entertaining invention, not a crucial biological adaptation like language. He carefully constructs and deliberately lays out his argument that music’s evolution holds the key to language. Yes, language *[[intellectual center function]]* ultimately supplanted music’s role in *emotional expression* *[[emotional center function]]* and became our means of conveying ideas and information. Music, however, still stirs our most basic emotions. Until the relatively recent advent of syntactic language in modern humans, Mithen maintains, it was music that helped hominids find a mate, soothe a child, cheer a companion or provide a group’s social glue. Like language, much of music does not fossilize. We have elegant bird-bone flutes as old as 36,000 years from sites in Germany and France — unequivocal musical instruments. Beyond that, one is hard-pressed to display tangible evidence of music’s role in prehuman society. Mithen must speculate that Neanderthals, for instance, strummed stalactites, drummed on mammoth skulls or otherwise made music without leaving a trace. But step inside a cave used by prehistoric people, and it is easy to appreciate its acoustic potential. By drawing data from a diverse range of disciplines, Mithen makes a persuasive case that our ancestors got rhythm and brings to prehistory a sense of sound.

Blake Edgar is a science editor and writer. He is co-author of From Lucy to Language, forthcoming in a revised edition from Simon & Schuster, and of The Dawn of Human Culture (John Wiley & Sons, 2002). — This text refers to an out of print or unavailable edition of this title.

Another review of “The Singing Neanderthals”, found on Amazon.com, this one by Stephen Haines:

Fear not, dear reader. I'm not making the sounds of indecision. Nor have I forgotten the words to my local national anthem. Instead, those sets of letters are acronyms. Steven Mithen uses them to typify the foundations of our ability to communicate in our distant past. The letters stand for “Holistic”, “multi-modal”, “manipulative”, and “musical”. With the addition of “mimetic”, he uses the collective phrase to explain why “music” in this broadly defined sense, preceded the development of language and grammar in our species. He also explains the “how” of this phenomenon, which is what gives this book its real value.

Mithen’s previous works are a foundation for this one, although he openly admits that the phenomenon of music eluded him in them. He makes up for that oversight with a detailed examination of fossil and genetic information to support his thesis. As humans fluent in the use of speech, with its lexicons and syntax, we’ve become blinded to our true roots. We rush children through infancy, overlooking the process we use in communicating with those who lack words and their meanings. Mithen says this period is critical — both because its universality among cultures should tell us something about our past, and because a better understanding of the communication process can lead to smarter and healthier children. Who, among the mothers we know, fails to “sing” to their newborn?

In Mithen’s view, that childhood communication method repeats what our African ancestors did with each other prior to the development of language. Words, in our time, are representative. They “mean” something — an object, an event, a lesson. In those early days, emotions, especially the basic ones of fear, flight, fight or feed, were the only significant topics. Music, he reminds us, is the language of emotion, whether it be lullabies to children or a Mozart aria. Newborns are particularly receptive to music or rhythmic sounds and gestures,

especially when they're synchronised [hence "multi-modal"]. Newborns can't understand the words mothers use, but they comprehend the "message" [the "holistic" part].

The author explains how studies in brain activity associated with speech and music have given us great insight to the mind's processing of information. Where and when did these talents emerge? Mithen builds his thesis with careful detail, noting how our gaining a bipedal stature did more than distinguish us from the other apes. A range of body changes modified our method of movement, hand manipulation and breathing. It also impinged on our voices. The Early Humans, as Mithen broadly characterizes the Homo genus, developed a range of sounds, with various pitches and volumes. The best way to use these new-found talents was in a musical manner and for a variety of circumstances.

Although nearly half the book must be consumed to reach the title's topic, the background is necessary for a full understanding. Homo neanderthalis, with its larger brain and stockier body than Homo sapiens, struggled for survival in Ice Age Europe. Even in the face of such stress, Neanderthal society remained doggedly static. The kinds of innovation speech might have spurred aren't found. Neanderthal excavation sites easily outnumber those of early Homo sapiens' digs in Africa, our original home. Yet in all those digs, nothing is found that would suggest the need for language. Jewelry only appears very late, probably introduced by Homo sapiens invading from Africa. And that invader brought a new talent in its armory — language and symbolic representation. Which likely led, in Mithen's view, to our being the sole remaining Homo species.

Mithen isn't offering us wild speculation plucked from offhand supposition. Although he notes the interest in music as an evolutionary prompter is only beginning, his presentation rests on solid evidence. Support comes from Alison Wray — who suggested the term "holistic" and from Simon Kirby of Edinburgh University. Kirby applies computer modeling to show how recursive feedback reinforces word development in proto-languages. Indeed, it's noteworthy that Mithen's Notes section comprises a quarter of the book. There's one glaring error — genes aren't made of amino acids, they're comprised of codons. Editors and proofreaders are still catching up with the sciences, so we may forgive Mithen this small lapse. We'd better, since this ground-breaking book will lead to much discussion and likely no little acrimony in exchanges. That's good, because he has overturned a number of dogmas needing shedding. [Stephen A. Haines — Ottawa, Canada]

Another review of "The Singing Neanderthals" on amazon.com, this one by Craig Matteson

You can tell the ambitious scope of this book by its subtitle: "the origins of music, language, mind, and body." Wow! Is that all? Actually, the task the author sets out to do isn't as vast as one might at first suppose because they are seen as related in the way early hominids arose and then evolved further. Steven Mithen is less concerned with the origin of music than the way in which the homo sapiens mind differed from its ancestors and the then contemporary hominids.

.....

Mithen's thrust in this book (if I understand it correctly) is that as early hominids developed into upright narrow-hipped creatures certain biological adaptations accompanied these developments that allowed homo ergaster and homo neanderthalensis and homo heidelbergensis and all the later hominids to make more flexible sounds than other related creatures. We can see the extension of those differences as we look at what the apes and monkeys do with "song" versus humans. (It is essential when reading this book when reading the words music and song to maintain the rudimentary nature of what he is describing versus the pieces by Bach, Brubeck, and Miles Davis that he refers to occasionally.) The author sees the sources of rhythm and music within the nature of our bodies and the way it moves and the sounds we are able to make because of our high larynx and flexible throat and mouth. I think this is exactly right.

But isn't this getting a bit ahead of the story? Surely language came before singing and dance? The author says no and his explanation is the main story of this book and is quite fascinating. There are two broad divisions about the rise of language. The first is the one most of us would have intuitively expected, that language started with one or two semi-grunted words and slowly evolved into Shakespeare. This is the compositional school. The other, that I had known nothing of until I read this book and am now quite persuaded by (see how being ignorant in the face of a great story teller can draw one in?) is known as the holistic development of speech.

In the holistic view, early hominids made certain calls that were not symbolic and contained whole meanings in the single utterance. One call might mean "give that to her" and another might mean "beware of the bear over there". But they were not words in our sense and could not be used to develop new phrases or sentences. They could not compose as we do. These calls rose out of the way early hominids had to care for their young and can even be seen in remnant in our Infant Directed Speech and our penchant for phrases that we say without

thinking or meaning, but preserve a function (such as “Howareyoudoing” “Iamfine”). He calls this early form of verbalization with the surprising acronym “HmMMMM”, which stands for Holistic, manipulative, multi-modal, musical, and mimetic.

The Neanderthals referred to in the title lived tough lives. The author believes that all the evidence available about them shows they lived short (about 35 years) hard lives. He thinks they had a “domain intelligence”. That is, their brains were capable of doing certain things like making fire or making and using tools, but did not have the interconnections and mental fluidity that developed in homo sapiens. They did not paint on walls, they did not make huts, and the author believes they could not speak in words. They used holistic song and dance to communicate, comfort their young, and develop interpersonal connectedness that strengthened their tribes.

Neanderthals were always on the precarious edge of survival and when homo sapiens showed up they disappeared. Mithen assures us that our ancestors didn't slaughter them to extinction, but offers no evidence for this. To me it sounds like a kind of political correctness borne of modern sensibilities against wanton killing. But I don't believe there is evidence one way or the other.

This book covers a great deal of ground that I can't even summarize here. It is worth reading for its valuable content and is also enjoyable if you like anthropology. As a musician, I did find his explanations of music a bit weak, but they made more sense as he developed his thesis. However, if you are looking for the explanation of how Bach, Haydn, Mozart, and Beethoven came to be, you won't find it here. This is much more basic and about how the raw musical potential came to be.

I am reminded of the cartoon of a detailed equation on a blackboard that is labeled in various steps. Two scientists are standing in front of step two which says “and then a great miracle occurs” and one says to the other “I think you need to flesh out this step a bit more”. It isn't that Mithen has left anything out for his story, but that for music to become something more than communal folk singing to the high art of Western Culture does require something more than the dismissal of such music as “elite” implying that it is somehow a prejudice not worthy of serious examination.

But that is beside the point. If you are interested in the development of early hominids, you will likely learn things from this book. If you want to learn about the holistic view of language development, this is a fine explanation. If you want to know more about how and when Neanderthals lived and how Homo Sapiens arose and filled the earth, this is a fine explanation. If you want to know about the differences in our musical potential versus other creatures in nature and what adaptations had to take place for that to happen, this is fascinating stuff.

So, recommended and enjoy!

I have seen this guy on a television science show. Evidently he is a well-respected anthropologist, from England.

<http://www.hup.harvard.edu/catalog/MITSIN.html>

The Singing Neanderthals, The Origins of Music, Language, Mind, and Body, by Steven Mithen (Professor of Early Prehistory and Head of the School of Human and Environmental Sciences at the University of Reading)

The propensity to make music is the most mysterious, wonderful, and neglected feature of humankind: this is where Steven Mithen began, drawing together strands from archaeology, anthropology, psychology, neuroscience — and, of course, musicology — to explain why we are so compelled to make and hear music. But music could not be explained without addressing language, and could not be accounted for without understanding the evolution of the human body and mind. Thus Mithen arrived at the wildly ambitious project that unfolds in this book: an exploration of music as a fundamental aspect of the human condition, encoded into the human genome during the evolutionary history of our species.

Music is the language of emotion, common wisdom tells us. In *The Singing Neanderthals*, Mithen introduces us to the science that might support such popular notions. With equal parts scientific rigor and charm, he marshals current evidence about social organization, tool and weapon technologies, hunting and scavenging strategies, habits and brain capacity of all our hominid ancestors, from *australopithecines* to *Homo erectus*, *Homo heidelbergensis* and Neanderthals to *Homo sapiens* — and comes up with a scenario for a shared musical and linguistic heritage. Along the way he weaves a tapestry of cognitive and expressive worlds — alive with vocalized sound, communal mimicry, sexual display, and rhythmic movement — of various species.

There are numerous other reviews of this book that one can find by googling “singing Neanderthals”. Here are some of the best:

<http://www.amazon.com/Singing-Neanderthals-Origins-Music-Language/dp/0674021924>

<http://www.epjournal.net/filestore/ep03375380.pdf>

http://www.bookslut.com/features/2005_10_006832.php

In all of the above reviews you will read that the singing (Emotion Center) phase in the development of language came between the earlier gestural (Motion Center) phase and the later verbal (Intellect Center) phase. Thus we have another instantiation of the Natural Sequence schema.

Stage Three Communication: Words

General Comments on the Evolution of Language

1. Each step is built on the previous step(s). First there is communication via physical gestures that convey meaning about what to do, then there is communication via tonal vocalizations driven by emotions that conveying a valence about how to feel, then there is verbal communication with words, sentences, syntax, regarding what to think or believe.
- 2.





Chapter IV-x

② RATIONAL EMOTIVE BEHAVIOR THERAPY

Connecting this chapter to the previous chapters is as simple as noting that this psychotherapy proposes that the “human” brain, the cerebral cortex (Intellect Center) should be the arbiter over the “mammalian” brain (Emotion Center) and over the “reptilian” brain (Motion Center) if a person is to be happy and healthy, psychologically speaking.

The REBT Philosophy of Psychotherapy

Here is the overview from Wikipedia:

Rational emotive behavior therapy (REBT), previously called rational therapy and rational emotive therapy, is an active-directive, philosophically and empirically based psychotherapy, the aim of which is to resolve emotional and behavioral problems and disturbances and to help people to lead happier and more fulfilling lives. REBT posits that people have erroneous beliefs about situations they are involved in, and that these beliefs cause disturbance, but can be disputed with and changed.

Rational emotive behavior therapy (REBT) was created and developed by the American psychotherapist and psychologist Albert Ellis, who was inspired by many of the teachings of Asian, Greek, Roman, and modern philosophers. REBT is the first form of cognitive behavioral therapy (CBT) and was first expounded by Ellis in the mid-1950s; development continued until his death in 2007. Ellis became synonymous with the highly influential therapy. Psychology Today [magazine] noted, “No individual — not even Freud himself — has had a greater impact on modern psychotherapy.”

More is said about the ancient and modern understanding that a person’s thoughts should govern their emotions, which in turn should govern their behavior. In other words, the proper process for dealing with your internal states is think > feel > act; do not let negative behavioral habits rule you, and do not let negative emotions rule you.

REBT is both a psychotherapeutic system of theory and practices and a school of thought established by Ellis. He first presented his ideas at a conference of the American Psychological Association in 1956, then published a seminal article in 1957 entitled “Rational psychotherapy and individual psychology”, in which he set the foundation for what he was calling rational therapy (RT) and carefully responded to questions from Rudolf Dreikurs and others about the similarities and differences with Alfred Adler’s Individual psychology. This was around a decade before psychiatrist Aaron Beck first set forth his “cognitive therapy”, after Ellis had contacted him in the mid 1960s. Ellis’ own approach was renamed Rational Emotive Therapy in 1959, then the current term in 1992.

Precursors of certain fundamental aspects of rational emotive behavior therapy have been identified in ancient philosophical traditions, particularly to Stoicists Marcus Aurelius, Epictetus, Zeno of Citium, Chrysippus, Panaetius of Rhodes, Cicero, and Seneca, and early Asian philosophers Confucius and Gautama Buddha. In his first major book on rational therapy, Ellis wrote that the central principle of his approach, that people are rarely emotionally affected by external events but rather by their thinking about such events, “was originally discovered and stated by the ancient Stoic philosophers”. Ellis illustrates this with a quote from the *Enchiridion* of Epictetus: “Men are disturbed not by things, but by the views which they take of them.” Ellis noted that Shakespeare expressed a similar thought in Hamlet: “There’s nothing good or bad but thinking makes it so.” Ellis also acknowledges early 20th century therapists, particularly Paul Charles Dubois, though he only read his work several years after developing his therapy.

The hierarchical pattern of rationality > emotionality > behaviorality is universally recognized by the interrelated and overlapping domains of spirituality, philosophy, and psychology. Those domains are reviewed in other Parts and in other chapters in this *Cosmogony* book. The thesis of this *Cosmogony* book is that the Natural Sequence schema is the system in which all these subsystems live and move and have their being.

Regarding cognitive-affective-behavioral processes in mental functioning and dysfunctioning, originator Albert Ellis explains:

REBT assumes that human thinking, emotion, and action are not really separate or disparate processes, but that they all significantly overlap and are rarely experienced in a pure state. Much of what we call emotion is nothing more nor less than a certain kind — a biased, prejudiced, or strongly evaluative kind — of thought. But emotions and behaviors significantly influence and affect thinking, just as thinking influences emotions and behaviors. Evaluating is a fundamental characteristic of human organisms and seems to work in a kind of closed circuit with a feedback mechanism: First, perception biases response, and then response tends to bias subsequent perception. Also, prior perceptions appear to bias subsequent perceptions, and prior responses appear to bias subsequent responses. What we call feelings almost always have a pronounced evaluating or appraisal element.”

REBT then generally proposes that many of these self-defeating cognitive, emotive, and behavioral tendencies are both innately biological [nature] and indoctrinated [nurture] early in and during life, and further grow stronger as a person continually revisits, clings and acts on them. Ellis alludes to similarities between REBT and the general semantics when explaining the role of irrational beliefs in self-defeating tendencies, citing Alfred Korzybski as a significant modern influence on this thinking.

REBT differs from other clinical approaches like psychoanalysis in that it places little emphasis on exploring the past, but instead focuses on changing the current evaluations and philosophical thinking, emoting, and behaving in relation to themselves, others, and the conditions under which people live.

One of the main pillars of REBT is that irrational and dysfunctional ways and patterns of thinking, feeling, and behaving are contributing to human disturbance and emotional and behavioral self-defeatism and social defeatism. REBT generally teaches that when people turn flexible preferences, desires and wishes into grandiose, absolutistic and fatalistic dictates, this tends to contribute to disturbance and upset. These dysfunctional patterns are examples of cognitive distortions.

The Wikipedia article continues with a discussion of some aspects of how the philosophy of REBT is applied in clinical psychotherapeutic practice. I suggest that it is successful because its understanding of how the psyche is structured is probably accurate, considering that that tripartite structure is so universally recognized.

How REBT Works

A section in the Wikipedia article has a brief discussion of the philosophy of how REBT works to help a person to re-frame and then heal their mental, emotional, and behavioral dysfunctionality:

In REBT, clients usually learn and begin to apply this premise by learning the A-B-C-D-E-F model of psychological disturbance and change. The following letters represent the following meanings in this model:

- A Adversity
- B Beliefs about adversity
- C Emotional Consequences
- D Disputations to challenge beliefs about adversity
- E Effective new rational beliefs
- F New Feelings

The A-B-C model states that it is not an A, adversity (or activating event) that cause disturbed and dysfunctional emotional and behavioral Cs, consequences, but also what people B, irrationally believe about the A, adversity. A, adversity can be an external situation, or a thought, a feeling or other kind of internal event, and it can refer to an event in the past, present, or future.

The Bs, irrational beliefs that are most important in the A-B-C model are the explicit and implicit philosophical meanings and assumptions about events, personal desires, and preferences. The Bs, beliefs that are most significant are highly evaluative and consist of interrelated and integrated cognitive, emotional and behavioral aspects and dimensions. According to REBT, if a person’s evaluative B, belief about the A, activating event is rigid, absolutistic, fictional and dysfunctional, the C, the emotional and behavioral consequence, is likely to be self-

defeating and destructive. Alternatively, if a person's belief is preferential, flexible, and constructive, the C, the emotional and behavioral consequence is likely to be self-helping and constructive.

Through REBT, by understanding the role of their mediating, evaluative and philosophically based illogical, unrealistic and self-defeating meanings, interpretations and assumptions in disturbance, individuals can learn to identify them, then go to D, disputing and questioning the evidence for them. At E, effective new philosophy, they can recognize and reinforce the notion no evidence exists for any psychopathological must, ought, or should and distinguish them from healthy constructs, and subscribe to more constructive and self-helping philosophies. This new reasonable perspective leads to F, new feelings and behaviors appropriate to the A they are addressing in the exercise. [https://en.wikipedia.org/wiki/Rational_emotive_behavior_therapy — retrieved 12 September 2022]

My suggestion is that the REBT procedure can be understood in terms of the Natural Sequence schema, in terms of the Septenarian Attributes, and in terms of the Centers. In the light of the cosmic Natural Sequence framework, the psychological REBT framework seems a bit muddled to me, so I propose to re-frame the REBT, as follows:

1. Ordinal Action and Motion Center: Something happens in the external world that is perceived to be “negative”: the event is unexpected, unwelcomed, unpleasant, unacceptable, and so on.
2. Ordinal Inspiration and Emotion Center: The person has a negative emotional reaction to the event: they are angry and/or frightened, and/or disgusted, and so on.
3. Ordinal Expression and Intellect Center: The person also has negative thoughts about the negative event and the negative emotions: they are hateful and/or judgmental and/or repulsed, and so on.
4. Neutral Assimilation and Impulse Center: The psychotherapy begins here. The person must first rise above the negativity by getting into a so-called “meta-cognitive” frame of mind. This is where they step outside the negativity, distance themselves from the negativity, and then step into higher states of consciousness.
5. Cardinal Expression and Concept Center: The next step in the psychotherapy is to philosophize about the negativity, having the intent to transmute it into a positivity. This requires a change in one's belief system about the nature of the human condition. The ultimate experience here is to unconditionally accept all experiences.
6. Cardinal Inspiration and Sympathy Center: The next step in the psychotherapy is to extend forgiveness to, and have a humble compassion toward, the human condition. This requires a change in one's value system. The ultimate experience here is to have gratitude for all experiences.
7. Cardinal Action and Excitation Center: The final step in the psychotherapy is to change one's behavior system. Instead of being unconsciously reactive in negative ways, one becomes consciously responsive in positive ways. For instance, rather than let the world break one, one learns to act to fix the world. Many “activists” and “reformers” are created via a positive reaction to a personal “tragedy”.

Notice that the Ordinal triad of negative behaviors, emotions, and thoughts is transmuted into the Cardinal triad of positive thought, emotions, and behaviors, hence “rational emotive behavior therapy”.

Concluding Comments on Rational Emotive Behavioral Therapy

It makes perfect sense that a psychotherapeutic modality would develop that acknowledged the evolution of the human brain.

1. REBT is yet another recognition of the tripartite division of the personality into three basic divisions: thoughts, emotions, and behaviors.
2. Everyone has a behavior system, a value system, and a belief system. It is simplistic but convenient to relate these systems to the Triune Brain Theory discussed in a previous chapter. It is simplistic but convenient to note that these systems evolved in the animal kingdom from reptile to mammal to human as discussed in a previous chapter. It is simplistic but convenient to refer to these systems as functions of the Intellect Center, the Emotion Center, and the Motion Center as discussed in a subsequent chapter. It is simplistic but convenient to note that the Motion Center develops in the Infancy Life-Stage, the Emotion Center develops in the Childhood Life-Stage, and the Intellect Center

develops in the Youth Life-Stage — as discussed in Part V. REBT claims that the more advanced should prevail over the more primitive.

3. REBT is rather similar to a channeled revelation discussed in Part VI, in Chapter VI-x, “Bashar”. Like REBT, Bashar’s psychotherapy follows the entire spectrum of the Natural Sequence.





Chapter IV-X

TEMPLATE — THEORY

Biography of

Concluding Comments on





PART **V** – DEVELOPMENTAL PSYCHOLOGY



Chapter **V-1**

① INTRODUCTION TO DEVELOPMENTAL PSYCHOLOGY

This is the first in a series of chapters on a branch of academic psychology that researches the stages of development that a person typically goes through during a full lifetime, from birth to death. As such, it is very much to be expected that it might follow the Natural Sequence, which alleges to be about a discernible pattern of predictable stages of development of one sort or another, from the shortest to the longest time cycles in the Cosmos. Obviously, I regard human psychological development as part of the Cosmos, even if — as we will see in subsequent chapters of this Part — some “transpersonal” psychologists propose an additional non-material, spiritual, or soul component of the human psyche.

In this chapter, as an introduction to the topic, a brief history of this field of psychological research is presented. In subsequent chapters, outlines of the specific work of various luminaries in the field are presented, and compared and contrasted to the Natural Sequence, and compared and contrasted to each other. My conclusion to this research is that, indeed, developmental psychologists are seeing an instantiation of the Natural Sequence — one that we all partake of, and therefore have personal experience of. Because we humans all live through these particular instantiations, and because it helps us to be more self-aware and other-aware, I regard Part V of the *Cosmogony* book as one of the most important Parts of this book. For the same reason, I have made it one of the longest Parts.

The following numbered comments apply to each of the following chapters on developmental psychology.

1. Because of the convenience that abbreviation affords, I reduce the ponderous phrase “developmental psychology” to DevPsy henceforth.
2. Most of the quoted information in these chapters in this Part of the *Cosmogony* book has been extracted from online Wikipedia articles. This makes it easy for readers of this book to access the referenced material, and, from there, readers may be led to other sources mentioned in the Wikipedia articles. (One can spend hours following hyperlinks down various rabbit holes into the wonderland of the web of knowledge available on the internet.) Wikipedia is a so-called “secondary” resource, but it often references so-called “primary” resources, meaning, the published works of the original DevPsy researchers. My second best resource for information in this Part has been various websites other than Wikipedia, but also freely and conveniently available on the internet, and I provide links to them. Only as a last resort do I refer to and quote from books that one would need to purchase or check out of a library if one were inclined to explore my references.
3. Regarding the acceptability of Wikipedia information, it may be, in some cases, that most credentialed scholars and academics do not perceive it as an authoritative and objective source. Because I am not myself a credentialed scholar or academic, I am in no condition or position to evaluate these claims, or to evaluate the information that Wikipedia presents. I rely on Wikipedia

because it is convenient for me to borrow from it — it is relatively unencumbered by copyright, so long as I reference the specific article and the date when I retrieved the quotation. The situation is the same with other internet resources that I may quote, regardless of their standing in academic communities: *caveat emptor* — do your own research.

4. I like to have long quotations within the main body of my text because it saves readers from the inconvenience of looking up the reference, and/or looking at footnotes and/or endnotes. It also demonstrates to the reader that: 1) I am not making this stuff up; 2) I have done some research homework; and 3) these other writers are likely smarter and more knowledgeable and more talented than I am, thus more reliable as well as easier to read.
5. My penchant for assimilating a lot of information and then reducing it down to fundamental principles is found in abundance in this Part of the *Cosmogony* book. This is the way my brain works, but I acknowledge that it has its advantages and disadvantages as far as the reader is concerned, and it might not appeal to everyone, or produce totally accurate results. Not only is my work a reduction of the work of psychologists, but my work is derived from secondary sources, such as Wikipedia, that are also reductions; certainly my results are even less complete and less comprehensive than Wikipedia. All chapters are, of course, summaries and simplifications of lifetimes of work by the original researchers. It would take a lifetime of work on my part to fully assimilate their lifetimes of work, and obviously I have not done that. There is so much more knowledge, both interesting and useful, about these researchers and their work than is offered herein, so I suggest that those readers so inclined pursue the leads and links that the referenced internet materials provide. If my limited knowledge and my reduction process has resulted in my misunderstanding and distorting their work, then I offer my apology to any readers who may know more than I do about the work of these researchers; feedback is welcomed.
6. In each of the following chapters, there might be mention of some developmental psychologists other than the one that the chapter is about. I have given some of those people a chapter of their own in this book, but others I have not. Their research and their models corroborate the thesis of this *Cosmogony* book, so far as I can tell, but I could not include everyone without this book becoming even more unwieldy than it already is. I had to be selective, but inclusive enough to get my point across. Nevertheless, readers are invited to investigate these additional and important developmental psychologists, if they are so inclined.
7. For my *Cosmogony* book, I have selected the clearest and most complete examples from developmental psychologists and researchers in terms of the obvious correlation with the Natural Sequence schema. Then, I have selected those portions of their work that appears to be the most relevant to the Natural Sequence schema. Where possible, I have quoted them in their own words, using their own summaries. I know that I could therefore be criticized for “cherry-picking” the data to support my case for the Natural Sequence schema, but so be it.
8. Each and every developmental psychologist reviewed in these chapters stands in a long line of researchers over the last hundred years or so. Some of them are still living and working. It looks to me as if they each furthered the work of those who preceded them, and/or provided a side branch to the work of their predecessors. These chapters are arranged to show this historical chronological development in the realm of DevPsy, as research is built upon research, as understanding is built upon knowledge.
9. Each of these psychologists has critics, other researchers who find some defects and deficiencies with their models. I am in no position to criticize the critics, so I just report what I find.
10. As much as seemed reasonable to me, my aim has been to make each of these chapters on DevPsy somewhat self-sufficient, so as to minimize the reader needing to refer back and forth to other chapters in this Part, just in order to get the gist of what each chapter is saying.
11. None of these chapters on DevPsy are about the application of the information in such professions as counseling psychology, personal improvement, organizational development, and the educational system. Certainly the insights provided by these models have found enormous utility in those realms, and many people’s lives have been improved by the application of these models in professional, clinical, and therapeutic settings, but my focus in these chapters is on showing that these models unwittingly substantiate and embellish the Natural Sequence schema.

12. The Natural Sequence schema is an idealized presentation of near-ultimate archetypes. Archetypes are abstractions, and as such they are pure and simple. Concrete instantiations of the Natural Sequence archetypes, such as the stages of human development, have some of the discernible and recognizable nature of the archetypes, but the manifestation is relatively distorted and complex. My endeavor and aspiration in this entire book is to present my discoveries and explanations about how the abstract archetypes elucidate the concrete instantiations, and the concrete instantiations elaborate on the archetypes.
13. Because humans are so very diverse and ambiguous, studying them is an inherently arguable exercise in subjective evaluation. This built-in ambiguity is why there is some disagreement among the models that various DevPsy researchers have proposed. The models put forward by academic researchers are not, and cannot be, as exacting and definitive as the Natural Sequence is. One corollary to this limitation on accuracy in DevPsy models is that I might not have always identified the best fit correlation of the various ambiguous models with the unambiguous Natural Sequence schema. Therefore, *caveat emptor* — do your own research.
14. Despite the inherent ambiguity of the subject and object, humans, the field of DevPsy seems to be clarifying, over the decades of its existence, in the direction of definitive correlation with the Natural Sequence schema. Of course, this Part of this *Cosmogony* book is aimed at nudging the field further in that direction, if any of the academic researchers happen to become aware of the Natural Sequence schema, and then care to take the Natural Sequence schema seriously.
15. My intention in these chapters is also to further the case argued in this entire book, namely that the Natural Sequence schema provides the abstract structural framework that *explains* the stages discovered by researchers in the field of DevPsy. If I may be so presumptuous and pretentious, my claim is that, until their correlation with the Natural Sequence schema is understood, these models only provided a *description* of the stages; they document an observed effect without knowing the underlying cause or source, which I believe the Natural Sequence schema to be.
16. As we will see in these chapters in this Part, different developmental psychologists researched different realms of life experience in which one can develop. As it turns out, these various realms can be categorized per the Natural Sequence schema. For instance, there is physical development in the body (Ordinal Action), there is emotional, moral, and social development (Ordinal Inspiration), there is intellectual and cognitive development (Ordinal Expression), there is psychological development in general (Neutral Assimilation), there is aesthetic and philosophical development (Cardinal Expression), there is ethical and spiritual development (Cardinal Inspiration), and there is self-governing or so-called “ego” development (Cardinal Action). This Part V discusses the work of at least one academic psychologist who did their research in one of these seven realms.
17. The DevPsy stages have a space-like and a time-like metaphor. In the space-like metaphor, each stage can be ‘higher’ or ‘lower’ in the stack, somewhat like the strata of sedimentary rocks in geology. I use this metaphor in the tables where the stages are listed, with the ‘lowest’ stage at the bottom of the table and the ‘highest’ stage at the top of the table. In the case of the time-like metaphor, the stages of DevPsy models are not actually a metaphor, because the stages are in fact steps in the journey through life through time. Throughout this Part, each stage is referred to as “low(er)–earl(ier)” and “high(er)–late(r)”, depending on where they are on the full spectrum of the stages of the model. These very words are typically used in the DevPsy models by their originators and their expositors. In terms of the Natural Sequence schema, these terms are used in both an absolute way and in a relative way. In the absolute way, “low–early” and “high–late” refer to Ordinal stages and to Cardinal stages respectively. In the relative way, except for the lowest–earliest stage, there are stages that are earlier–lower, and except for the highest–latest stage, there are stages that are higher–later.
18. Just so you know that there is no attempt on my part to misrepresent my level of expertise in the realm of DevPsy, I declare under penalty of perjury that I have no credentials whatsoever wherewith I am allowed to pontificate authoritatively in this realm. It is totally presumptuous, pretentious, and pompous for me to write this Part. However, I do claim some expertise in understanding the structure and meaning of the Natural Sequence schema. On the Dunning-Kruger competence-confidence curve, I am competent in the latter, and incompetent in the former.

19. In the Introduction to this *Cosmogony* book, in Part I, there is a [chapter on “The Psychology of the Natural Sequence”](#). That chapter expounds on the notion that there is a certain personality type that loves to discern the patterns, the regularities, the systematics, of various realms of the Cosmos. There are people who apply this penchant and their talents for it to the subject of human beings. Some of them study personality typology, for instance. Others study DevPsy. This chapter is a study of some of those attempts to discern the regular patterns that DevPsy researchers claim to have discerned.

Review of Life-Stages, Zones, Worldviews, and Cultures

As we review DevPsy models in the chapters in this Part, we will see that developmental psychologists sometimes, but not always, recognized that their particular model is a subset of a larger set with the same pattern, and as being a superset of a smaller set with the same pattern. One of the final chapters in this Part discusses the work of philosopher Ken Wilber, who has elaborated on that subset-set-superset phenomenon in some detail. I agree with him, and claim that DevPsy has a place somewhere in about the middle of the so-called “Great Chain/Nest of Being” (see [Chapter I-X](#)). The GC/NB refers to the repeating pattern of stages in the alleged septenarian cycles in time, from the shortest timescale to the longest timescale. I refer to that as the Fractality Principle, which was discussed in the Introduction. My claim is that the archetypal septenarian fractal pattern of the Natural Sequence schema is found in many DevPsy models, and that it is not so obscured by the ambiguities of the human condition to be indiscernible.

As we will see in subsequent chapters in this Part, DevPsy models typically do not make clear distinctions between different developmental tracks that the Natural Sequence schema makes, namely the tracks named in the title of this section. These are tracks that span various time scales in the GC/NB. DevPsy model-makers of the humanistic persuasion are very aware of internal psychological development over the time span of a full lifetime, which I refer to as “Life-Stages”; DevPsy model-makers of the humanistic persuasion to a lesser extent are aware of external socio-cultural evolution over the time span of human history, which I refer to as “Culture”. However, except for some psychologists of the transpersonal persuasion, DevPsy model-makers are not believers in what I refer to as “Zones” and “Worldviews” ([see Chapter II-4](#)), because these are alleged to be maturity factors that are ascribed to the evolution of a transpersonal identity element commonly known as the “soul” and which is said to develop over the course of many lifetimes. (More is said about the difference between humanistic and transpersonal psychologists and their belief systems throughout this Part of this *Cosmogony* book.) All four of these developmental tracks (Life-Stages, Zones, Worldviews, Cultures) could be subsumed under the title “growing up”. All of these tracks are running concurrently, and human personalities partake of all of them, so it is understandable that their existence ambiguates discernment by developmental psychologists of both persuasions. All of these developmental tracks influence and interact with each other to such an extent that it is generally impossible to single out one of these tracks as the cause for any specific behavior and/or emotion and/or thought.

For your convenience, the following table shows the Attributes of the Natural Sequence as they apply to those four developmental tracks. To understand all of what you read in this Part, it would help you considerably if you commit this table to long-term memory right now. Or maybe just print it out and refer to it as needed while you read the remainder of this Part of this *Cosmogony* book.

Table V-1a — SOME RELEVANT TIME CYCLES in the GREAT CHAIN/NEST of BEING							
RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
DIALECTIC	–ORDINAL– (ME)			=NEUTRAL=	+CARDINAL+ (WE)		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
PROCESS → ASPECT ↓	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
CENTER	+Endurance MOTION –Activity	+Sensibility EMOTION –Sentimental'ty	+Thought INTELLECT –Reason	+Intuition IMPULSE –Instinct	+Integration CONCEPT –Fantasy	+Empathy SYMPATHY –Sensitivity	+Vitality EXCITATION –Arousal
LIFE-STAGE	+Coordination INFANCY –Clumsiness	+Socialization CHILDHOOD –Codependence	+Independence YOUTH –Irresponsibility	+Authenticity MIDDLE AGE –Falseness	+Legacy SENIORITY –Self-indulgenc	+Gratitude ELDERHOOD –Regret	+Anticipation DYING –Disengagement
ZONE	+Institution RESOLUTION –Regulation	+Affiliation IMMANENCE –Indoctrination	+Individuation SEPARATION –Alienation	+Consolidation EXPERIENCE –Achievement	+Philosophy UNIFICAT'N –Ideology	+Ascension TRANSCEND'E –Exaggeration	+Causation ACTIVATION –Agitation
WORLDVIEW	+Preservation PRIMITIVISM –Security	+Propriety TRADITION'SM –Conformity	+Production MATERIALISM –Exploitation	+Consensus COLLECTIVISM –Ambiguity	+Wisdom HOLISM –Speculation	+Liberation TRANSPERSON'M –Catharsis	+Revolution MESSIANISM –Provocation
CULTURE	Paleolithic Hunter-Gatherer	Neolithic Agricultural	Bronze-Iron Civilization	Scientific Informational	Philosophical? (future)	Spiritual? (future)	Utopian? (future)

My comments on this table are as follows:

13. The names (and numbers) in headers of rows and columns are described and explained in Chapter I-x in Part I, “Structure of the Natural Sequence”.
14. ATTRIBUTES: The first five rows (Rank, Dialectic, Axial, Dimension, Direction) show the Attributes of the Natural Sequence schema. These are explained and described in Chapter I-x in Part One, “Attributes of the Natural Sequence”.
15. PROCESS: The sixth row shows the names of the so-called “Processes” of the Natural Sequence schema.
16. ASPECT: The names of five so-called “Aspects” of the Process/Aspect System (Center, Life-Stage, Zone, Worldview, Culture) are shown in the first column of the final five rows.
17. CENTER: The seven so-called “Centers” shown in the seventh row can be thought of as a sequence, the same as those Aspects shown in the bottom four rows. They correlate with the Natural Sequence Attributes, and they are part of many DevPsy models in terms of the so-called “dimensions” of personality, namely the sensorial-behavioral dimension (“Action” in the Natural Sequence schema), the emotional-social dimension (“Inspiration” in the Natural Sequence schema), the mental-cognitive dimension (“Expression” in the Natural Sequence schema), and experience in general (“Assimilation” in the Natural Sequence schema). The appearance of Centers in some DevPsy models will be noted in the sections and chapters that follow. Centers are discussed at length in Chapter Xx in Part X, “The Seven Centers”.
18. The bottom four rows refer to developmental sequences that run on different time scales or schedules, all having to do with ‘growing up’ — increasing psychological “maturity” considered as a whole. The shortest time scale is Life-Stage and the longest time scale is Culture.

19. LIFE-STAGE: The so-called “Life-Stages” of the Natural Sequence schema, with names shown in the eighth row of the table, are the equivalent of the phenomena that are studied by most developmental psychologists. These are stages that normal healthy people in normal healthy environments go through during the course of a full lifetime from birth to death. There are cases of so-called “arrested development”, where people gets stuck at some Life-Stage along the way, or they move on from it in the so-called “Negative Pole” (shown with an “n-dash” before the –Name), which inhibits or distorts their expression of subsequent stages as they move forward in life. Other people do not stop at some “ceiling” during their ascent through the Life-Stages; they continue to evolve until they die. Life-Stages are discussed at length in [Chapter Xx in Part X](#), “The Seven Life-Stages”.
20. ZONE and WORLDVIEW: The so-called “Zones” and “Worldviews” of the Natural Sequence schema, named in the ninth and tenth rows of the table, are inborn personality traits. Worldview is primary and Zone is secondary; one may picture each of the seven Worldviews as containing all seven Zones as a subset in the GC/NB. (In the opinion and belief of some transpersonal psychologists, these are the stages of maturity of the “soul” or “essence” in a long story arc of reincarnation with many lifetimes. However, it is not necessary to believe in reincarnation as the explanation of Zone and Worldview; whatever their cause, left unexplained, one can still find the categories to be valid and useful.) They share the same Attributes as the Life-Stages. The general idea is this: as a person matures during a lifetime, developing through the Life-Stages, they tend to come to the level of their inherent Worldview/Zone and stop there. Thus, there is an inherent limit in the Worldview/Zone Aspect, beyond which one does not evolve in terms of Zone/Worldview in a lifetime even though there is continued development in terms of Life-Stage. (This limit in some DevPsy models has been noted as an empirical fact by some DevPsy researchers.) Worldviews/Zones are discussed at length in [Chapter Xx in Part X](#), “Worldviews/Zones”. For convenience, the name of this ‘growing up’ time track is abbreviated to “Worldview”.
21. CULTURE: Psychological maturity considered as a whole is influenced by the environmental and social milieu in which the ‘growing up’ on other time tracks takes place. Many DevPsy researchers have recognized the similarity and correspondence of stages of psychological maturity over the course of a lifetime to stages of socio-cultural-economic-political evolution over the course of human history thus far, and they speculate about future stages of socio-cultural evolution that correlate with stages of individual development. It takes thousands of years to advance through a stage. Humanity as a whole appears to be somewhere in the transition from Stage 3, “Civilization”, to Stage 4, “Science/Information”. Transitions from stage to stage can be traumatic. If humanity makes it through this current transition intact, then it presumably will move on to the Cardinal stages at some future time. This particular growing-up track is mentioned in this Part of the *Cosmogony* book with respect to some DevPsy models, and it is discussed at length in [Chapter Xx in Part X](#), “Socio-cultural Evolution”. In the chapters that follow, the name of this ‘growing up’ track is simplified to “Culture”.
22. In my opinion, the table above shows the greatest amount of respect for, and does the least amount of violence to, the DevPsy models discussed in this chapter and in subsequent chapters, as constrained by the theoretical framework embodied in the Natural Sequence schema, which I regard as canonical, based on the evidence and argument presented throughout this book.

These four Aspects (Life-Stage, Zone, Worldview, Culture) of the Natural Sequence schema determine a person’s overall psychological maturity. Each person is usually at a different stage of each of the four Aspects. Each Aspect influences how each of the other Aspects manifests, such that it is difficult to sort out where exactly a person is “coming from” in general, and in specific instances. This is one of the facts of life that makes “pigeon-holing” people so difficult when assessing their psychological maturity. One might hope that information in this Part of this *Cosmogony* book will assist the reader with the task of understanding and tolerating the lack of psychological maturity in oneself and others, and show the way to greater psychological maturity where that is a possibility. In other words, this *Cosmogony* book need not be a mere academic exercise in understanding how the world works, even if that is its main function.

Other than “growing up”, as systematized in these four Aspects of the Natural Sequence schema, there is yet another developmental track that might be called “waking up”, which is often referred to as “spiritual growth”, and which I refer to as “Enlightenment” in this *Cosmogony* book. This track is discussed in several

chapters in **Part VI — “Paths to Enlightenment”**. This time track influences and is influenced by the four tracks discussed in this and other Parts of this *Cosmogony* book.

Principles of the Life-Stage Septenary

[[This section might get a significant rewrite after I finish the full Introduction to the Natural Sequence schema in Part One.]]

Another useful preliminary discussion, before we delve into a review of DevPsy models, it would be helpful to review what I refer to as Natural Sequence Principles, because these show up repeatedly in the discussion of the various DevPsy models that follow. This section is a condensation of **Chapter I-x** in Part One, “Natural Sequence Principles”. I regard these as “principles” because they can be discerned in many if not most of the staged developmental septenaries reviewed in this book. It seems expedient, and potentially helpful, to review the Principles here because they are especially relevant to Life-Stages, and because we actually experience Life-Stages over the course of our lifetime. The Principles are abstract, but the experience of them is not; it is concrete and particular (idiosyncratic).

Table V-1a above provides a graphic representation for the discussion of the Natural Sequence Principles, so look back and forth between the table and the discussion below. The top five rows of the table below the title row show the Attributes of the Natural Sequence: Rank, Dialectic, Axial, Dimension, Direction. The bottom five rows (below the double line) show five instantiations of the Natural Sequence at increasing time scales: Centers > Life-Stages > Levels > Ages > Planes, and the Principles apply to all of them.

- **HOLARCHY:** The first row shows the RANKS of the Natural Sequence; the practice of assigning a rank is *per se* a kind of so-called “holarchy”. The notion of a holarchy is similar to the notion of a hierarchy in that one stage follows naturally from what has gone before, but it emphasizes the feature that a later–higher stage includes the previous stage while also transcending it. Regarding the Life-Stages, it is said that the perceptions and the perspective in each stage between birth and death are built on the foundation of the experiences had during previous stage(s), such that each stage includes the previous stage(s), but transcends it or them. This means that, at each stage, there are additional and different characteristics and qualities; specifically, each stage provides a more encompassing perspective and a more mature perception. I often use the hyphenated phrases “higher–later” and “lower–earlier” to refer to the relative position of stages in the spectrum of the holarchy. This Principle has other names, such as: development, evolution, advancement, and emergence.
- **TRANSITION:** In the table, there are vertical lines that separate each rank in the holarchy. As we will see in the sections that follow, each Life-Stage is said to be separated from previous and subsequent Life-Stages by a troubled, turbulent, traumatic, tortured metamorphosis phase. This is a so-called “Transition”, when people are said to have an “identity crisis”, when they “do not know who they are any more”, but then they make the required course correction and end up in the next higher–later rank or stage of the holarchy. Typically and normally, there is a relatively stable plateau between the metamorphoses. If a person emerges from the Transition in a healthy way, then the following plateau is relatively stable and productive; if a person does not emerge from the Transition in a healthy way, then the trauma continues. These metamorphoses can be compared to “phase transitions”, e.g., as changes of state from solid to liquid to gas. The person metaphorically remains as the same basic ‘substance’ or ‘essence’, but the personality undergoes substantial behavioral system, value system, and belief system changes during the Transition from one plateau to following plateau.
- **PLATEAU:** Between the metamorphoses in the holarchy, there are relatively stable phases that I refer to metaphorically as the “plateaus”. During the plateau, there is progress, but it is evolutionary rather than revolutionary, which the Transition phase is. It is not as if the ‘plateaus’ are metaphorically ‘flat’; they have an ‘incline’, and those inclines lead up to the next ‘cliff’ to climb, aka the metamorphoses. The plateaus and the metamorphoses have different natures and characteristics.
- **ATTRIBUTE:** The seven Life-Stages have so-called “Attributes” as shown in the table: the Dialectic Attributes are named Ordinal, Neutral, Cardinal; the Axial Attributes are named Action, Inspiration, Expression, Assimilation. The combination of Dialectic and Axial Attributes are called Septenarian Attributes. As explained in my book *The Process/Aspect System*, personality phenomena in the time/space (subjective) realm are analogous to the geometry of physics phenomena in the space/time (objective) realm. The Septenarian Attributes have both so-called “Dimensions” (space-like being-

noun) and so-called “Directions” (time-like doing-verb) in terms of geometry, as shown in the table. The change in Attributes from Life-Stage to Life-Stage causes the so-called “identity crisis” of a Transition: the personality makes quantitative and qualitative changes in both space-like being-noun (Dimension) and time-like doing-verb (Direction) by successfully passing through the Transition from Life-Stage to Life-Stage.

- **DIALECTIC:** A corollary to the Attribution Principle is the so-called “Dialectic” Principle, which is a consequence of the Dialectic Attributes, not the Axial Attributes. Dialectic refers to the struggle between complementary contraries that moves an interacting system forward to a resolution or reconciliation. This word “dialectic” harkens back to the work of Fichte and Hegel, two German philosophers from a couple hundred years ago. You might have heard of “thesis, antithesis, synthesis”. This is the notion that progress is made in the universe — as well as in human life through the ranks of holarchy from Life-Stage to Life-Stage — by the reconciliation of contradictions, meaning that they work through their issues with each other until they arrive at at neutrality with each other, but the system as a whole then ends up at a higher level and later stage. In the Life-Stage schema, in terms of the Dialectic Attributes, “thesis” is a Cardinal assertion that is countered by its “antithesis”, an Ordinal assertion; the two interact both during a Transition and during a plateau, and eventually the contraries combine into a Neutral state at the next higher-later Life-Stage ... until that plateau is disrupted with the initiation of the next Transition.
- **FEEDBACK:** Besides the notion that progress through the Life-Stages is driven by internal changes in Septenarian Attributes from Life-Stage to Life-Stage as described above, there are also changes driven by interaction between internal conditions and external conditions; I refer to this interaction as the “Feedback Principle”. The feedback loop between internal “nature” and external “nurture” influences the characteristics of each Life-Stage. Sometimes this Principle is referred to as “agent/arena” catalyst. The basic idea is that “it takes two to tango”, meaning that without the interaction of self and not-self, no progress is made. (The Feedback Principle is a specific variation of the more general Dialectic Principle.) This Principle embodies a deep philosophical insight about how the universe ‘dances’ through cycles of time. That is, as a person develops over the course of a lifetime from birth to death, different internal systems come ‘on line’, so to speak. At the same time, the developing person changes and enlarges their environment, and this external system provides feedback to the internal system. Thus, back and forth and round and round we go in an ascending spiral of perceptual-behavioral, emotional-social, mental-cognitive, and consciousness-ego development as the inner world processes and assimilates the outer world ... and *vice versa*.
- **FRACTALICITY:** In the **channeling** that we will review further on, the seven Life-Stages are said to consist of seven sub-stages. We have already seen above, and will see again below, that the seven Life-Stages are said to be a subset of the seven Levels, the seven Levels are said to be a subset of the seven Ages, and the seven Ages are said to be a subset of the seven Planes. “Fractality” is my invented word for this phenomenon; it is the combination of “fractal” with “cyclicity”. The span of a full human lifetime is just one time-cycle that correlates with the septenarian (seven step) Natural Sequence schema. There are septenarian times-cycles that are longer, and there are septenarian time-cycles that are shorter than the span of a full human lifetime. The entire spectrum from the shortest to the longest septenarian time-cycle is commonly referred to as the “Great Chain/Nest of Being” in esoteric literature. Each instantiation of the septenarian time-cycle in the GC/NB has different qualities and characteristics because of differing circumstances and situations at that time scale, but there is a similarity from one time cycle to another (per the Septenarian Attributes), which is what one sees in a fractal. Fractality is really just an extension of the Holarchy Principle into septenaries ‘above’ and ‘below’ whatever septenary in the GC/NB is under discussion.
- **ME-WE:** In the table, in the Dialectic row, notice the –ORDINAL– (ME) and the +CARDINAL+ (WE) cells. Because of the Fractality Principle, in terms of the Life-Stages, each Life-Stage typically starts out in the ego-centric so-called “me” phase of the plateau in the first three sub-stages. In the three sub-stages the person is focused on dealing with, and presumably fully resolving, the Transition at the start of a new Life-Stage. If the Transition is in fact resolved in a healthy way during the (Ordinal) ME phase, then the person can refocus on the socio-centric so-called “WE” phase during the last three (Cardinal) sub-stages of the plateau of the Life-Stage. The Me-We Principle applies to each Life-Stage,

but it also applies to the entire septenary of Life-Stages, the “ME” phase correlates with the Ordinal Life-Stages, and the “WE” phase correlates with the Cardinal Life-Stages. And, of course, the ME-WE Principle also applies to the longer developmental time-cycle septenaries: the Levels, the Ages, and the Planes. (I borrowed this Principle and this terminology from some of the developmental psychologists reviewed in my *Natural Sequence* book.)

- The last three rows of the table show the other developmental septenaries known to the MT (Level, Soul Age, Plane), with the names that I prefer, as explained in the relevant chapters here in Part Four of this *History* book.
- TAIJITU TANGO: As chapter 42 of the Tao teh Ching says, “Tao produced the One, the One produced the Two, the Two produced the Three, the Three produced all things. All things carry the Yin and embrace the Yang, and through the blending of the Chi they achieve harmony.” The Cosmos as a whole (Oneness) is balanced or symmetrical, but then it is divided (Twoness) into an unbalanced, asymmetrical yin and yang, and then both the yin and the yang are split three ways (Threeness). Add this all up and you have the Canonical Septenary. According to the Taijitu Tango Principle, there is a yin/yang and a yang/yin balance or symmetry in the Septenary as a whole. Recall from discussion in other chapters of this *Cosmogony* book that the TTP refers to a paragraph in the “Michael Math” chapter of *More Messages from Michael*: “You can perceive that [from the point of view of space, being, noun] while one is ordinal and seven is cardinal, that [from the point of view of time, doing, verb] the first half is cardinal and the last half is ordinal — in other words, the pattern ‘doubles back on itself’. This is what is implied by the ‘yin-yang’ symbol, and it would probably be of use to keep the ‘yin-yang’ in mind while considering what we tell you of the function of levels and numbers.” [MMFM, p. 189] **One way to explain what this means in terms of the Natural Sequence schema in regard to NatEvo is that a septenarian cycle start out with the most vitality and ends with the least vitality and is therefore *entropic*. Thus Cardinal Action and the Origination Process progress through the cycle to Ordinal Action and Termination Process. But on the other hand the septenarian cycles are also the opposite — *syntropic* — in that they start out with an emphasis on the earlier–lower–outer Ordinal Action and the Termination Process and progress to later–higher–inner Cardinal Action and Origination Process [The application of the TTP to the understanding of what happens in the story arcs of the NatEvo instantiations should be expanded considerably in future edits of this chapter.]**

Toward the end of each chapter on a specific DevPsy model, I will point out where that model recognized one or another of these Principles, and where they did not. Every model recognized at least some of the Principles, but not always the same Principles as other models. However, all of the Principles have been recognized in the collective field of DevPsy. The fact that not all Principles are recognized by all DevPsy researchers, no matter how much research they do, indicates that these Principles are archetypal, but people are not; they are ambiguous and diverse as hell. Principles can be obscured behind the ambiguity and diversity that is present in every human being.

Developmental Stage Theories

The following lengthy quotation, within which I have inserted my own comments and observations, was copied from the Wikipedia article that has the same title as this section. Underlines in this quotation are my emphasis on features of DevPsy that have correlates in the Natural Sequence schema. I have added some comments in [brackets] in order to provide some explanation and correlation with features of the Natural Sequence schema. I have also added some explanatory comments between paragraphs of the quoted material.

Developmental stage theories are theories that divide child development into distinct stages which are characterized by qualitative differences in behavior [and in emotions and in intellect and in psychology in general].

There are a number of different views about the way in which psychological and physical development proceed throughout the life span. The two main psychological developmental theories include continuous and discontinuous development. In addition to individual differences in development, developmental psychologists generally agree that development occurs in an orderly way and in different areas simultaneously.

The statements above and below are one way to describe the Holarchy Principle of the Natural Sequence schema, which states that each stage is developed from or grows out of previous stages, the previous stages being necessary precursors to following stages.

Continuous versus Discontinuous

One of the major controversies in developmental psychology involves whether development is continuous or discontinuous.

Continuous development is measurable and quantitative, while discontinuous development is qualitative.

Quantitative measurements of development could be measuring the height of a child, measuring their memory, or measuring their attention span. "Particularly dramatic examples of qualitative changes are metamorphoses, such as the emergence of a caterpillar into a butterfly".

Obviously, this statement is one way to describe the Transition Principle of the Natural Sequence schema, where the characteristic quality (the Attributes of the Natural Sequence schema) of each stage is different from all other stages, such that transitioning from one stage to the next is traumatic.

Let's consider the word "emergence" in this quotation. Although the word "emergency" comes from the same root — and it might even be appropriate as a description of a transition between stages — in scientific parlance, emergence is when one state evolves into another state that is distinctly and qualitatively different from the prior state. The stages of the Natural Sequence schema are all about emergence: when people are having a psychological emergency, they are on the cusp of a breakthrough or a breakdown.

Those psychologists who support the continuous view of development suggest that development involves gradual and ongoing changes throughout the life span, with behavior in the earlier stages of development providing the basis of skills and abilities required for the next stages. "To many, the concept of continuous, quantifiable measurement seems to be the essence of science".

That paragraph is another restatement of the Hierarchy Principle mentioned above, with emphasis on the word "required": one cannot advance in a healthy way through the stages without successfully completing prior stages. I suggest that one reason that it is arguable whether development is continuous or discontinuous is that there is a spectrum between these extremes: some people have an easy time growing up so the development seems continuous, and some people have a hard time growing up, so the development happens in a series of metamorphoses.

Not all psychologists, however, agree that development is a continuous process. Some view development as a discontinuous process. They believe development involves distinct and separate stages with different kinds of behavior [1-D Action, Motion Center] occurring in each stage. This suggests that the development of certain abilities in each stage, such as specific emotions [2-D Inspiration, Emotion Center] or ways of thinking [3-D Expression, Intellect Center], have a definite starting and ending point. However, there is no exact time at which an ability suddenly appears or disappears. Although some types of thinking [3-D Expression, Intellect Center], feeling [2-D Inspiration, Emotion Center] or behaving [1-D Action, Motion Center] may seem to appear suddenly, it is more than likely that this has been developing gradually for some time.

That paragraph describes the Dimension component of the Attribution Principle of the Natural Sequence schema, as well as the Transition Principle. The three Ordinal stages of the Natural Sequence schema are listed, first in proper numerical order, and then in reverse numerical order. That is exactly the pattern of the stages in the Natural Sequence schema, and the correlation of Dimensions with Centers is obvious. There are many other references to these Dimensions of the psyche in the remainder of this Part of this *Cosmogony* book. As stated, the transition from one stage to the next often appears to be sudden, but it was probably happening in the background for a while before emerging into the foreground. One could liken the Transition Principle to the way earthquakes happen: the stress builds up at the boundary between tectonic plates, and then the stress is released suddenly.

Stage theories of development rest on the assumption that development is a discontinuous process involving distinct stages which are characterized by qualitative differences in behavior. They also assume that the structure of the stages is not variable according to each individual, however the time of each stage may vary individually.

Stage theories can be contrasted with continuous theories, which posit that development is an incremental process.

In the Life-Stages model of the Natural Sequence schema, there is an acknowledgment of both somewhat continuous development within each stage and somewhat discontinuous development between stages. The structure of the Natural Sequence schema is more than a mere "assumption"; it is derived from the logical and mathematical structure of systems that evolve in time, which instantiates in phenomena such as the development of the human psyche. That is why DevPsy stages are not *contingent* on individual human differences; it is *necessary* that stages emerge in a certain sequence.

Humans create meaning from experience — a cognitive process. “Meaning is not given to us but by us.” “These cognitive structures form into a stage of development.” Cognitive stages form a hierarchical and invariant sequence of meaning-making from the less complex to increasingly greater levels of complexity of thinking.

One analogy for the Holarchy Principle is how one learns mathematics during school: learn the meaning of numbers, learn the arithmetic relationships of numbers (add, subtract, multiply, divide), learn about fractions and exponents, learn geometry, learn trigonometry, learn algebra, learn calculus, learn topology, and so on. It is necessary to start by learning the most simple and/or concrete concepts, and learn step-wise to the most complex and/or abstract concepts. So it is with the human psyche over a lifetime.

Stage growth is determined by interaction between the person and the environment including cultural, ethnic, and racial backgrounds. It is either [sic] unilateral, not automatic, and is a life-long process.

That underlined phrase about feedback between a person and their environment (also called “nature and nurture” or “subjective and objective”, or “inner and outer”) is elevated to a principle in the Natural Sequence schema, namely the Dialectic Principle. We will see it repeatedly in subsequent discussions.

This is the end of the subsection in the Wikipedia article that discussed continuous versus discontinuous DevPsy models. I suggest that there is some truth to both the continuous and discontinuous notions, or else developmental psychologists would not argue about it; it is a subjective situation; the truth or falsity of the contention is contingent on the personality of the person doing the investigating and the personality of the person being investigated. I say this because a personal observation of mine is that some people have an unhealthy psyche by nature and/or nurture, so their transitions from stage to stage are rougher than people who have a healthy psyche by nature and nurture; an observer might not even notice the relatively smooth transitions between stages in the psyches of healthy people.

Another relevant comment in this context is that, in the Natural Sequence schema, Ordinality is discontinuous and quantitative, and Cardinality is continuous and qualitative. **This abstraction is explained in the Introduction to the book, Chapter I-x in Part One, “Derivation of the Natural Sequence”.**

The Wikipedia article continues as follows:

List of Staged Theories

While some of these theories focus primarily on the healthy development of children, others propose stages that are characterized by a maturity rarely reached before old age.

- The psychosexual stage theory created by Sigmund Freud posits that there are five distinct stages that the person will pass through for the duration of their lifespan. Four of these stages stretch from birth through puberty and the final stage continues throughout the remainder of life.
- Rudolf Steiner developed a stage theory based on seven-year life phases. Three childhood phases (conception to 21 years) are followed by three stages of development of the ego (21–42 years), concluding with three stages of spiritual development.
- Maria Montessori’s planes of development theory.
- Jean Piaget’s cognitive developmental theory describes four major stages from birth through puberty, the last of which starts at 12 years and has no terminating age.
- Lev Vygotsky’s theories, particularly zone of proximal development.
- Margaret Mahler’s separation-individuation theory of child development contained three phases regarding the child’s object relations.
- Erik Erikson’s psychosocial developmental theory, influenced by Freud, includes four childhood and four adult stages of life. His theory includes the influence of biological factors on development.
- James Marcia’s theory of identity achievement and identity status.
- John Bowlby’s attachment theory proposes that developmental needs are connected to particular people, places, and objects throughout our lives. These connections provide a base relied on throughout the entire lifespan.
- Abraham Maslow’s hierarchy of needs.
- Clare W. Graves’ emergent cyclical levels of existence theory.
- Jane Loevinger’s stages of ego development.
- Albert Bandura’s social learning theory emphasizes the child’s experiential learning from the environment.

- Lawrence Kohlberg's stages of moral development described how individuals developed moral reasoning.
- Don Beck and Chris Cowan's spiral dynamics.
- Judith Rich Harris' modular theory of social development.
- Michael Commons' model of hierarchical complexity.
- James W. Fowler's stages of faith development theory.
- Robert Kegan's subject–object constructive developmental theory.
- Ken Wilber's integral theory

[>https://en.wikipedia.org/wiki/Developmental_stage_theories< — retrieved 05 May 2022]

Underlined names in this list are those theorists who have a section or subsection in this chapter, or an entire chapter in this Part, or in this *Cosmogony* book, dedicated to an introduction to their work. Most of these DevPsy researchers were aware of the work of the others, so they compared and contrasted their work with the others, and they made correlations between them. There is a chapter near the end of this Part that reviews the work of Ken Wilber, whose book *Integral Psychology* is an attempt to synthesize the work of most of the people on this list, and some others. My word for this type of correlation is *para-synthesis*. My work is offered in the same spirit as Wilber's work, and it goes even further. That is to say, I purport that the Natural Sequence schema provides an *explanation* for the phenomena that the DevPsy models themselves merely *describe*. Thus, the Natural Sequence schema is a *meta-synthesis* of DevPsy systems.

A Brief History of Developmental Psychology

As part of an introduction to this subject, let me point out that the notion of stages in a person's life is not totally an invention of modern psychology. The perceptive and talented bard William Shakespeare had somewhat to say about it, as documented by Wikipedia:

"All the world's a stage" is the phrase that begins a monologue from William Shakespeare's pastoral comedy *As You Like It*, spoken by the melancholy Jaques in Act II Scene VII Line 139. The speech compares the world to a stage and life to a play and catalogs the seven stages of a man's life, sometimes referred to as the seven ages of man.

All the world's a stage, / And all the men and women merely Players; / They have their exits and their entrances, / And one man in his time plays many parts, / His Acts being seven ages. At first, the infant, / Mewling and puking in the nurse's arms. / Then the whining schoolboy, with his satchel / And shining morning face, creeping like snail / Unwillingly to school. And then the lover, / Sighing like furnace, with a woeful ballad / Made to his mistress' eyebrow. Then a soldier, / Full of strange oaths and bearded like the pard, / Jealous in honor, sudden and quick in quarrel, / Seeking the bubble reputation / Even in the cannon's mouth. And then the justice, / In fair round belly with good capon lined, / With eyes severe and beard of formal cut, / Full of wise saws and modern instances; / And so he plays his part. The sixth age shifts / Into the lean and slippered pantaloone, / With spectacles on nose and pouch on side; / His youthful hose, well saved, a world too wide / For his shrunk shank, and his big manly voice, / Turning again toward childish treble, pipes / And whistles in his sound. Last scene of all, / That ends this strange eventful history, / Is second childishness and mere oblivion, / Sans teeth, sans eyes, sans taste, sans everything.

Likewise the division of human life into a series of ages was a commonplace of art and literature, which Shakespeare would have expected his audiences to recognize. The number of ages varied: three and four being the most common among ancient writers such as Aristotle. The concept of seven ages derives from medieval philosophy, which constructed groups of seven, as in the seven deadly sins, for theological reasons. The seven ages model dates from the 12th century. King Henry V had a tapestry illustrating the seven ages of man.

According to T. W. Baldwin, Shakespeare's version of the concept of the ages of man is based primarily upon Pier Angelo Manzolli's book *Zodiacus Vitae*, a school text he might have studied at the Stratford Grammar School, which also enumerates stages of human life. He also takes elements from Ovid and other sources known to him.

[>https://en.wikipedia.org/wiki/All_the_world's_a_stage< — retrieved 14 July 2022]

The Natural Sequence schema also posits the fundamentality of "sevenness" based on "theological" reasons — if you allow the premise that logic and mathematics embody the belief/value/behavior system in "the mind of God", aka "Nature", as explained in Part I of this *Cosmogony* book.

My personal introduction to the subject of modern-day DevPsy was a book that I read in the late 1970s, at about the time of my thirtieth birthday. That book was *Passages: Predictable Crises of Adult Life*, by Gail Sheehy. Little did I understand then that I would follow the pattern that was outlined in this blurb from its back cover:

At last, this is your story. You'll recognize yourself, your friends, and your loves. You'll see how to use each life crisis as an opportunity for creative change — to grow to your full potential. Gail Sheehy's brilliant road map of adult life shows the inevitable personality and sexual changes we go through in our 20s, 30s, 40s, and beyond. The Trying 20s — The safety of home left behind, we begin trying on life's uniforms and possible partners in search of the perfect fit. The Catch 30s — Illusions shaken, it's time to make, break, or deepen life commitments. The Forlorn 40s — Dangerous years when the dreams of youth demand reassessment, men and women switch characteristics, sexual panic is common, but the greatest opportunity for self-discovery awaits. The Refreshed (or Resigned) 50s — Best of life for those who let go old roles and find a renewal of purpose.

[><https://www.amazon.com/Passages-Predictable-Crises-Adult-Life/dp/0553271067>< — retrieved 15 February 2021]

Obviously, Sheehy noticed the Transition Principle, with her use of the word “crisis”. Not much else can be gleaned from this blurb, other than that there are stages of adult life that are somewhat predictable in characteristics and qualities. However, if you return and review this blurb after reading the remainder of this Part, you will understand why Sheehy used the brief (but catchy) phrases that she did to describe the decades.

Over the next few decades, Sheehy followed up with several other books on the same theme: *New Passages: Mapping Your Life Across Time* (1995), *Understanding Men's Passages* (1999), and *Passages in Caregiving* (2011). I looked in vain in the Index of *New Passages* for the names of academic DevPsy researchers. Thus, her book is not a popular, mainstream account of academic research. Reading the pages provided by Amazon in their “Look inside” feature, it appears that her research material for the later books was partly derived from numerous personal anecdotal accounts given to her by people who responded to the first book, and partly derived from seminars and workshops that she personally conducted subsequent to the first book. This has a value, a popularized self-help value, which is different from the professional academic research found in chapters in this Part of my *Cosmogony* book. The academic research is used by professionals trained in the multiple disciplines branching off from the root subjects of psychology; for instance, it is used by counseling psychologists in their therapeutic work.

My second introduction to the DevPsy subject was found in the book *Messages from Michael*, by Chelsea Quinn Yarbro, which I read in 1980. The name “Milestones” and “Internal Monads” was used for the phenomenon. This stage theory is discussed at length in my book *A History of the Overleaf Chart*, in **Chapter 4Q in Part Four**, “The Seven Life-Stages”. It is discussed briefly in **Chapter II-x** in this *Cosmogony* book. Briefly: there are seven Life-Stages, and my names of the Life-Stages are Infancy, Childhood, Youth, Middle-Age, Seniority, Elderhood, and Dying. Per the Natural Sequence schema, the first three have Ordinal Attributes, the last three have Cardinal Attributes, and the middle one has Neutral Attributes. I will often make the correlation of Life-Stages with other DevPsy models in this Part.

Also via the book *Messages from Michael*, I was introduced to the concept of worldviews, which it referred to as “soul ages”. Briefly, there are seven soul ages, and in that book they are named Infant, Baby, Young, Mature, Old, Transcendental, and Infinite. Each soul age was further divided into seven levels. Per the Natural Sequence schema, the first three have Ordinal Attributes, the last three have Cardinal Attributes, and the middle one has Neutral Attributes. The proposal in that book was that the alleged immortal spiritual soul follows a developmental track over the course of a series of many reincarnations. It is not necessary to believe in this explanation for the phenomenon of psychological development to come to know that soul age, aka Worldview, is a real thing, as discovered and described by developmental psychologists, and I point this out where appropriate in the review of various DevPsy models.

My third introduction to the DevPsy subject is found in Wikipedia, as I researched material for this Part. Here in the chapter that introduces the subject, I will borrow extensively from the Wikipedia article on the topic, namely this: >https://en.wikipedia.org/wiki/Developmental_psychology< — retrieved 16 February 2021. Underlined words and phrases are my emphasis, and words or phrases that I have inserted in [brackets] indicate the correlation with stages of the Natural Sequence.

The Wikipedia article on DevPsy begins:

Developmental psychology is the scientific study of how and why human beings change over the course of their life. Originally concerned with infants and children, the field has expanded to include adolescence, adult

development, aging, and the entire lifespan. Developmental psychologists aim to explain how thinking [3-D Expression, Intellect Center], feeling [2-D Inspiration, Emotion Center], and behaviors [1-D Action, Motion Center] change throughout life. This field examines change across three major dimensions: physical development [1-D Ordinal Action, Motion Center], cognitive development [3-D Ordinal Expression, Intellect Center], and social emotional development [2-D Ordinal Inspiration, Emotion Center]. Within these three dimensions are a broad range of topics including motor skills, executive functions, moral understanding, language acquisition, social change, personality, emotional development, self-concept, and identity formation.

Obviously, that quotation mentions what I refer to as the Dimension component of the Attribute Principle of the Natural Sequence schema. In subsequent sections and subsections and chapters in this Part, it will be shown repeatedly that the stages of early human development follow the Natural Sequence schema, with Ordinal Action as Stage One; it is the foundation upon which Stage Two, Ordinal Inspiration, is built, and upon that, Stage Three, Ordinal Expression, is built. Also, it will be shown that upon this foundation of Ordinal stages, subsequent stages naturally follow during adult life, and that the entire sequence of stages correlates with the Natural Sequence schema. We will also see below that various DevPsy models focus on one or the other of those Dimensions, and/or one or the other of the realms mentioned in the last sentence of the quotation above, and yet others.

The Wikipedia article continues:

Developmental psychology examines the influences of nature and nurture on the process of human development, and processes of change in context across time. Many researchers are interested in the interactions among personal characteristics, the individual's behavior [1-D Action, Motion Center], and environmental factors, including the social [2-D Inspiration, Emotion Center] context and the built environment. Ongoing debates in regards to developmental psychology include biological essentialism versus neuroplasticity and stages of development versus dynamic systems of development.

In terms of the Natural Sequence schema, a person's Worldview is said to be a product of their "essential nature", and Life-Stage is said to be a product of neuroplasticity or "nurture". It is difficult to tease out which of these two factors is responsible for any particular expression, hence the word *versus* between the two in the minds of DevPsy researchers. The nature–nurture ambiguity is also partly responsible for the continuity–discontinuity ambiguity in the minds of DevPsy researchers. I would like to believe that the Natural Sequence schema can contribute to the discussion, and clarify these ambiguities.

Developmental psychology involves a range of fields, such as educational psychology, child psychopathology, forensic developmental psychology, child development, cognitive [3-D Expression, Intellect Center] psychology, ecological psychology, and cultural psychology. Influential developmental psychologists from the 20th century include Urie Bronfenbrenner, Erik Erikson, Sigmund Freud, Jean Piaget, Barbara Rogoff, Esther Thelen, and Lev Vygotsky.

So, here again we find mention that DevPsy models have the same "dimensions" that are discussed repeatedly in this book in regard to numerous realms of evolution, which are referred to as Ordinal Action (or more specifically Motion Center), Ordinal Inspiration (or more specifically Emotion Center), and Ordinal Expression (or more specifically Intellect Center). In fact, the Wikipedia article has three subsections in the "Research Areas" section, namely "Physical Development", "Social and Emotional Development", and "Cognitive Development". As we see throughout this *Cosmogony* book, in many contexts and in many instantiations, those are the first three stages of the Natural Sequence septenary, in that order.

Some names of prominent psychologists are given in this quotation, and three of them (underlined) are featured in this chapter (but do not have a chapter in this Part). In subsequent paragraphs of the Wikipedia article, other names are given and their work is introduced. Some of them have chapters of their own in this Part, so as an introduction to them, I quote as follows from the same Wikipedia article referenced above.

The Wikipedia article continues.

Historical antecedents

Jean-Jacques Rousseau and John B. Watson are typically cited as providing the foundations for modern developmental psychology. In the mid-18th century, Jean Jacques Rousseau described three stages of development: infants (infancy), puer (childhood) and adolescence in *Emile: Or, On Education*. Rousseau's ideas were taken up strongly by educators at the time.

Developmental psychology generally focuses on how and why certain changes (cognitive, social, intellectual, personality) in the course of a human life occur over time. There are many theorists who have made a profound

contribution to this area of psychology. One of them, Erik Erikson developed a model of eight stages of psychological development. He believed that humans developed in stages throughout their lifetimes and that this would affect their behaviors.

Here again, note that DevPsy models cover the behavioral, social–emotional, and intellectual–cognitive dimensions of a lifetime per the Attributes/Dimension Principle, and that this development occurs in definable and discernible stages per the Hierarchy Principle and the Transition Principle.

In the late 19th century, psychologists familiar with the evolutionary theory of Darwin began seeking an evolutionary description of psychological development; prominent here was the pioneering psychologist G. Stanley Hall, who attempted to correlate ages of childhood with previous ages of humanity. James Mark Baldwin, who wrote essays on topics that included *Imitation: A Chapter in the Natural History of Consciousness* and *Mental Development in the Child and the Race: Methods and Processes*, was heavily involved in the theory of developmental psychology. Sigmund Freud, whose concepts were developmental, significantly affected public perceptions.

So, very early on in the field of DevPsy, it was noticed that stages of socio–cultural evolution are correlated with stages of childhood development. This observation shows up in several chapters in this Part. Furthermore, Chapter **IV-x in Part IV**, “Socio–cultural Evolution”, is dedicated to the subject.

From the description below, I would say that Freud’s model is focused on the Dimension component of the Attribute Principle, and more specifically on the tripartite division of the psyche into Motion Center, Emotion Center, and Intellect Center.

Sigmund Freud — Psycho-sexual development

Sigmund Freud [1856–1939] believed that everyone has a conscious, preconscious, and unconscious level of awareness. In the conscious, one is aware of their mental process. The preconscious involves information which, though not currently in our thoughts, can be brought into consciousness. Lastly, the unconscious includes mental processes that a person is unaware of.

He believed there is tension between the conscious and unconscious because the conscious tries to hold back what the unconscious tries to express. To explain this, he developed three personality structures: the id, ego, and superego. The id, the most primitive of the three, functions according to the pleasure principle: seek pleasure and avoid pain [the correlate in the Natural Sequence is Ordinal Action or more specifically the Motion Center]. The superego plays the critical and moralizing role [the correlate in the Natural Sequence is Ordinal Inspiration or more specifically the Emotion Center]; and the ego is the organized, realistic part that mediates between the desires of the id and the superego [the correlate in the Natural Sequence is Ordinal Expression or more specifically the Intellect Center].

Here again, note the three dimensions that are investigated in the DevPsy field of research, almost from the beginning of the research. Freud may have referred to these three, id, ego, superego, as personality structures, but they arise from brain structures or modules, as we see in **Chapter IV-x in Part IV**, “The Triune Brain”.

Based on this, he proposed five universal stages of development, that each is characterized by the erogenous zone that is the source of the child’s psycho-sexual energy. The first is the oral stage, which occurs from birth to 12 months of age. During the oral stage, “the libido is centered in a baby’s mouth”. The baby is able to suck. The second is the anal stage, from one to three years of age. During the anal stage, the child defecates from the anus and is often fascinated with their defecation. The third is the phallic stage, which occurs from three to five years of age (most of a person’s personality forms by this age). During the phallic stage, the child is aware of their sexual organs. The fourth is the latency stage, which occurs from age five until puberty. During the latency stage, the child’s sexual interests are repressed. Stage five is the genital stage, which takes place from puberty until adulthood. During the genital stage, puberty starts happening.

These five stages of childhood development do not have a correlate in the Natural Sequence schema that I have been able to discern, and in any case, even though Freud’s ideas gained some traction early in the history of developmental psychology, they have lost most of their traction with subsequent research.

It is thought that the most influential figure in the history of developmental psychology is Jean Piaget, and his ideas have held up well over time. From the description below, I would say that Piaget’s model is focused on the Hierarchy Principle.

Jean Piaget — Theory of Cognitive Development

Jean Piaget [1896–1980], a Swiss theorist, posited that children learn by actively constructing knowledge through hands–on experience. He suggested that the adult’s role in helping the child learn was to provide appropriate

materials that the child can interact with and use to construct. He used Socratic questioning to get children to reflect on what they were doing, and he tried to get them to see contradictions in their explanations.

Piaget believed that intellectual development takes place through a series of stages, which he described in his theory on cognitive development. Each stage consists of steps the child must master before moving to the next step. He believed that these stages are not separate from one another, but rather that each stage builds on the previous one in a continuous learning process. He proposed four stages: sensorimotor [Ordinal phase of 1-D Action, Motion Center], pre-operational [Cardinal phase of 1-D Action, Motion Center], concrete operational [2-D Inspiration, Emotion Center], and formal operational [3-D Expression, Intellect Center]. Though he did not believe these stages occurred at any given age, many studies have determined when these cognitive abilities should take place.

The principle to be extracted from this quotation, the Holarchy Principle — the principle that reappears in all of these chapters — is that the steps or stages of development build on each other. This is one of the central principles of the Natural Sequence schema. Piaget's research only covered childhood development; subsequent researchers extended the steps and stages into the entirety of a full lifetime. Notice that Piaget's first stage is "sensorimotor", which involves learning to operate the physical body during infancy, and then learning to move around in the environment during infancy. This obviously correlates with the first stage of the Natural Sequence schema, namely Ordinal Action, or more specifically in the PAS matrix, the Motion Center. The next three stages are cognitive, having to do with how a child comes to a mental understanding of how the world works, and which correlate with Ordinal Expression in the Natural Sequence schema, or more specifically the Intellect Center. From the words "pre-operational, concrete operational, formal operational", one might get the impression that Piaget seemed to have overlooked Dimensions other than cognitive development (Expression, Intellect Center) as manifested in behavior (Action, Motion Center). In subsequent sections and chapters, we will see that his stages correlate as shown in the bracketed phrases.

In the Wikipedia article on Piaget, we find this statement:

Piaget first developed as a psychologist in the 1920s. He investigated the hidden side of children's minds. Piaget proposed that children moved from a position of ego-centrism to socio-centrism.

[>https://en.wikipedia.org/wiki/Jean_Piaget< — retrieved 21 February 2021]

As we see further on, this observation was later found to be typical of each stage of development within childhood, not just the story arc of childhood development. As a convenient shorthand in subsequent discussion, "ego-centrism" is abbreviated to "me" and "socio-centrism" is abbreviated to "we". In terms of the Natural Sequence schema, I have elevated this alternation between "me" and "we" phases within a stage to the Me-We Principle, and it corresponds to the three Ordinal and the three Cardinal sub-stages of each Life-Stage and Zones of each Worldview, as well as to the three Ordinal (Me-ish) and the three Cardinal (We-ish) Worldviews in the Natural Sequence schema, as shown in Table V-1a near the beginning of this chapter.

Let's return now to the lengthy Wikipedia article on DevPsy, which next takes up the work of Lawrence Kohlberg. From the description below, I would say that Kohlberg's model is focused on the Dimension Principle, and he takes it to an extreme.

Lawrence Kohlberg — Stages of Moral Development

Piaget claimed that logic [Ordinal Expression, Intellect Center] and morality [Ordinal Inspiration, Emotion Center] develop through constructive stages. Expanding on Piaget's work, Lawrence Kohlberg [1927 – 1987] determined that the process of moral development was principally concerned with justice, and that it continued throughout the individual's [entire] lifetime [not just childhood]. He suggested three levels of moral reasoning; pre-conventional moral reasoning, conventional moral reasoning, and post-conventional moral reasoning. The pre-conventional moral reasoning is typical of children and is characterized by reasoning that is based on rewards and punishments associated with different courses of action [Ordinal Action]. Conventional moral reason occurs during late childhood and early adolescence and is characterized by reasoning based on rules and conventions of society [Ordinal Inspiration]. Lastly, post-conventional moral reasoning is a stage during which the individual sees society's rules and conventions as relative and subjective [Ordinal Expression], rather than as authoritative. Kohlberg used the Heinz Dilemma to apply to his stages of moral development. The Heinz Dilemma involves Heinz's wife dying from cancer and Heinz having the dilemma to save his wife by stealing a drug.

Preconventional morality, conventional morality, and post-conventional morality applies to Heinz's situation.

The correlation of these three stages (pre-conventional, conventional, post-conventional) with stages of the Natural Sequence that I showed in [brackets] might seem more tenuous than those discussed in previous and

subsequent subsections. An explanation is provided in Chapter V-6 further on in the Part of the Cosmogony book, which is dedicated to Kohlberg's work.

The next model, Erikson's, appears to focus on the Dialectic Principle, the Transition Principle, and the Feedback Principle, and he takes it to an extreme.

Erik Erikson — Stages of Psycho-social Development

German-American psychologist Erik Erikson [1902 – 1994] and his collaborator and wife, Joan Erikson, conceptualized eight stages of psycho-social development that they theorized healthy individuals pass through as they develop from infancy to adulthood [Holarchy Principle]. At each stage the person must resolve a challenge, or an existential dilemma [Dialectic Principle]. Successful resolution of the dilemma results in the person ingraining a positive virtue, but failure to resolve the fundamental challenge of that stage reinforces negative perceptions of the person or the world around them and the person's personal development is unable to progress. The first stage, "Trust versus Mistrust", takes place in infancy. The positive virtue for the first stage is hope, in the infant learning whom to trust and having hope for a supportive group of people to be there for him/her. The second stage is "Autonomy versus Shame and Doubt" with the positive virtue being will. This takes place in early childhood when the child learns to become more independent by discovering what they are capable of whereas if the child is overly controlled, feelings of inadequacy are reinforced, which can lead to low self-esteem and doubt. The third stage is "Initiative versus Guilt". The virtue to be gained is a sense of purpose. This takes place primarily via play. This is the stage where the child will be curious and have many interactions with other kids. They will ask many questions as their curiosity grows. If too much guilt is present, the child may have a slower and harder time interacting with their world and other children in it. The fourth stage is "Industry (competence) versus Inferiority". The virtue for this stage is competency and is the result of the child's early experiences in school. This stage is when the child will try to win the approval of others and understand the value of their accomplishments. The fifth stage is "Identity versus Role Confusion". The virtue gained is fidelity and it takes place in adolescence. This is when the child ideally starts to identify their place in society, particularly in terms of their gender role. The sixth stage is "Intimacy versus Isolation", which happens in young adults and the virtue gained is love. This is when the person starts to share his/her life with someone else intimately and emotionally. Not doing so can reinforce feelings of isolation. The seventh stage is "Generativity versus Stagnation". This happens in adulthood and the virtue gained is care. A person becomes stable and starts to give back by raising a family and becoming involved in the community. The eighth stage is "Ego Integrity versus Despair". When one grows old, they look back on their life and contemplate their successes and failures. If they resolve this positively the virtue of wisdom is gained. This is also the stage when one can gain a sense of closure and accept death without regret or fear.

Something like some of these stages shows up in the work of other researchers/theorists, but others do not. My view is that Erikson was a pioneer whose work was on the primitive side, and that later researchers and theorists are more accurate and complete, meaning that they discerned the Natural Sequence schema with more fidelity.

Joan Erikson added a ninth stage, as documented in the Wikipedia article on her:

Joan Erikson was the main collaborator in developing husband Erik Erikson's eight stages of psycho-social development. Her contribution to Erikson's theory of personality could have been neglected, but was nevertheless important: Erik admitted being unable to distinguish between his own contribution and his wife's. Joan had a great influence on the development of the stages and on the inclusion of the eighth stage. The pair created the stages as they were experiencing them themselves, and after Erik's death in 1994, Joan added a ninth stage of very old age. This ninth stage is experienced in the eighties and nineties and is accompanied by a loss of physical health, friends, family members, and independence, in addition to isolation from society. Often during this time, individuals are put into retirement communities and assisted living facilities, which Joan believed was isolating them from society and from youth. She believed that "aging is a process of becoming free" and should not be treated as the opposite. As a result of these changes, individuals experience a loss of autonomy, self-esteem, and trust. Death is near and seen as an inevitable reality. Joan contributed to the writings on the first eight stages in the book, *The Life Cycle Completed*, and later added the final part on the ninth stage.

[>https://en.wikipedia.org/wiki/Joan_Erikson< — retrieved 03 April 2021]

Refer to Chapter V-5, "Erik Erikson", for a lengthy discussion of these nine stages, and the way that I propose to correlate the nine stages with the seven-stage Natural Sequence schema.

The word “crisis” has appeared before in this chapter (for instance, Gail Sheehy had it in the subtitle of her book) and it will appear again, so I might as well explain it further, in the context of DevPsy and the Natural Sequence schema. The reason for discussing it in this subsection is because Erikson invented the phrase “identity crisis”, and applied it to the transition from Childhood to Adolescence — see below for a description of those stages. A fellow by the name of James Marcia built on Erikson’s notion, and modified it somewhat:

Marcia is perhaps best known for his extensive research and writings on psychological development, with specific attention focused on adolescent psycho-social development and lifespan identity development. Erik H. Erikson had suggested that the normative conflict occurring in adolescence is the opposition between identity achievement and identity confusion. Marcia elaborated on Erikson’s proposal in a citation classic by suggesting this stage consists neither of identity resolution nor identity confusion as Erikson claimed, but is better understood as the extent to which one has both explored and committed to an identity in a variety of life domains including politics, occupation, religion, intimate relationships, friendships, and gender roles. “Two crucial areas in which the adolescent must make such commitments are ideology and occupation”.

His theory of identity achievement states that there are two distinct parts contributing to the achievement of adolescent identity: a time of choosing or crisis, and a commitment. He defined a crisis as a time of upheaval where old values or choices are being reexamined and new alternatives are explored — “times during adolescence when the individual seems to be actively involved in choosing among alternative occupations and beliefs”. Both exploration and commitment are the two processes that contribute to differences in outcome during an identity crisis. That is, whether or not (the extent to which) one explores identity alternatives and whether or not one makes a commitment to chosen alternatives. [https://en.wikipedia.org/wiki/James_Marcia — retrieved 22 February 2021]

In this Part, I elevate “crisis” — which happens at the beginning of a transition from one stage to another — to the status of a principle, and I refer to it as the Transition Principle. Then, I also elevate the notion of “commitment”, which happens during the stage, to a principle, and I refer to it as the Plateau Principle. In my view, both Transition and Plateau happen with each stage, in both DevPsy models and the Natural Sequence schema.

Let’s return now to the lengthy Wikipedia article on DevPsy. The next model discussed therein focuses on the Hierarchy Principle, and takes it to an extreme.

Model of Hierarchical Complexity

Michael Commons [1939 –] enhanced and simplified Bärbel Inhelder [1913 – 1997] and Piaget’s developmental theory and offers a standard method of examining the universal pattern of development. The Model of Hierarchical Complexity (MHC) is not based on the assessment of domain-specific information. It divides the Order of Hierarchical Complexity of tasks to be addressed from the Stage performance on those tasks. A stage is the order hierarchical complexity of the tasks the participant’s successfully addresses. He expanded Piaget’s original eight stage (counting the half stages) to fifteen stages. The stages are: 0–Calculatory; 1–Sensory & Motor; 2–Circular sensory-motor; 3–Sensory-motor; 4–Nominal; 5–Sentential; 6–Preoperational; 7–Primary; 8–Concrete; 9–Abstract; 10–Formal; 11–Systematic; 12–Metasystematic; 13–Paradigmatic; 14–Cross-paradigmatic; 15–Meta-Cross-paradigmatic. The order of hierarchical complexity of tasks predicts how difficult the performance is....

In the MHC, there are three main axioms for an order to meet in order for the higher order task to coordinate the next lower order task. Axioms are rules that are followed to determine how the MHC orders actions to form a hierarchy. These axioms are: a) defined in terms of tasks at the next lower order of hierarchical complexity task action; b) defined as the higher order task action that organizes two or more less complex actions; that is, the more complex action specifies the way in which the less complex actions combine; c) defined as the lower order task actions have to be carried out non-arbitrarily.

This model is a new one on me, and I have not taken the time and effort to make sense of it within the Natural Sequence schema beyond its stated correlation with Piaget’s model. There is an entire Wikipedia article on the MHC, which one may find here:

https://en.wikipedia.org/wiki/Model_of_hierarchical_complexity. Nothing more will be said about it in this book. The reason I mention it at all is because it is an extreme exploration of the Hierarchy Principle — where each stage is built upon the previous stage(s) — which might just be the most important Principle in the Natural Sequence schema and DevPsy models.

Let’s continue with the Wikipedia article.

Ecological Systems Theory

This variation on the theme of DevPsy focuses on the Dialectic Principle, the notion that development is driven by the interaction of self and not-self, aka nature and nurture, aka inner and outer realms.

Ecological systems theory, originally formulated by Urie Bronfenbrenner, [1917 – 2005] specifies four types of nested environmental systems, with bi-directional influences within and between the systems. The four systems are microsystem, mesosystem, exosystem, and macrosystem. Each system contains roles, norms and rules that can powerfully shape development. The microsystem is the direct environment in our lives such as our home and school. Mesosystem is how relationships connect to the microsystem. Exosystem is a larger social system where the child plays no role. Macrosystem refers to the cultural values, customs, and laws of society.

There are shades of the Fractality Principle in these nested systems of different sizes or scales.

The microsystem is the immediate environment surrounding and influencing the individual (example: school or the home setting). The mesosystem is the combination of two microsystems and how they influence each other (example: sibling relationships at home vs. peer relationships at school). The exosystem is the interaction among two or more settings that are indirectly linked (example: a father's job requiring more overtime ends up influencing his daughter's performance in school because he can no longer help with her homework). The macrosystem is broader taking into account socio-economic status, culture, beliefs, customs, and morals (example: a child from a wealthier family sees a peer from a less wealthy family as inferior for that reason)....

Since its publication in 1979, Bronfenbrenner's major statement of this theory, *The Ecology of Human Development* has had widespread influence on the way psychologists and others approach the study of human beings and their environments. As a result of this conceptualization of development, these environments — from the family to economic and political structures — have come to be viewed as part of the life course from childhood through to adulthood.

The takeaway that I want you to get from this subsection is that the stages of “ecological systems theory” (EcoSys) and the Natural Sequence schema both have something to do with the size of the world that one is involved with or immersed in, namely that the larger the world (from micro- to meso- to exo- to macro-), the further along one is in psycho-social development from infancy into adulthood. These correlate with the first four major Life-Stages and Worldviews that are discussed in various chapters in this Part. That is the similarity between the EcoSys and Natural Sequence schema; the difference is that EcoSys has four stages, and the Natural Sequence has seven; the Natural Sequence schema extends beyond the so-called “macro-system” of the EcoSys — which has to do with concrete society as a whole — and into the three abstract realms to which I attach, for convenience, the shorthand names “philosophy”, “theology”, and “cosmology”. Furthermore, the Natural Sequence schema is much more definitive in the characterizations of the fundamental nature of the four stages (and the seven stages) than the EcoSys is.

“Research Areas”

That is the title of another major section in >https://en.wikipedia.org/wiki/Developmental_psychology<. Three subsections of that section are titled “Cognitive Development”, “Social and Emotional Development”, and “Physical Development”. Obviously, those categories are correlated with the three Ordinal Dimensions of the Natural Sequence schema, namely and respectively the Ordinal Expression Dimension in general and Intellect Center Aspect specifically, the Ordinal Inspiration Dimension in general and Emotion Center specifically, and the Ordinal Action Dimension in general and Motion Center specifically. Obviously, this is the Dimensionality Principle of the Natural Sequence schema as it instantiates in DevPsy models. Reading that section, I see no reason to quote from it here, but the interested reader is invited to explore on their own. There are entire Wikipedia articles on each of these three DevPsy research areas.

“Life Stages of Psychological Development”

That is the title of a major section in >https://en.wikipedia.org/wiki/Developmental_psychology<. In the subsections below, I extract quotations from it, and make comments relevant to their correlation with the stages of the Natural Sequence schema, particularly the Life-Stages. This section therefore serves as an introduction to subsequent entire chapters in this Part of this *Cosmogony* book.

In the subsections of this section that follow, and throughout this Part, I have found it expedient to make a distinction between a so-called “phase” and a so-called “stage”. A stage consists of a first-half phase and a second-half phase. The first-half phase is characterized as ego-centric or Me or Ordinal, whereas the second-half phase is characterized as socio-centric or We or Cardinal — recall the discussion of the Me-We Principle in

the section above on Natural Sequence Principles. This distinction between phase and stage has been made for two reasons. The first reason is that numerous DevPsy researchers have noticed that in development through life, there is a swing back and forth between ego-centric (Me) and socio-centric (We) phases of a stage. Sometimes in their models each phase is regarded as a stage, and sometimes not. The Natural Sequence schema has seven stages, each with an Ordinal ego-centric Me phase and a Cardinal socio-centric We phase; numerous DevPsy models have more than five “stages”, and this is a clue that in some way it is composed of what I refer to as phases and stages, and I had to figure out how to correlate that particular model with the Natural Sequence schema. Whatever the terminology, phases and stages are both separated by a Transition, another Principle discussed in the section on Natural Sequence Principles, but I suggest the Transition between phases is milder than the Transition between stages, in the ideal Natural Sequence schema.

In the quotations of Wikipedia that follow, underlines of words and phrases in the quotations are my emphasis, and [bracketed] words and phrases within the quotations are my insertions indicating correlations with the stages of the Natural Sequence schema, and I provide extensive commentary interspersed between paragraphs of quoted material.

The Infancy Stage — Sensorimotor Initiation and Development

The first year or two of life correlates with the Ordinal Action stage of the Natural Sequence generally, or with the development of the Motion Center specifically.

From birth until the first year, the child is referred to as an infant.... Infant perception is what a newborn can see, hear, smell, taste, and touch. These five features are better known as one’s “five senses”.... Piaget suggested that an infant’s perception and understanding of the world depended on their motor development, which was required for the infant to link visual, tactile and motor representations of objects. According to this view, it is through touching and handling objects that infants develop object permanence, the understanding that objects are solid and permanent and continue to exist when out of sight. Piaget’s sensorimotor stage comprised six sub-stages.... In the early stages, development arises out of movements caused by primitive reflexes. Discovery of new behaviors results from classical and operant conditioning, and the formation of habits. From eight months the infant is able to uncover a hidden object but will persevere when the object is moved.... There are critical periods in infancy and childhood during which development of certain perceptual, sensorimotor [Ordinal Action, Motion Center], social [Ordinal Inspiration, Emotion Center], and language [Ordinal Expression, Intellect Center] systems depends crucially on environmental stimulation [Dialectic Principle].... Studies have been done to look at the differences in children who have developmental delays versus typical development. Normally when being compared to one another, mental age isn’t taken into consideration. There still may be differences in Developmentally delayed (DD) children versus Typical development (TD) behavioral [Ordinal Action, Motion Center], emotional [Ordinal Inspiration, Emotion Center] and other mental [Ordinal Expression, Intellect Center] disorders....

In the Infancy Stage — the first stage of the lifespan, the so-called “sensorimotor” phase of human development — the primary task of the infant is to first learn to operate the physical body, and secondarily, to learn to operate the physical body in relation to the environment by manipulating physical objects. Therefore, I see this stage as having two phases, a “me” phase and a “we” phase. We will see this pattern — focus on the internal realm first and focus on the external realm second — in subsequent stages; therefore I refer to this as the Me-We Principle. The sensorimotor stage, aka the Infancy stage, obviously correlates with the first stage, the Ordinal Action stage, of the Natural Sequence schema, with the Me phase being the Ordinal phase of Ordinal Action, and the We phase being the Cardinal phase of Ordinal Action. Sensorimotor function continues to develop into adulthood, and athletes can continue to develop skill in their movements well into adulthood.

Subsequent to reading this and other descriptions of the Infant Life-Stage, my preference is to name the Positive Pole as +Coordination and the Negative Pole as –Clumsiness. One can see that where one ends up in regard to these Poles affects how well coordinated versus how clumsy one is during the entire lifetime in contexts other than the operation of the physical body.

Note that the newborn infant starts out with random, spontaneous, chaotic movements, and learns to control and regulate them from there on, in order to be effective and efficient with their body and with objects. This is typical for all stages during a lifetime; the starting of a new stage of development with chaotic exploration and experimentation is a component of the overall pattern, because it is also typical of the initiation of subsequent stages, as already discussed, and this is referred to as the Transition Principle.

The Toddlerhood Phase — Initiation of Emotional–Social Development

The Dimensionality Principle begins to manifest noticeably after the so-called “Infancy” stage of human development, because after the first year or two of life where the infant developed the Motion Center, the child begins to develop the Emotion Center in the so-called “Toddler” stage.

The Wikipedia article continues in its description of stages of development:

Infants shift, between ages of one and two, to a developmental stage known as toddlerhood. In this stage, an infant’s transition into toddlerhood is highlighted through self-awareness, developing maturity in language use, and the presence of memory and imagination.

During toddlerhood, babies begin learning how to walk, talk, and make decisions for themselves. An important characteristic of this age period is the development of language, where children are learning how to communicate and express their emotions and desires through the use of vocal sounds, babbling, and eventually words. Self-control also begins to develop. At this age, children take initiative to explore, experiment and learn from making mistakes. Caretakers who encourage toddlers to try new things and test their limits, help the child become autonomous, self-reliant, and confident. If the caretaker is overprotective or disapproving of independent actions, the toddler may begin to doubt their abilities and feel ashamed of the desire for independence. The child’s autonomic development is inhibited, leaving them less prepared to deal with the world in the future. Toddlers also begin to identify themselves in gender roles, acting according to their perception of what a man or woman should do.

Socially, the period of toddlerhood is commonly called the “terrible twos”. Toddlers often use their new-found language abilities to voice their desires, but are often misunderstood by parents due to their language skills just beginning to develop. A person at this stage testing their independence is another reason behind the stage’s infamous label. Tantrums in a fit of frustration are also common.

As with the Infancy stage, the Toddler phase manifests the Dialectic Principle in regard to the ego-centric emotions and the socio-centric interactions with others. As with behavioral learning during the Infancy stage, the emotions and social interactions during the Toddler phase are random and chaotic at first per the Transition Principle, but over time children learn what is acceptable and what is not acceptable in terms of emotional expression and social interaction. As one can see from the quotation, the Toddler phase is a continuation of the Infancy stage in that much of it correlates with the Ordinal Action stage of the Natural Sequence schema, but one can also see from the quotation that the toddler is beginning to exhibit the rudiments and fundamentals of emotional–social development, which obviously correlates with the second stage, the Ordinal Inspiration stage, of the Natural Sequence schema.

As we will see in the next subsection, this emotional–social phase starts with Toddlerhood, but it does not end there; it continues through the remainder of childhood. Therefore, the Toddler phase and the Childhood phase best fit with the Natural Sequence schema if they are considered to be two phases of Ordinal Inspiration, with the Toddler phase regarded as the Me levels of Ordinal Inspiration, and the Childhood phase regarded as the We levels of Ordinal Inspiration, per the Me-We Principle.

The points that I want to emphasize about the Toddler phase are these: It is in this phase that children continue to learn to operate the physical body in the environment, but they also begin to learn to express emotions, and then regulate emotions to suit the guidance of their caretakers. With proper upbringing, negative emotions diminish and positive emotions increase; with improper upbringing, negative emotions increase, and a negative feedback loop develops with the caretakers per the Dialectic Principle. It is also in this phase that children had better begin to learn social skills — to get along with others, such as siblings, parents, and the babysitter — or a life-long struggle of self against the world begins.

In terms of the Natural Sequence schema, the development of Motion Center motor skills begins at birth and continues into adulthood, but declines after middle age. The development of Emotion Center social skills mostly begins after infancy and continues into adulthood, and even into old age. The development of Intellect Center logical reasoning skills mostly begins after childhood and continues into adulthood, but declines after middle age.

The Childhood Phase — Continuation of Emotional–Social Development

As we will see in many subsequent chapters on specific DevPsy models, there is a shift from emphasis on maturation in the Action Dimension/Motion Center in the Infancy stage to an emphasis on maturation in the

Inspiration Dimension/Emotion Center in the Toddler phase and the Childhood phase. Take note of that in the next few subsections.

The Wikipedia article continues in its description of stages of development:

Play (or preschool) (ages 3–5)

In the earliest years, children are “completely dependent on the care of others”. Therefore, they develop a “social relationship” with their caregivers and, later, with family members. During their preschool years (3–5), they “enlarge their social horizons” to include people outside the family....

The motor skills of preschoolers increase so they can do more things for themselves. They become more independent. No longer completely dependent on the care of others, the world of this age group expands. More people have a role in shaping their individual personalities. Preschoolers explore and question their world. For Jean Piaget, the child is “a little scientist exploring and reflecting on these explorations to increase competence” and this is done in “a very independent way”.

Play is a major activity for ages 3–5. For Piaget, through play “a child reaches higher levels of cognitive development”.

In their expanded world, children in the 3–5 age group attempt to find their own way. If this is done in a socially acceptable way, the child develops the initiative. If not, the child develops guilt....

Playfulness and guilt are positive and negative expressions of the Emotion Center. Shame and tantrums were mentioned above as negative expressions in this phase of life.

Middle childhood (ages 6–13)

For Erik Erikson, the psycho-social crisis during middle childhood is Industry versus Inferiority which, if successfully met, instills a sense of Competency in the child.

In all cultures, middle childhood is a time for developing “skills that will be needed in their society”. School offers an arena in which children can gain a view of themselves as “industrious (and worthy)”. They are “graded for their school work and often for their industry”. They can also develop industry outside of school in sports, games, and doing volunteer work. Children who achieve “success in school or games might develop a feeling of competence”.

The “peril during this period is that feelings of inadequacy and inferiority will develop. Parents and teachers can “undermine” a child's development by failing to recognize accomplishments or being overly critical of a child's efforts. Children who are “encouraged and praised” develop a belief in their competence. Lack of encouragement or ability to excel lead to “feelings of inadequacy and inferiority”....

Underlined words emphasize the emotional-social development during the second stage, the Toddler-Childhood stage, the Ordinal Inspiration stage of the Natural Sequence schema. The Emotion Center is one of the Aspects of the Ordinal Inspiration Dimension. Such feelings about one's worth to self and society, mentioned above, are from the development of the Emotion Center that takes place in childhood. Childhood is the time for fundamental socialization into the socio-cultural environment.

Middle Childhood (ages 7–10)

Entering elementary school, children in this age group begin to think about the future and their “place in the world”. Working with other students and wanting their friendship and acceptance become more important. [Dialectic Principle] This leads to “more independence from parents and family”. As students, they develop the mental and verbal skills “to describe experiences and talk about thoughts and feelings”. They become less self-centered and show “more concern for others”.

One of the trends in the Hierarchy Principle from beginning to end is that people normally evolve from Me (ego-centrism) to We (socio-centrism). This is part of the emotional maturation process, but it also happens in the behavioral and the mental maturation processes.

Middle Childhood (ages 9–11).

For children ages 9–11 “friendships and peer relationships” increase in strength, complexity, and importance. This results in greater “peer pressure”. They grow even less dependent on their families and they are challenged academically. To meet this challenge, they increase their attention span and learn to see other points of view.

Another Wikipedia article, >https://en.wikipedia.org/wiki/Social_emotional_development<, has an extensive explanation of the social-emotional development that takes place during the early phases of a human life, a

phase that is mostly emphasized from pre-school to middle school. This information confirms my correlation of the Toddler and Childhood phases with Ordinal Inspiration generally, and the Emotion Center specifically.

Subsequent to reading this and other descriptions of the Childhood Life-Stage, my preference is to name the Positive Pole as +Socialization and the Negative Pole as –Co-dependence. One can see that where one ends up in regard to these Poles affects how well fitted to society versus how dependent on society one is during the entire lifetime in contexts other than with childhood playmates and school-mates.

The takeaway points about Childhood as an instantiation of a phase of Ordinal Inspiration are these: There is continued development of motor skills that were begun in the Infancy stage; there is continued development of the emotional and social skills that were begun in the Toddler phase; as with the Toddler phase the focus of attention continues to move away from ego-centrism toward socio-centrism during the course of the Childhood phase; the rudiments and fundamentals of mental and intellectual development are initiated in this phase, and these come to fuller fruition in the next phase, Adolescence. However, for the most part, it seems that the Childhood phase of human development correlates best with the We phase of the Ordinal Inspiration stage.

The Adolescence Phase — Beginning of Cognitive–Intellectual Development

During the Childhood phase there is an emphasis on maturation in Ordinal Inspiration (Emotion Center), whereas in Adolescence there is an emphasis on maturation in the Ordinal Expression (Intellect Center). Notice that as you read the next few subsections.

The Wikipedia article continues in its description of stages of development:

Adolescence is the period of life between the onset of puberty and the full commitment to an adult social role, such as worker, parent, and/or citizen. It is the period known for the formation of personal and social identity (see Erik Erikson) and the discovery of moral purpose (see William Damon). Intelligence is demonstrated through the logical use of symbols related to abstract concepts and formal reasoning. A return to ego-centric thought [from socio-centric emotions in the Childhood phase] often occurs early in the period.

Take note of the Me-We Principle here, with mention of the swing between Me (Ordinal) and We (Cardinal) phases of the stages. This is a prominent feature of some DevPsy models discussed in subsequent chapters. Adolescence is also about building on the emotional-social stage of childhood and moving into the mental-cognitive stage.

Only 35% develop the capacity to reason formally during adolescence or adulthood. (Huitt, W. and Hummel, J. January 1998)

This statement indicates that some people are limited in how far they can fully and healthily develop along the entire spectrum of Life-Stages. We will see over and over again in this Part that it is quite common for people to become cases of “arrested development”; one way or another, they do not develop in healthy ways during the entire story arc of their lives. Instead, they get stuck somewhere along the way, in one or another stage, and they do not advance to the next stage, or if they do, it is in the Negative Pole. One of the reasons for this seems to be because some physiological, behavioral, emotional, or mental adversity locks them into the Negative Pole of an early Life-Stage. Another reason for this seems to be that their inherent, inborn personality trait of Worldview and/or Zone is at the primitive end of the Natural Sequence spectrum.

If this 35% figure means what I think it means, then it is a sad commentary on the human condition that only 35% of people mature fully into the third stage, the Ordinal Expression, Intellect Center stage, of the Natural Sequence schema. This would explain the irrationality and general immaturity that dominates human actions and interactions in the world today.

But I digress. Let’s continue with the Wikipedia article.

It [adolescence] is divided into three parts, namely:

Early Adolescence: 10 to 14 years [middle school years]

Mid Adolescence: 15 to 17 years and [high school years]

Late Adolescence: 18 to 19 years [college years]

Perhaps with more information about the nature and characteristics of these sub-stages, I could confidently correlate them with the Ordinal (Motion, Emotion, Intellect) sub-stages of the Ordinal Expression (Intellect Center) Dimension of the Natural Sequence schema.

The adolescent unconsciously explores questions such as “Who am I? Who do I want to be?” Like toddlers, adolescents must explore, test limits, become autonomous, and commit to an identity, or sense of self. Different

roles, behaviors and ideologies must be tried out to select an identity. Role confusion and inability to choose vocation can result from a failure to achieve a sense of identity through, for example, friends.

Notice in this quotation an emphasis on mental development and identity development that has not been present to this extent in the description of previous phases and stages. Therefore, it seems appropriate to correlate the Adolescent phase of human development with the Ordinal Expression stage of the Natural Sequence schema, and more specifically with the Me phase of Ordinal Expression. As you will recall, the name that I have chosen for the Ordinal Expression Process is “Analysis”, a word that is appropriate for both intellectual functions and identity development as Adolescents “sort themselves out” in terms of who they are and who they are not. (The We phase of Ordinal Expression is discussed in the next subsection.) Another word that is commonly used for this process of separating from family and “sorting oneself out” and “striking out on one’s own” and “making a name for oneself” is “individuation”.

The Early Adulthood Phase — Continuation of Cognitive–Intellectual Development

The mental development and individuation that gained prominence in the Adolescent phase continues into the Early Adulthood phase, but with an emphasis on We rather than on Me.

The Wikipedia article continues in its description of phases and stages of development:

Early adulthood generally refers to the period between ages 20 to 29, and according to theorists such as Erik Erikson, is a stage where development is mainly focused on maintaining relationships. Examples include creating bonds of intimacy, sustaining friendships, and starting a family. Some theorists state that development of intimacy skills rely on the resolution of previous developmental stages [the Dialectic Principle]. A sense of identity gained in the previous stages is also necessary for intimacy to develop. If this skill is not learned the alternative is alienation, isolation, a fear of commitment, and the inability to depend on others.

The DevPsy model proposed by Erikson is discussed in Chapter V-5 below.

In Natural Sequence terminology, the Ordinal Expression Dimension of the Zone Aspect (a subset of the Worldview Aspect) is named “Separation”, the Positive Pole is “+Individuation”, and the Negative Pole is “–Alienation. Another Aspect of Ordinal Expression is the Intellect Center, which comes to prominence during the Adolescent and Early Adulthood phases. Basically, the Intellect Center is about making distinctions, defining things, naming things, discerning relationships between things, and manipulating thoughts in the mind.

A related framework for studying this part of the lifespan is that of emerging adulthood. Scholars of emerging adulthood, such as Jeffrey Arnett, are not necessarily interested in relationship development. Instead, this concept suggests that people transition after their teenage years into a period not characterized as relationship building and an overall sense of constancy with life, but with years of living with parents, phases of self-discovery, and experimentation.

As stated above, I regard Adolescence and Early Adulthood as one stage (the Ordinal Expression stage of the Natural Sequence schema) in two parts, the Adolescent Me phase and the Early Adulthood We phase, per the Me-We Principle that happens in all stages. Besides that, the main point of discussing this stage of psychological development is that, in the pre-adolescent phase, there was some intellectual development, especially after the child started school, but Adolescence–Early Adulthood is the stage in a typical human life where mental development takes precedence over emotional and social development, and where individuation is the primary emphasis.

Subsequent to reading this and other descriptions of the Youth Life-Stage, my preference is to name the Positive Pole as +Independence and the Negative Pole as –Irresponsibility. One can see that where one ends up in regard to these Poles affects how competently self-responsible versus how incompetently self-irresponsible one is during the entire lifetime in contexts other than beginning to find a place in, versus not finding a place in, the world at large.

The Middle Adulthood Stage — The Peak Years

The next phase of DevPsy correlates with the Neutral Assimilation Dimension of the Natural Sequence schema.

The Wikipedia article continues in its description of phases and stages of development:

Middle adulthood generally refers to the period between ages 30 to 49. During this period, middle-aged adults experience a conflict between Generativity and Stagnation [according to Erikson]. They may either feel a sense of

contributing to society, the next generation, or their immediate community; or develop a sense of purposelessness. The important influence of biological and social changes experienced by women and men in middle adulthood is reflected in the fact that depression is highest at age 48.5 around the world.

Depression is a typical psychological symptom of the inner struggle that happens at each Transition from one stage to the next. There was more said in the above Wikipedia entry but it was inadequate to make a firm correlation with the fourth Life-Stage of the Natural Sequence schema, Neutral Assimilation, so I referred to the full Wikipedia article on the subject, >https://en.wikipedia.org/wiki/Middle_age<, and found this:

For some, marital satisfaction remains but other family relationships can be more difficult. Career satisfaction focuses more on inner satisfaction and contentedness and less on ambition and the desire to “advance”. Even so, career changes often can occur. Middle adulthood or middle age can be a time when a person re-examines their life by taking stock, and evaluating their accomplishments. Morality may change and become more conscious.

In the Natural Sequence schema, during one's thirties, the Transition of the fourth Life-Stage is mostly about shedding acculturation during the emergence into manifestation of a deeper, truer self. The fourth Life-Stage, with Attributes of Neutral Assimilation is qualitatively different from the three previous Life-Stages, with their Ordinal Attributes.

As we will see in subsequent chapters, the above description is referring to the early half of Middle Adulthood, one's Thirties, whereas the following description is referring to the later half of Middle Adulthood, one's Forties:

The perception that those in this stage of development of life undergo a “mid-life” crisis is largely false. This period in life is usually satisfying, tranquil. Personality characteristics remain stable throughout this period. The relationships in middle adulthood may continue to evolve into connections that are stable.

[>https://en.wikipedia.org/wiki/Developmental_psychology< — retrieved 16 February 2021]

Here again, I want to point out that, as with previous and subsequent stages, this stage of human development is divided into two parts, an ego-centric so-called “Me” phase and a socio-centric so-called “We” phase per the Me-We Principle. As with other stages, there is often a chaotic transition period from the previous stage to this stage, and that is the “mid-life crisis” that is well known and well documented with people in their early to mid thirties, where they “re-examine” and “take stock” — far more is said about this further on. If the transition is handled well during their thirties (the Me phase), then the person settles into a condition of “inner satisfaction and contentedness” during their forties, the We phase, and this phase lasts until the next Transition at about age fifty.

Beyond this point in the Wikipedia article on DevPsy, there is a subsection on Old Age, but it did not have what I was looking for, so I turned to Wikipedia articles that are dedicated to that stage of adult development.

Subsequent to reading this and other descriptions of the Middle Age Life-Stage, my preference is to name the Positive Pole as +Authenticity and the Negative Pole as –Falseness. One can see that where one ends up in regard to these Poles affects how much one will fully realize one's true nature, versus how much one will remain in one's acculturated nurture, during the remainder of the entire lifetime.

The Late Adulthood Stage — Seniority Time

This is the stage that, in the Life-Stages of the Natural Sequence schema, covers the years from about age fifty to about age sixty-five. It is the fifth stage, with Attributes of Cardinal Expression and Synthesis Process, one of the Aspects of which is Concept Center.

In my own personal experience, age fifty-ish is when I perceived that I was starting to go “over the hump”; my life had ‘peaked’ in some way, and I had entered the ‘down-hill’ side of the ‘story-arc’ of my employment career and life in general. At that time I devised and implemented plans to prepare for retirement well in advance of the event, and I shifted my focus away from career advancement to, as one might say, “extra-curricular activities”. I also began to focus on tidying up my legacy in the profession. That is, during the last decade of my working career, I gathered together my written and graphic accumulation of knowledge in my engineering profession, and I handed it to the young whipper-snappers upon my exit from the employment scene. The name that I have chosen for this Life-Stage of the Natural Sequence schema is Seniority.

I regard this stage as the “beginning to wind down” phase of adulthood. This is when the effects of a decline in body and mind begin to get noticed, so one must begin to compensate, and begin to look elsewhere for realms in which one can maintain competence and continue to develop, personally in the Me phase, and socially in the We phase of the stage.

Here is what a Wikipedia article dedicated to this phase of life had to say:

Middle age is the period of age beyond young adulthood but before the onset of old age. Though the exact range is disputed, most sources place middle adulthood between the ages of 45-65. This phase of life is marked by gradual physical [1-D, Ordinal Action, Motion Center], cognitive [3-D, Ordinal Expression, Intellect Center], and social [2-D, Ordinal Inspiration, Emotion Center] changes in the individual as they age....

Obviously, the quotation above mentions what I refer to as the Dimensionality Principle of the Natural Sequence schema. In fact, the Wikipedia article has sections describing the “Physical”, “Social”, and “Cognitive” characteristics of Middle Age. And then there is this:

Emotional responses and retrospection vary from person to person, for example, experiencing a sense of mortality, sadness, or loss are common emotions at this age....

In my personal experience, the aging process past the half century mark has been about letting go of the things of youth as part of “retrospection” while maintaining aspirations for the future as part of “prospection”. During the Seniority Life-Stage, one realizes that, in some ways, the “best” is behind. If one gets stuck in the past, that is the unhealthy pessimistic path through this Life-Stage; if one continues to look forward to the future with optimism, then that is the healthy path.

The Seniority stage ends when one retires, and therefore becomes totally unencumbered by career concerns. (At my age now, about 75 years old, the letting go of youthful vigor is still in progress, at an ever-accelerating pace, but there are compensations in terms of ability and freedom to be of service to others, less encumbered as one can be when not focused on career and its concerns.)

I omit quoting the section in the Wikipedia article where it discusses physical changes in the body during the Late Adulthood stage. That phenomenon correlates with the Dimension of the Natural Sequence that is named Ordinal Action in general and Motion Center specifically. The next subsection of the Wikipedia article after that discusses the Dimension of the Natural Sequence that is named Ordinal Inspiration in general and Emotion Center specifically. After that, there is discussion of the Dimension of the Natural Sequence that is named Ordinal Expression in general and Intellect Center specifically.

Then I resume quoting from Wikipedia:

Social and personality characteristics

For some, marital satisfaction remains but other family relationships can be more difficult. Career satisfaction focuses more on inner satisfaction and contentedness and less on ambition and the desire to “advance”. Even so, career changes often can occur. Middle adulthood or middle age can be a time when a person re-examines their life by taking stock, and evaluating their accomplishments. Morality may change and become more conscious.

The perception that those in this stage of development of life undergo a “mid-life” crisis is largely false. This period in life is usually satisfying, tranquil. Personality characteristics remain stable throughout this period. The relationships in middle adulthood may continue to evolve into connections that are stable.

The changes of morality referred to in this quotation are discussed at some length in the chapters on Kohlberg and Fowler.

In my view, the quotation above is mostly referring to the Plateau phase that follows the Transition transition into the Late Adulthood stage, starting at about age fifty, the Fifth Stage in Natural Sequence terms. From my own experience, and that of others that I know personally, and from other DevPsy models, the so-called “mid-life crisis” happens in one’s mid-thirties, at the beginning of the previous stage, the Neutral Assimilation stage, the Fourth Stage in the Natural Sequence schema, not a decade and a half later at the beginning of the Fifth Stage. The Transition at about age fifty from Stage 4 Neutral Assimilation to Stage 5 Cardinal Expression is mild in comparison to other Metamorphoses between stages.

The Wikipedia article continues to discuss the Late Adulthood stage, the Seniority Life-Stage that comes before actual retirement.

Cognitive characteristics

Erik Erikson refers to this period of adulthood as the generativity-versus-stagnation [stage]. This is the seventh out of eight stages of Erik Erikson’s stages [Fifth Stage in the Natural Sequence schema].... During this stage, we can see that adults strive to have things that will outlast them [their legacy]. When we are talking about this stage, the generativity means that one is making one’s mark. This is where one is [socio-centric,] trying to make the world a better place.

Key characteristics of generativity:

- Mentoring others
- To develop relationships with family
- Contributing to the next generation

On a personal note, the documentation of the accumulated knowledge of my working career that I gave to my employer, and my seven books that I give to the world, are my legacy. Yes, I aspire to make the world a better place.

Then we can see that stagnation means a failure to find a way to contribute. When people are in this part of the stage we can see that people can feel disconnected from the community and society.

Key characteristics of stagnation:

- No improvement of oneself
- Placing themselves above everything
- Being self-centered

There when we can understand how to increase our generativity and make sure that we are not using stagnation we can become better and be more connected in cognitive ways. [https://en.wikipedia.org/wiki/Middle_age — retrieved 05 April 2021]

“Cognitive connection” is very much a feature of the Synthesis Process and its Concept Center. If one gets stuck in the ego-centric “stagnant” morass of the Transition at the beginning of this Life-Stage, then one does not graduate to the “generative” socio-centric phase of the stage. This is the same as with all other stages; this is yet another appearance of the Me-We Principle of the Natural Sequence schema.

Subsequent to reading this and other descriptions of the Seniority Life-Stage, my preference is to name the Positive Pole as +Legacy and the Negative Pole as –Self-indulgence. One can see that where one ends up in regard to these Poles affects how much one contributes to the greater good versus how much one contributes only to oneself for the remainder of the lifetime.

The Old Age Stage — Retirement and/or “Golden Years”

This is where I am now, in my mid-seventies at the time of this writing. In the Natural Sequence schema, this is the sixth Life-Stage, with Attributes of Cardinal Inspiration and Evolution Process, one of the Aspects of which is Sympathy Center. In the Natural Sequence schema, I have named this Life-Stage “Elderhood”.

So what does Wikipedia, and what do the DevPsy models, have to say about it? For your convenience, I have marked synonyms for what I regard as the Positive [+] and Negative [–] Poles of this Life-Stage in the following quotation. Notice the emotional component of this Inspiration stage.

The United Nations has agreed that 65+ years may be usually denoted as old age and this is the first attempt at an international definition of old age.

PSYCHO-SOCIAL ASPECTS

According to Erik Erikson’s “Stages of Psycho-social Development”, the human personality is developed in a series of eight stages that take place from the time of birth and continue on throughout an individual’s complete life. He characterizes old age as a period of “Integrity versus [–] Despair”, during which a person focuses on reflecting back on his life. Those who are unsuccessful during this phase will feel that their life has been wasted and will experience many [–] regrets. The individual will be left with feelings of [–] bitterness and despair. Those who feel [+] proud of their accomplishments will feel a sense of integrity. Successfully completing this phase means looking back with few regrets and a general feeling of [+] satisfaction. These individuals will attain wisdom, even when confronting death. Coping is a very important skill needed in the aging process to move forward with life and not be ‘stuck’ in the past. The way a person adapts and copes, reflects his aging process on a psycho-social level.

Newman & Newman [in their textbook *Development Through Life*] also proposed a ninth stage of life, Elderhood. Elderhood refers to those individuals who live past the life expectancy of their birth cohorts. There are two different types of people described in this stage of life. The “young old” are the healthy individuals who can function on their own without assistance and can complete their daily tasks independently. The “old old” are those who depend on specific services due to declining health or diseases. This period of life is characterized as a period of “immortality versus extinction”. Immortality is the belief that your life will go on past death, some examples are an afterlife or living on through one’s family. Extinction refers to feeling as if life has no purpose.

My preference, based on the notion that the Life-Stages represent an “ideal” lifespan story arc, is to put the description of the “young old” into the Elderhood Life-Stage generally and the description of the “old old” into the Dying Life-Stage (see next section) generally, but one can see that physical and mental health issues in specific cases cause a departure from the idealized story arc during the declination phase of the advanced aging process.

Theories

Social theories, or concepts, propose explanations for the distinctive relationships between old people and their societies.

One theory, proposed in 1961, is the disengagement theory, which proposes that, in old age, a mutual disengagement between people and their society occurs in anticipation of death. By becoming disengaged from work and family responsibilities, according to this concept, people are enabled to enjoy their old age without stress. This theory has been subjected to the criticism that old age disengagement is neither natural, inevitable, nor beneficial. Furthermore, disengaging from social ties in old age is not across the board: unsatisfactory ties are dropped and satisfying ones kept.

In opposition to the disengagement theory, the activity theory of old age argues that disengagement in old age occurs not by desire, but by the barriers to social engagement imposed by society. This theory has been faulted for not factoring in psychological changes that occur in old age as shown by reduced activity, even when available. It has also been found that happiness in old age is not proportional to activity.

According to the continuity theory, in spite of the inevitable differences imposed by their old age, most people try to maintain continuity in personhood, activities, and relationships with their younger days.

Socio-emotional selectivity theory also depicts how people maintain continuity in old age. The focus of this theory is continuity sustained by social networks, albeit networks narrowed by choice and by circumstances. The choice is for more harmonious relationships. The circumstances are loss of relationships by death and distance.

[>https://en.wikipedia.org/wiki/Old_age< — retrieved 16 February 2022]

Based on the description above, one could make a case that –Disengagement is an appropriate ego-centric name for the Negative Pole of the Elderhood Life-Stage, and that +Continuity is an appropriate name for the Positive Pole, +Continuity meaning that the person successfully transited the Transition and continues to be as socio-centric as health allows. Disengagement from, and letting go of, stuff that no longer works during this stage is not a bad thing, really, especially if/when one maintains an engaged continuity with stuff that has consistently promoted well-being during one’s younger and healthier days.

One can extrapolate from the brief description above, and one can think about what it means, and I can speak from personal experience and observation of my retired peers. I can also ponder the abstract meaning of this stage, the sixth stage, in the Natural Sequence schema.

In the Life-Stages of the Natural Sequence schema, the sixth stage is named Elderhood, which is typically after retirement from one’s multi-decade employment path. Now that a person’s fulfillment and satisfaction is no longer derived from the working world, and now that a person is no longer encumbered with the distraction of having to make a living, they tend to ask, “So now what?” It can be hoped that they will have thought about this ahead of retirement and made preparations, but if not, then typically this time of retrospective qualitative assessment goes awry. In the Negative Pole, they become elderly in the worst sense of that word; they truly retire — from interest in life — and focus only on themselves and the satisfaction of their lower desires. They spiral downward in what I refer to as a “negative energy vortex”. They are disappointed with themselves, and perhaps disappointed with the world, for not living up to their youthful expectations. In the worst-case scenario, they might even be bitter that they did not live up to their youthful ambitions and aspirations. They become basically worthless as far as continuing to contribute to society.

On the other hand, people who Metamorphosed gracefully and graciously into retirement live in the Positive Pole. These people enter their so-called “golden years”, and they make the best of it; they continue to ascend on an upward trajectory. Some turn an activity that was a sideline or hobby or “extracurricular activity” during their employment decades into a full-time creative endeavor that makes themselves and/or others happy, an endeavor that gives everyone satisfaction and fulfillment. People who live this stage in the Positive Pole likely continue a life-long path of self-improvement, as well as social engagement. Many become volunteers for some social betterment endeavor that they find meaningful. Whatever they do, they continue to remain productive in one way or another. (I finish writing my books, the first one of which I started more than forty years ago. This is making me a better person. Will it make a better world?)

Subsequent to reading this and other descriptions of the Elderhood Life-Stage, my preference is to name the Positive Pole as +Gratitude and the Negative Pole as –Regret. One can see that where one ends up in regard to these Poles affects how much one feels happy, satisfied, and fulfilled about a life well lived versus how much one feels the need to apologize to oneself and others for a life not well lived.

“Time waits for no one”, as the saying goes, so, in the long run, the aging process catches up with all of us even if we have had an exemplary life, and we enter the final stage of the story arc of the life cycle.

The Dying Life-Stage — The Decline before Death

The Wikipedia article continues with a description of the last stage of a full lifetime. This is the ninth stage of the Erikson model, but the seventh stage of the Natural Sequence schema, which I have named the Dying Life-Stage, it has Cardinal Action and Origination Process Attributes, and it is correlated with the Excitation Center. This correlation might seem paradoxical, but there is an explanation, which I provide after some Wikipedia quotations.

Psycho–social Crises: All first eight stages in reverse quotient order.

Joan M. Erikson, who married and collaborated with Erik Erikson, added a ninth stage in *The Life Cycle Completed: Extended Version*. Living in the ninth stage, she wrote, “old age in one’s eighties and nineties brings with it new demands, reevaluations, and daily difficulties”. Addressing these new challenges requires “designating a new ninth stage”. Erikson was ninety-three years old when she wrote about the ninth stage. Joan Erikson showed that all the eight stages “are relevant and recurring in the ninth stage”. In the ninth stage, the psycho–social crises of the eight stages are faced again, but with the quotient order reversed. For example, in the first stage (infancy), the psycho–social crisis was “Trust vs. Mistrust” with Trust being the “syntonic [Positive Pole] quotient” and Mistrust being the “dystonic” [Negative Pole].

[>https://en.wikipedia.org/wiki/Erikson's_stages_of_psychosocial_development< — retrieved 07 May 2021]

For people in their 80s and 90s, Joan Erikson added a ninth stage in *The Life Cycle Completed: Extended Version*. As she wrote, she added the ninth stage because the Integrity of the eighth stage imposes “a serious demand on the senses of elders” and the Wisdom of the eighth stage requires capacities that ninth stage elders “do not usually have”. [>https://en.wikipedia.org/wiki/Old_age< — retrieved 16 February 2022]

Another aspect of the cognitive component of many existential crises concerns the attitude to one’s personal end, i.e. the realization that one will die one day. While this is not new information as an abstract insight, it takes on a more personal and concrete nature when one sees oneself confronted with this fact as a concrete reality one has to face. This aspect is of particular relevance for existential crises occurring later in life or when the crisis was triggered by the loss of a loved one or by the onset of a terminal disease. For many, the issue of their own death is associated with anxiety. But it has also been argued that the contemplation of one’s death may act as a key to resolving an existential crisis. The reason for this is that the realization that one’s time is limited can act as a source of meaning by making the remaining time more valuable and by making it easier to discern the bigger issues that matter in contrast to smaller everyday issues that can act as distractions. Important factors for dealing with imminent death include one’s religious outlook, one’s self-esteem, and social integration as well as one’s future prospects. [>https://en.wikipedia.org/wiki/Identity_crisis< — retrieved 17 February 2022]

This is the final stage of the lifespan, where a person must face their mortality squarely, come to terms with it, and make whatever behavioral, emotional, cognitive, psychological, philosophical, and theological adjustments are necessary to accommodate the undeniable inevitable. As with other stages, it typically has an ego-centric Ordinal phase and a socio-centric Cardinal phase. The Ordinal phase typically begins when a person is so decrepit that they can no longer make a positive contribution to themselves and to their world. The Cardinal phase begins when a person definitely enters the dying process. Paradoxically, even though the life is almost over, if the person has completed the first six Life-Stages in the Positive Pole, and they have a sense that their life was well-lived and successful, then they can anticipate their exit with a sense of satisfaction and accomplishment. If they have faith in an afterlife, then they approach death as if it were opening a door into a greater reality, and this resolves the ultimate paradox of death versus life, of Termination versus Origination. If they have not resolved, or at least let go of, the issues and dilemmas and crises of the story arc of their lives, then that makes the dying process even uglier than it has to be. Elizabeth Kubler-Ross, who believed in an afterlife, had somewhat to say about this process in her book *On Death and Dying*. She founded the Hospice Movement, which is premised on making the Transition of death into as positive an experience as it can be.

Subsequent to reading this and other descriptions of the Dying Life-Stage, my preference is to name the Positive Pole as +Anticipation and the Negative Pole as –Disengagement. One can see that where one ends up in regard to these Poles affects how easily and gracefully one exits the life versus how awkwardly and gracelessly one exits the lifetime.

The Transition Principle in DevPsy Models

There is a part of me that wants the information in this Part to be enlightening to the reader in the psychotherapeutic sense, not just enlightening in the academic sense. If I can increase your awareness and understanding about what is happening to you during the story arc of your life, then I am happier, and it is hoped that you will also be happier. The most important factor in this endeavor in this context seems to be awareness of the existence and function of ‘turning points’ and ‘course corrections’ during a lifetime. Consequently, the following few sections are focused on elucidating the Transition Principle of the Natural Sequence schema.

Positive Adult Development

Several times in the sections above, the three Natural Sequence schema Dimensions of Ordinal Action (Motion Center), Ordinal Inspiration (Emotion Center), and Ordinal Expression (Intellect Center) were mentioned as being present in, and the focus of, various DevPsy models. These three Dimensions seemed to be the limit among the humanistic psychologists that were introduced in the “Brief History” section above. However, there are seven stages in the Natural Sequence schema. One might wonder if the other four were ever noticed. According to the Wikipedia entry on “positive adult development”, it took a while for DevPsy researchers to get there:

Positive adult development is a subfield of developmental psychology that studies positive development during adulthood. It is one of four major forms of adult developmental study that can be identified, according to Michael Commons; the other three forms are directionless change, stasis, and decline (Commons, 2002). Commons divided positive adult developmental processes into at least six areas of study: hierarchical complexity (i.e., orders or stages), knowledge, experience [Neutral Assimilation, Impulse Center], expertise [Cardinal Action, Excitation Center], wisdom [Cardinal Expression, Concept Center], and spirituality [Cardinal Inspiration, Sympathy Center].

So, there, in the underlined words and bracketed names, are the four extra stages of the Natural Sequence schema. None of these higher Dimensions are to be found in any significant amount in the DevPsy models discussed previously, but they are to be found in subsequent chapters of this *Cosmogony* book, mostly in the work of “transpersonal” psychologists. Even some humanistic psychologists, at some time in their careers, got a glimpse of the fact that there were stages of positive adult development, even if they did not perceive their relation to philosophy and spirituality and other such higher virtues:

The achievement of complete development at the end of adolescence was suggested by Freud, Piaget, and Binet among others. Research in positive adult development questions not only that development ceases after adolescence, but also the notion of decline after late adolescence postulated by many gerontologists. Positive development does occur during adulthood. Recent studies indicate that such development is useful in predicting things such as an individual’s health, life satisfaction, and degree of contribution to the society.

This field stems originally from several threads of work within psychology. Erik Erikson (1978) proposed a number of adult periods. Daniel Levinson (1978) had described a number of “seasons of life”.

Levinson’s research, published in two books, *The Seasons of a Man’s Life* and *The Seasons of a Woman’s Life*, left so much to be desired, in terms of academic scientific standards of research, that it did not get much respect in the DevPsy academic community, so I will not have a chapter on it. I will say this, that he referred to his theory as the “stage–crisis view”. His basic premises were borrowed from Erikson’s model. Both of these models emphasized the Hierarchy and the Transition Principles. Interested readers can check out the Wikipedia articles on him and his work. The researchers mentioned below, that have their names underlined, have chapters dedicated to them and their work in chapters further on in this DevPsy Part of this *Cosmogony* book.

Abraham Maslow proposed an adult needs hierarchy. Jean Piaget (Vuyk, 1980) came to agree that there were adult post-formal stages beyond the stage of formal operations [Ordinal Expression, Intellect Center]; his earlier theory had located an endpoint to the development of cognitive structures in the adolescent’s acquisition of formal operations. John L. Horn (1970, 1979) found that crystallized intelligence, represented by such things as

vocabulary size, increased in adulthood. Robert Kegan (1982) combined a Piagetian and an existential–phenomenological approach to create what he called constructive–developmental psychology. Lawrence Kohlberg (1984) found that in early adulthood, some people come to think of moral, ethical, and societal issues in multivariate terms (Systematic stage 11, the first post-formal stage) [Neutral Assimilation]. They use multiple relations. During middle adulthood some people become principled reasoners about moral issues; for instance, they used abstract principles to relate systems of rights to systems of duties (Metasystematic stage 12, the second post-formal stage) [Cardinal Expression, Concept Center]. Likewise, Cheryl Armon (1984) found that by middle adulthood, some people could reason about interpersonal relationships at an order of complexity similar to that described by Lawrence Kohlberg.

In Natural Sequence terms, the higher–later the Life-Stage and Worldview/Zone a person is in, the more the person is able to apply “abstract principles” to live a wise and gracious life, and make wise and gracious decisions, even in the face of “complex” dilemmas, where something is not clearly right or clearly wrong.

Research on positive adult development grew and expanded upon these early threads in a number of directions. Summaries of some of that initial positive adult development research can be found in Commons, Richards, and Armon (1984), as well as in Alexander and Langer (1990). Four post-formal adult stages of development beyond the formal stage have been discovered in a wide variety of domains.

In the Natural Sequence schema, as stated above, these four “post-formal” adult stages have the Attributes of Neutral Assimilation, Cardinal Expression, Cardinal Inspiration, and Cardinal Action.

The total number of stages across the life span now stands at 15. ‘Periods’ and ‘Seasons’ have been described. For critical discussion of the term “post-formal thinking”, see Kallio (2011). She claims that the highest forms of adult cognitive development (as part of adult positive development) can be called “integrative thinking” (i.e. integrating several different psychological domains as emotions [Ordinal Inspiration, Emotion Center], cognition [Ordinal Expression, Intellect Center], etc.).

In the Natural Sequence schema, the Life-Stages consist of 14 levels in total: there are 7 major “stages”, and these are each divided into Ordinal and Cardinal “phases” according to the Me-We Principle. I mentioned this previously where appropriate, and this is the way it will be shown in sections and chapters and tables to follow, until the end of this Part. It is in the three Cardinal Stages of a full and healthy life that a person is able to “integrate” the various “psychological domains”, the Ordinal Centers that might have made them dis-integrated in their earlier years.

A number of edited books were written on the topic of positive adult development in the 1990s (Commons, Sinnott, Richards, & Armon, 1989 and Commons, Armon, Kohlberg, Richards, Grotzer, & Sinnott, 1990) and more recently (Demick & Andreoletti, 2002; Hoare, 2006). In the past decade, researchers have turned to investigating methods to foster positive development in educational and organizational settings, rather than just describe it and/or measure it. These methods are used in organizational and educational setting. Some use developmentally–designed, structured public discourse to address complex public issues (Ross, 2007).

[>https://en.wikipedia.org/wiki/Positive_adult_development< — retrieved 21 February 2021]

The work of the researchers mentioned in the above paragraph are not reviewed in Wikipedia. It is interesting to me that no prominent transpersonal psychologists are mentioned in this Wikipedia article. Even so, those who were mentioned apparently noticed and documented the four major stages beyond the third major stage, making seven in total, the same as the Natural Sequence schema, but perhaps they did not perceive the transpersonal aspects of those stages, particularly the last three, the Cardinal stages.

Existential Crises

Wikipedia has three articles dedicated to psychological crises. The first one is on so-called “existential” crises. (The other two are on the “midlife crisis” and on the “identity crisis”; see further on.) I quote from this article extensively because I believe readers do well to apply the information to themselves personally, for their own good. As usual, I underline words and phrases that are especially relevant to this Part of my book, I provide some words in [brackets] to correlate the DevPsy vocabulary with the Natural Sequence schema vocabulary, and I provide commentary interspersed between paragraphs of extractions from Wikipedia.

In psychology and psychotherapy, existential crises are inner conflicts characterized by the impression that life lacks meaning. Some authors also emphasize confusion about one’s personal identity in their definition.

Existential crises are accompanied by anxiety and stress, often to such a degree that they disturb one’s normal functioning in everyday life and lead to depression. Their negative attitude towards life and meaning reflects

various positions characteristic of the philosophical movement known as existentialism. Synonyms and closely related terms include existential dread, existential vacuum, existential neurosis, and alienation. The various aspects associated with existential crises are sometimes divided into emotional, cognitive, and behavioral components. Emotional components refer to the feelings they provoke, such as emotional pain, despair, helplessness, guilt, anxiety, and loneliness. Cognitive components encompass the problem of meaninglessness, the loss of personal values, and reflections about one's own mortality. Outwardly, existential crises often express themselves in addictions, anti-social, and compulsive behavior.

Components

Existential crises are usually seen as complex phenomena that can be understood as consisting of various components. Some approaches distinguish three types of components belonging to the fields of emotion, cognition, and behavior. Emotional aspects correspond to what it feels like to have an existential crisis. It is usually associated with emotional pain, despair, helplessness, guilt, anxiety, and loneliness. On the cognitive side, the affected are often confronted with a loss of meaning and purpose together with the realization of one's own end. Behaviorally, existential crises may express themselves in addictions and anti-social behavior, sometimes paired with ritualistic behavior, loss of relationships, and degradation of one's health. While manifestations of these three components can usually be identified in every case of an existential crisis, there are often significant differences in how they manifest. Nonetheless, it has been suggested that these components can be used to give a more unified definition of existential crises.

Hey! There is that triad yet again, the triad that we have seen repeatedly above, and will see repeatedly below in this Part, and that I refer to as Dimensions. Existential crises typically manifest in the Ordinal triad of Centers — Motion, Emotion, Intellect — as negative behaviors, negative emotions, and negative thoughts — the Negative Poles of those Centers. As documented in Part VI — Enlightenment, the purpose of many so-called “spiritual paths” is to mitigate the Negative Poles of those Centers. The purpose of “cognitive emotional behavioral therapy” is the same: >https://en.wikipedia.org/wiki/Cognitive_emotional_behavioral_therapy<.

The specific symptoms can vary a lot from case to case. Theorists try to address this by distinguishing between different types of existential crises. Categorizations are usually based on the idea that the issues at the core of existential crises differ with the individual's stage in life and personal development. Types commonly found in the academic literature include the teenage crisis, the quarter-life crisis, the mid-life crisis, and the later-life crisis. They all have in common a conflict about the meaning and purpose of one's life. The earlier crises tend to be more forward-looking: the individual is anxious and confused about which path in life to follow, especially concerning education and career as well as one's identity and independence in social relationships. Crises later in life are more backward-looking. They can be triggered by the impression that one is past one's peak point in life and are often characterized by guilt, regrets, and a fear of death. The individual's age does generally correspond to the type of crisis they experience, but not always since there is a lot of variation on the level of personal development. Some people may only experience some of these types or none at all. If an earlier existential crisis was properly resolved, it makes it usually easier for the individual to resolve or avoid later crises.

In the paragraph above we see the Holarchy Principle, what with mention of the stages of development (“teen, quarter-life, mid-life, late-life”). We also see the Transition and the Dialectic principles, what with the use of the words “crisis” and “conflict” and “resolved”: the transformations from one phase and/or stage to another are completed successfully.

The problem of meaninglessness plays a central role in all of these types. It can arise in the form of cosmic meaning, which is concerned with the meaning of life at large or why we are here. Another form concerns personal secular meaning, in which the individual tries to discover purpose and value mainly for their own life. The issue of meaninglessness becomes a problem because of the discrepancy between the desire of humans to live a meaningful life and the apparent meaninglessness and indifference of the world, sometimes termed the absurd. Various sources of meaning [have] been suggested through which the individual may find meaning. They include altruism or trying to benefit others, dedicating oneself to a cause, such as a religious or political movement, creativity, for example, by creating art, hedonism or trying to live one's life to the fullest, self-actualization, which refers to the development of one's inborn potentials, and finding the right attitude towards one's hardships.

All inborn personality traits influence how and where a person finds or adds meaningfulness to their life, of course, but in this DevPsy Part of this *Cosmogony* book we are focused on the Life-Stages and the Worldviews of the Natural Sequence schema. The lower-earlier the Life-Stage and the Worldview of a person, the more they

will find meaning toward the Ordinal end of the spectrum; the higher—later the Life-Stage and the Worldview of the person, the more they will find meaning toward the Cardinal end of the spectrum. This is explained in greater detail in the Chapter V-4, “Abraham Maslow — Hierarchy of Needs”. Where one is on the Me-We spectrum (ego-centric versus socio-centric) also influences where one looks for meaning, whether in personal satisfaction or social satisfaction.

Existential crises have various negative consequences, both on the personal level, such as anxiety and the formation of bad relationships, and the social level, such as a high divorce rate and decreased productivity. They may also have positive effects by pushing the affected to address the underlying issue and thereby develop as a person. Some questionnaires, such as the Purpose in Life Test, can be used to measure whether someone is currently undergoing an existential crisis. Because of the primarily negative consequences, it is important that existential crises are resolved. The most common approach is to help the affected find meaning in their life. This can happen through a leap of faith, in which the individual places their trust into a new system of meaning, or through a reasoned approach focusing on a careful and evidence-based evaluation of the sources of meaning. Some theorists recommend a nihilistic approach, in which the individual accepts that life is meaningless and tries to find the best way to cope with this fact. Other approaches include cognitive [emotional] behavior therapy and the practice of social perspective-taking.

In every experience of Transition, the Dialectic Principle is at work: positives and negatives need to be resolved at a higher level of integration (thesis > antithesis > synthesis), or the person and their relationships will suffer indefinitely.

Evidently the nihilistic approach actually works for the benefit of some people. I know people who find the notion that the Cosmos as a whole is meaningless makes their own life seem more meaningful, more precious, more special. If the nihilistic approach does not work therapeutically, one can continue to suffer (there is the old notion that suffering is good for the “soul”), or one can just kill oneself. However, my recommendation is that instead of killing yourself, you should just kill that negative thought and see what develops, because crises tend to resolve themselves eventually, with or without intervention: “this too shall pass”; suicide is a permanent solution to a temporary problem.

Thereafter in the Wikipedia entry being quoted there followed a lengthy expansion of this introduction to the subject.

TYPES

Different types of existential crises are often distinguished based on the time in one’s life when they occur. This approach rests on the idea that, depending on one’s stage in life, individuals are faced with different issues connected to meaning and purpose. They lead to different types of crises if these issues are not properly resolved. The stages are usually tied to rough age groups but this correspondence is not always accurate since different people of the same age group may find themselves in different life situations and different stages of development. Being aware of these differences is central for properly assessing the issue at the core of a specific crisis and finding a corresponding response to resolve it.

Teenage

The early teenage crisis involves the transition from childhood to adulthood [at puberty] and is centered around the issue of developing one’s individuality and independence. This concerns specifically the relation to one’s family and often leads to spending more time with one’s peers instead. Various rebellious and anti-social behavior seen sometimes in this developmental stage, like stealing or trespassing, may be interpreted as attempts to achieve independence. It can also give rise to a new type of conformity concerning, for example, how the teenager dresses or behaves. This conformity tends to be not in relation to one’s family or public standards but to one’s peer group or adored celebrities. But this may be seen as a temporary step in order to distance oneself from previously accepted standards with later steps emphasizing one’s independence also from one’s peer group and celebrity influences. In order to resolve the early teenage crisis, it is important that meaning and purpose are found in one’s new identity since independence without it can result in the feeling of being lost and may lead to depression.

In the Natural Sequence schema, the Metamorphic crisis from the Childhood Life-Stage to the Youth Life-Stage happens at puberty. The Positive Pole of the Youth Life-Stage is said to be +Independence and the Negative Pole is said to be –Irresponsibility.

Quarter-life or sophomore crisis

The term “quarter-life crisis” is often used to refer to existential crises occurring in early adulthood, i.e. roughly during the ages between 18 and 30. Some authors distinguish between two separate crises that may occur at this stage in life: the sophomore crisis and the adult crisis. The sophomore crisis affects primarily people in their late teenage years or their early 20s. It is also referred to as “sophomore slump”, specifically when it affects students. It is the first time that serious questions about the meaning of life and one’s role in the world are formulated. At this stage, these questions have a direct practical relation to one’s future. They apply to what paths one wants to choose in life, like which career to focus on and how to form successful relationships. At the center of the sophomore crisis is the anxiety over one’s future, i.e. how to lead one’s life and how to best develop and employ one’s abilities. Existential crisis often specifically affect high achievers who fear that they do not reach their highest potential since they lack a secure plan for the future. To solve them, it is necessary to find meaningful answers to these questions. Such answers may result in practical commitments and can inform later life decisions. Some people who have already made their career choices at a very early age may never experience a sophomore crisis. But such decisions can lead to problems later on since they are usually mainly informed by the outlook of one’s social environment and less by the introspective insight into one’s individual preferences. If there turns out to be a big discrepancy between the two, it can provoke a more severe form of the sophomore crisis later on.

As stated previously, in the Natural Sequence schema, there are two general “phases” that occur within each “stage”. The Youth Life-Stage is said to span from puberty to the early thirties. I suggest that the Ordinal (Me) phase of the Youth Life-Stage begins at puberty, when the Childhood Life-Stage ends. I suggest that the Cardinal (We) phase of the Youth Life-Stage begins at the so-called “sophomore” crisis at about age twenty, when the person normally leaves the parental home and begins to make their own way in the world. The Youth Life-Stage ends when the Middle Age Life-Stage begins in the late twenties or early thirties, which this Wikipedia article refers to as the Adult Crisis.

Adult Crisis

The adult crisis usually starts in the mid to late 20s. The issues faced in it overlap to some extent with the ones in the sophomore crisis, but they tend to be more complex issues of identity. As such, they also circle around one’s career and one’s path in life. But they tend to take more details into account, like one’s choice of religion, one’s political outlook, or one’s sexuality. Resolving the adult crisis means having a good idea of who one is as a person and being comfortable with this idea. It is usually associated with reaching full adulthood, having completed school, working full-time, having left one’s home, and being financially independent. Being unable to resolve the adult crisis may result in disorientation, a lack of confidence in one’s personal identity, and depression.

In the Natural Sequence schema, this so-called “adult crisis” is the Transition from the We phase of the Youth Life-Stage to the initiation of the Me phase of the Middle Age Life-Stage. Some DevPsy researchers reviewed in subsequent chapters put the start of this stage in the early thirties, which is what I prefer based on my own experience. In my own case, hints of it started in my late twenties, but it did not fully emerge into a Metamorphic crisis until my early thirties. I questioned the acculturation accumulated during the previous three Life-Stages, including my religion, my marriage, my politics, and my career choice; only the last of these survived the examination and the transformation. I feel that this Transition took me ten years to transit, from age 32 to age 42, so it includes the description of the so-called “mid-life crises” written about next:

Mid-life Crisis

Among the different types of existential crises, the mid-life crisis is the one most widely discussed. It often sets in around the age of 40 and can be triggered by the impression that one’s personal growth is obstructed. This may be combined with the sense that there is a significant distance between one’s achievement and one’s aspirations. In contrast to the earlier existential crises, it also involves a backward-looking component: previous choices in life are questioned and their meaning for one’s achievements are assessed. This may lead to regrets and dissatisfaction with one’s life choices on various topics, such as career, partner, children, social status, or missed opportunities. The tendency to look backward is often connected to the impression that one is past one’s peak period in life. Sometimes five intermediary stages are distinguished: accommodation, separation, liminality, reintegration, and individuation. In these stages, the individual first adapts to changed external demands, then addresses the distance between their innate motives and the external persona, next rejects their previously adaptive persona, later adopts their new persona, and lastly becomes aware of the external consequences associated with these changes.... Between 8 and 25 percent of Americans over the age of thirty-five have experienced a midlife crisis.

In this Wikipedia article, I would equate this crisis at about age forty as the minor Transition in the middle of the Middle Age Life-Stage, the transition from the Me phase to the We phase. In my case, with the new identity having been found and established during my thirties, my forties were relatively stable and productive.

More is said about the so-called “mid-life” crises in its own subsection further on. Some DevPsy researchers reviewed in subsequent chapters place it as early as about age 35 and others as late as about age 50. To me that means that the timing of that crisis is a bit variable from person to person. In the Natural Sequence schema, the Middle Age Life-Stage lasts from age thirty-five to age fifty, with a major Transition at the beginning and the end.

Later-life Crisis

The later-life crisis often occurs around one’s late 60s. It may be triggered by events such as retirement, the death of a loved one, serious illness, or imminent death. At its core is a backward-looking reflection on how one led one’s life and the choices one made. This reflection is usually motivated by a desire to have lived a valuable and meaningful life paired with an uncertainty of one’s success. A contemplation of one’s past wrongdoings may also be motivated by a desire to find a way to make up for them while one still can. It can also express itself in a more theoretical form as trying to assess whether one’s life made a positive impact on one’s more immediate environment or the world at large. This is often associated with the desire to leave a positive and influential legacy behind.

In the Natural Sequence schema, this so-called “later-life” crisis at about retirement age is referred to as the Metamorphic transition between the Seniority Life-Stage and the Elderhood Life-Stage. In the Seniority Life-Stage, from about age fifty to about age sixty-five, the aspiration is to leave a legacy to one’s profession, but in the Elderhood Life-Stage, the aspiration is to leave a legacy to the “world at large”. I can identify with the “contemplation of past wrongdoings” during the transition to the Elderhood Life-Stage; at that time in my life, I often found myself apologizing, in person or in imagination, for the stupid hurtful things that I did in previous decades to other people and during my employment; this was my experience of the Negative Pole of – Regret.

Because of its backward-looking nature, there may be less one can do to truly resolve the crisis. This is true especially for people who arrive at a negative assessment of their life. An additional impeding factor in contrast to earlier crises is that individuals are often unable to find the energy and youthfulness necessary to make meaningful changes to their lives. Some suggest that developing an acceptance of the reality of death may help in the process. Other suggestions focus less on outright resolving the crisis but more on avoiding or minimizing its negative impact. Recommendations to this end include looking after one’s physical, economic, and emotional well-being as well as developing and maintaining a social network of support. The best way to avoid the crisis as much as possible may be to ensure that one’s earlier crises in life are resolved.

[>https://en.wikipedia.org/wiki/Identity_crisis< — retrieved 16 February 2022]

If only I had not been such an idiot my whole life I would have done a better job of resolving my crises along the way. (Just kidding.) (Just kidding about just kidding.)

So much for the Wikipedia article on the so-called “identity crises”. Wikipedia also has an article dedicated to and focused on one of them, the so-called “midlife crisis”.

Midlife Crisis

There is one Transition that might be the most famous of the transitions between stages of psychological development over the course of an adult lifetime, and that is the so-called “midlife crisis”. It even has a Wikipedia entry, a small portion of which is quoted below:

A midlife crisis is a transition of identity and self-confidence that can occur in middle-aged individuals, typically 45 to 65 years old. The phenomenon is described as a psychological crisis brought about by events that highlight a person’s growing age, inevitable mortality, and possibly lack of accomplishments in life. This may produce feelings of intense depression, remorse, and high levels of anxiety, or the desire to achieve youthfulness or make drastic changes to their current lifestyle or feel the wish to change past decisions and events. The term was coined by Elliott Jaques in 1965.

The age range mentioned places the mid-life crisis between the Middle Adulthood and the Late Adulthood stages discussed in previous subsections. This is approximately the duration of the fifth Life-Stage of the Natural Sequence Life-Stage septenary. It seems to be initiated when a person realizes that they have entered the declining phase of the story arc of their lives — they realize they are now ‘over the hill’, they are now “past

their prime” — and they must make the necessary adjustments to the inevitable and accelerating decline on the journey to death.

The Wikipedia article continues:

Researchers have found that mid-life is often a time for reflection and reassessment, but this is not always accompanied by the psychological upheaval popularly associated with “mid-life crisis”. Those who made career or jobs changes early in life were less likely to experience a crisis in midlife.

In my personal experience and that of people I know, the Transition between Stage Three and Stage Four Life-Stages, which typically happens at about age 35, is usually much more traumatic than the Transition between Stage Four and Stage Five of the Life-Stages septenary, which typically happens at about age 50. The Stage 3 > 4 Transition is when many people make a career change, end a marriage, move to a different geographical location, and do other life-changing things as part of shedding acculturated falseness and thereby finding a “truer” self in the staggered, staged process of “individuation”. If they don’t do it then, then yes, as stated in the quotation, the dilemma of Stage 3 > 4 still wants to be resolved in a healthy way, so it reappears at the next Transition, or the next.... This ‘kicking the can (Transition) down the road’ has been noticed by many DevPsy researchers. Whatever dilemma of whatever Transition of whatever Stage is up for review, if the identity crisis is not resolved in a healthy way, then we have a case of “arrested development”.

The Wikipedia article continues:

The notion of the mid-life crisis began with followers of Sigmund Freud, who thought that during middle age everyone’s thoughts were driven by the fear of impending death. Although mid-life crisis has lately received more attention in popular culture than serious research, there are some theoretical constructs supporting the notion. Jungian theory holds that mid-life is key to individuation, a process of self-actualization and self-awareness that contains many potential paradoxes. Although Carl Jung did not describe midlife crisis *per se*, the mid-life integration of thinking [Intellect Center, Youth Life-Stage], sensation [Motion Center, Infancy Life-Stage], feeling [Emotion Center, Childhood Life-Stage], and intuition [Impulse Center, Middle Age Life-Stage] that he describes could, it seems, lead to confusion about one’s life and goals. [https://en.wikipedia.org/wiki/Midlife_crisis — retrieved 07 April 2021]

The Life-Stages are a “theoretical construct” about the human experience within the cosmic framework of the Natural Sequence schema. The concept of a paradox-resolving crisis (Transition and Dialectic Principles) separating stages is a “theoretic construct” of many DevPsy models.

Correlating with the Natural Sequence Life-Stages here, I would say that the “individuation” spoken of in the quotation above happens most and best in the three Cardinal Stages of life, after mid-life, as the person transits the Life-Stages of Seniority, Elderhood, and Dying; as the person becomes more and more who they really are in essence, stripped of whatever acculturated facade they accumulated before the Middle Age Life-Stage. In the Life-Stage model of the Natural Sequence schema, the Ordinal Life-Stage are Infancy, Childhood, Youth; these are covered in “Jungian theory” mentioned in the quotation above. The Middle Age Life-Stage is the Neutral Assimilation, Impulse Center stage, which lasts from about age 35 to about age 50. It is a plateau between Ordinal and Cardinal Life-Stage; it is at the ‘top of the hump’ of the lifespan ‘story arc’. Because one of the Attributes of the Middle Age Life-Stage is Neutrality, personal identity during that Life-Stage tends to be tentative, ambiguous, fluid — “confusing”, to use the term found in the quotation. (Perhaps that is the reason that DevPsy researchers disagree on the timing of “mid-life” and its “crisis”.) There is a major transformation, according to the Transition Principle, that happens between each of these Life-Stage, not just the Youth-to-Middle Age and the Middle Age-to-Seniority transitions. During the Cardinal Life-Stages (Seniority, Elderhood, Dying), if the Metamorphoses are transited in a healthy way and one ends up in the Positive Poles, then “individuation” increases to the point that all falseness is extinguished, and complete, genuine, authentic self-actualization is achieved.

So much for the Wikipedia article on the so-called “mid-life crises”. Wikipedia also has an article focused on, and dedicated to, another crisis, the so-called “adolescent identity crisis”.

Adolescent Identity Crisis

There is not much that I have been able think of to say about this particular Transition, the transition from the Childhood Life-Stage to the Youth Life-Stage that has not already been said, but I include the following Wikipedia quotation because it has important things to say about the characteristics of the Metamorphic transitions between all Life-Stages. Those important things are underlined in the following Wikipedia

quotation. Some clarifications and correlations with the Natural Sequence schema are indicated in [brackets]. If this helps any reader to understand whatever Transition they may be going through, then the purpose of this subsection is fulfilled.

[ADOLESCENT] IDENTITY CRISIS

In psychology, identity crisis is a stage theory of identity development where it involves resolution of a conflict over the 8 stages of the lifespan. The term was coined by German psychologist Erik Erikson.

The stage of psycho-social development in which identity crisis may occur is called the identity cohesion versus role confusion. During this stage, adolescents are faced with physical growth, sexual maturity, and integrating ideas of themselves [ego-centric Me phase] and about what others think of them [socio-centric We phase].

Adolescents therefore form their self-image and endure the task of resolving the crisis of their basic ego identity. Successful resolution of the crisis depends on one's progress through previous developmental stages [Infancy Life-Stage and Childhood Life-Stage], centering on issues such as trust, autonomy, and initiative.

Erikson's own interest in identity began in childhood. Born Ashkenazic Jewish, Erikson felt that he was an outsider. His later studies of cultural life among the Yurok of northern California and the Sioux of South Dakota helped formalize Erikson's ideas about identity development and identity crisis. Erikson described those going through an identity crisis as exhibiting confusion.

Each Life-Stage has different characteristics and qualities, and it takes time to get from one Life-Stage to the next Life-Stage, so naturally "confusion" exists during the time that the person does not have a firmed-up self-image in the previous or the next Life-Stage.

Underlined words in the following quotation provides possible names for Positive and Negative Poles for the adolescent Transition.

Concept

Adolescents may withdraw from normal life, not taking action or acting as they usually would at work, in their marriage or at school, or be unable to make defining choices about the future. They may even turn to negative activities, such as crime or drugs since from their point of view having a negative identity could be more acceptable than none at all.

On the other side of the spectrum, those who emerge from the adolescent stage of personality development with a strong sense of identity are well equipped to face adulthood with confidence and certainty.

Erikson felt that peers have a strong impact on the development of ego identity during adolescence. He believed that association with negative groups such as cults or fanatics could actually "redistrict" the developing ego during this fragile time. The basic strength that Erikson found should be developed during adolescence is fidelity, which only emerges from a cohesive ego identity. Fidelity is known to encompass sincerity, genuineness and a sense of duty in our relationships with other people.

He described identity as "a subjective sense as well as an observable quality of personal sameness and continuity, paired with some belief in the sameness and continuity of some shared world image. As a quality of unself-conscious living, this can be gloriously obvious in a young person who has found himself as he has found his commonality. In him we see emerge a unique unification of what is irreversibly given — that is, body type and temperament, giftedness and vulnerability, infantile models and acquired ideals — with the open choices provided in available roles, occupational possibilities, values offered, mentors met, friendships made, and first sexual encounters."

Marcia Theory

James Marcia's research on identity statuses of adolescents also applies to Erikson's framework of identity crises in adolescents.

Identity *foreclosure* is an identity status which Marcia claimed is an identity developed by an individual without much choice. "The foreclosure status is when a commitment is made without exploring alternatives. Often these commitments are based on parental ideas and beliefs that are accepted without question". Identity foreclosure can contribute to identity crises in adolescents when the "security blanket" of their assumed identity is removed. These "foreclosed individuals often go into crisis, not knowing what to do without being able to rely on the norms, rules, and situations to which they have been accustomed." An example of this would be a son of a farmer who learns that his father is selling the farm, and whose identity as an heir to a farm and the lifestyle and identity of a farmer has been shaken by that news.

Identity *diffusion* is a Marcian identity status that can lead to identity crises in adolescents. Identity diffusion can be described as “the apathetic state that represents the relative lack of both exploration and commitment”. Identity diffusion can overlap with diagnoses such as schizophrenia and depression, and can best be described as a lack of identity structure. An example of an identity crisis emerging from this status is an adolescent who becomes reclusive after his identity as a star athlete is destroyed by a serious injury.

Identity *moratorium* is the status that Marcia theorizes lasts the longest in individuals, is the most volatile, and can be best described as “the active exploration of alternatives”. Individuals experiencing identity moratorium can be very open-minded and thoughtful but also in crisis over their identity. An example of this would be a college student who lacks conviction in their future after changing majors multiple times but still cannot seem to find their passion.

Identity *achievement* is the resolution to many identity crises. Identity achievement occurs when the adolescent has explored and committed to important aspects of their identity.

[>https://en.wikipedia.org/wiki/Identity_crisis< — 26 February 2022]

In the Natural Sequence schema, not only are there major metamorphoses between the seven major stages, but according to the Fractality Principle, each of the seven major stages consist of seven minor stages. (Every few years I have a little “identity crisis” where I “do not know who I am any more”, and this lasts a few weeks or months. These resolve themselves in a minor “course correction”, so I continue down a slightly different path.) So, not only are there major crises between the major stages, there are seven minor crises within each major stage. As we will see in subsequent chapters, according to DevPsy researchers who propose more than a few stages, there is a secondary Transition between the Ordinal (Me) and the Cardinal (We) phases of all major stages. This sub-stage Transition appears to be a relatively mild transformation, compared to the transition between major stages. This will be noted in the description of those DevPsy researchers in the chapters dedicated to them.

Concluding Comments on Introduction to Developmental Psychology

It helps me to get my thoughts together and present them in writing if I organize them into a bulleted or numbered list that makes sense in terms of logic and meaning.

1. This Part of this *Cosmogony* book discusses what in **another Part** of this book are referred to as Life-Stages and Worldviews. Life-Stages are the stages that a person goes through during the typical course of a full lifetime. Worldviews share the same pattern as the Life-Stages, the Natural Sequence schema, but a person is born with a Worldview. A person’s Worldview is not apparent at birth, but as a person advances through the Life-Stages, when the person arrives at the same Life-Stage that corresponds with their inborn Worldview, the Worldview is fully manifested. The Worldview ceases to advance at that point, but the Life-Stage continues to advance.
2. There is another Part of this *Cosmogony* book, **Part VI** — “Paths to Enlightenment”, that discuss a time track of development other than the Life-Stages and Worldviews that are discussed here in **Part V** and other Parts. Enlightenment typically happens on a time scale that is shorter than the Life-Stages.
3. There is another Part of this *Cosmogony* book, **Chapter Xx in Part X** — “Socio-cultural Evolution”, that discuss a time track of development other than the Life-Stages and Worldviews time tracks that are discussed in this Part. Socio-cultural evolution typically evolves on a time scale that is longer than the Life-Stages.
4. Professional academic developmental psychologists typically focus on the Dimensions of psychological development that occur naturally, which is to say, in the normal course of the story arc of people’s lives. These are the three Dimensions of Ordinal Action/Motion Center, Ordinal Inspiration/Emotion Center, and Ordinal Expression/Intellect Center. There are processes that function in the human psyche that provide progress in these Dimensions whether or not the people under academic scrutiny are aware of them and their consequences. These unaware, unreflective people usually have a “ceiling” in their Worldview that limits their psychological maturation to these three lower-earlier Dimensions.
5. However, there are people who are self-aware enough that they wish to understand, appreciate, and even augment the Dimensions higher-later than the basic three Dimensions. (Maslow is perhaps the most famous academic who researched these areas. He and his work were introduced above, and a chapter is devoted to him and his work further on in this Part.) The so-called “pop psychology”

endeavor of the self-improvement industry is aimed at these people. If you are reading this book, it is likely that you are in this category. This category is populated by people whose Worldview and other inborn personality factors incline them to seek progress in Dimensions higher-later than the basic three. This is especially the case of people who have Evolution Process Traits in their Process/Aspect System Array. They have a level and type of reflective self-awareness such that they can see themselves from a meta-perspective.





Chapter V-2

① JEAN GEBSER — STRUCTURES OF CONSCIOUSNESS

The person who is the subject of this chapter was not a developmental psychologist. Rather:

Jean Gebser (20 August 1905 – 14 May 1973) was a philosopher, a linguist, and a poet, who described the structures of human consciousness. [https://en.wikipedia.org/wiki/Jean_Gebser — retrieved 11 March 2021]

There is a definition of “consciousness” further on, but for here and now let’s just say that the word broadly covers much of the same territory that developmental psychologists do. His work also influenced actual developmental psychologists whose work is discussed in this Part of this *Cosmogony* book. His work also has enough similarity and correspondence to the work of developmental psychologists that it is appropriate to discuss him here. There is overlap of Gebser’s work with other Parts of the book, but in my estimation, he and his work fit better here in this Part than in those other Parts. I placed him and his work as the first of the chapters on developmental psychology (DevPsy) because of its obvious fit with the Natural Sequence schema: you will see as you read this chapter that Gebser’s model correlates obviously and neatly with Dimensions, Life-Stages, Worldviews, and Cultures.

Biography of Gebser

The Wikipedia page reference above did not provide much of a biography on Gebser, so I borrowed the following from a website that is dedicated to him and his work; please overlook the fact that the biography is a bit of a hagiography. I believe that it is important to understand the messenger, the man and his times, in order to better understand his message. I extracted only those portions of the bio that seemed relevant to this chapter. I also note in [brackets] that several Natural Sequence Principles can be discerned in this extraction.

In the somber halls of academe, an individual appears who is a philosopher in the original sense of the word — a bright lover of wisdom, a herald of higher human possibilities.

The Swiss philosopher and poet Jean Gebser belonged to that rare Socratic breed. He was a man of extraordinary vision who did not allow himself to be seduced by his learning, but intrepidly pushed beyond the boundaries of accepted truth. He likened modern philosophy to the “picking apart of a rose.” His foundational work on the evolution of human consciousness and culture is among this century’s finest contributions to our modern self-understanding.

In a nutshell, what Gebser succeeded in demonstrating through painstaking documentation and analysis was this: Hidden beneath the apparent chaos of our times is an emergent new order [Holarchy Principle]. The disappearance of the pre-Einsteinian world-view, with its creator-god and clockwork universe as well as its naive faith in progress, is more than a mere breakdown; it is also a new beginning. In fact, long before the apostles of a “new age” arrived on the scene, Jean Gebser spoke of our period as one of the great turning points in human history. What makes his work so appealing and relevant is that it offers a unique perspective on human history and the present global crisis. [Transition Principle] When Gebser’s study on the unfolding of human consciousness was first published it was considered one of the most controversial intellectual creations of our era. This is still true; his ideas challenge not only those of the establishment but also many of the new contenders.

Who was Jean Gebser? And why are a growing number of people excited about his ideas? Until seven years before his death at the age of sixty-two, Gebser was almost completely ignored by the academic establishment. It was then that the University of Salzburg, a venerable institution in Austria, created a special professorial chair for him: comparative culturology. This unique appointment was a belated acknowledgment of his genius. But it changed little, if anything, in Gebser’s lifestyle; he had lived and worked most of his life as a maverick.

It is hard to classify Gebser. Neither he nor his books fit any existing stereotype. He was a scholar, a linguist, a translator, a poet, a historian, an eloquent speaker, a traveler, an adventurous lover of life, people, and ideas — a man of experience, wisdom, spiritual depth, and charisma. Gebser had many friends and admirers, among them psychologist Carl Gustav Jung, biologist Adolf Portmann, physicists Werner Heisenberg and Carl Friedrich von Weizsacker, as well as Tibetologist and spiritual leader Lama Anagarika Govinda. It was the last-mentioned who described Gebser as “one of the most creative and stimulating thinkers of modern Europe.” Most important, however, are Gebser’s publications and lectures, which have affected tens of thousands of people in the German-speaking countries of Europe....

At this point in the narrative, I omit a few paragraphs of his biography that are irrelevant to an understanding of his model.

Gebser’s Structures of Consciousness

The Wikipedia article continued with a description of Gebser’s theory:

In the winter of 1931, Gebser had received in a flash of inspiration the concept of his later work, and now he was dedicating his life to making explicit what he had intuitively grasped in that moment. What he had realized was that the phenomenal transformations in the arts and sciences during the first three decades of the twentieth century amounted to a change in the very consciousness of humanity, in the way we perceive ourselves and the world. He compared it in its significance to the transmutation that ancient humanity had passed through at the time of Socrates in Greece, Lao-Tzu in China, and Gautama the Buddha in India [the so-called “Axial Age”, ~500 BCE]. Gebser saw that early period as a transition from what he came to call the mythical structure to the mental-rational structure of consciousness. He felt that the restructuring he was witnessing in his own time was an equally fundamental shift from the mental-rational structure to the arational aperspectival structure of consciousness.... [Transition Principle]

In characterizing the emergent consciousness as arational (as opposed to irrational) and aperspectival, Gebser sought to indicate that it transcended the dualistic, black-or-white categories of the rational orientation to life. [Dialectic Principle] Rationalism, for him, was by no means the pinnacle of human existence, but, on the contrary, an evolutionary digression with fatal consequences. He regarded it as a deficient of the inherently balanced mental structure of consciousness. In other words, Gebser did not reject reason, merely its inflation into the sole arbiter of our lives. As he recognized, the human being is a composite of several evolutionary structures of consciousness, and we must live all of them according to their intrinsic value. The individual who is dominated by the rational structure represses all other structures, which are viewed as irrational and hence dispensable. Thus the “reasonable” person is inclined to reject magic, myth, religion, feeling, empathy, and not least ego-transcendence. [Dimensionality Principle]

In a 1955 diary entry, Gebser observed, “Becoming an ego is painful. Hardly anyone finds his ego prior to the middle of his life. Then most people remain stuck in it and become hardened in it. The still more painful process of ego-transcendence with all its crises and relapses is accomplished by only a few. But it is just this ego-transcendence that is the decisive task of human life.” [Dimensionality Principle]

The reason-dominated individual tends to be heavily ego-defensive, because identity is defined in terms of the ego-personality. The person who has broken through to the arational-aperspectival consciousness, however, sees the limitations of the ego, and is not threatened by the suggestion that he or she is more than the narrow field of awareness and angular vision that is associated with the ego. In fact, that person welcomes the idea that individuality arises in participation with the larger reality [Dialectic Principle] — a reality that by far eclipses the rational mind and even the feeling heart that is so often closed to the rationalist.

In 1943, Gebser published his book *Abendlandische Wandlung* (*Transformation of the West*), in which he surveyed the most significant changes in the natural and social sciences, suggesting that they point to a new constellation of consciousness and reality-perception. Six years later, he published the first part of his major work, *Ursprung und Gegenwart*, available in English under the title *The Ever-Present Origin*.... In it, he concerned himself with the aperspectival foundations of our modern civilization. In 1953, the second part appeared. Here Gebser looked back into our human past, identifying and clarifying for us other similar fundamental mutations of consciousness. He distinguished four in all: the archaic structure, the magical structure, the mythical structure, and the mental structure (out of which emerged, as its deficient form, the rational consciousness during the Renaissance). Today a fifth mode or style of cognition, the arational structure, has become a possibility that, as Gebser never tired of

insisting, requires our conscious midwifery through personal and collective self-transcending practice.

[Dimensionality Principle]

Gebser's unabashedly spiritual orientation, which is unique in European philosophy, has confounded and annoyed his peers, especially those anxious to uphold the neutral rationalist standards of academia. Today, American Gebser scholars, unfortunately, tend to repeat the error of their European counterparts when they try to make Gebser into a phenomenologist of consciousness and culture, ignoring his strong spiritual communication.

I had the opportunity to present a paper on the spiritual implications of Gebser's work at the 1987 Gebser conference at Ohio University in Athens [Ohio]. Except for some old-timers, who had known Gebser personally, my presentation caused a stir among participants when I reported that Gebser had confided to me in a letter that he had had an enlightenment experience (satori). "It was sober," he put it, "on the one hand happening with crystal clarity in everyday life, which I perceived and to which I reacted 'normally,' and on the other hand and simultaneously being a transfiguration and irradiation of the indescribable, unearthly, transparent 'Light' – no ecstasy, no emotion, but a spiritual clarity, a quiet jubilation, a knowledge of invulnerability, a primal trust."

[Transition Principle]

This satori experience surprised Gebser while he was visiting Sarnath in 1961, the place where 2,500 years ago the Buddha preached his first sermon. A year later Gebser published his *Asienfibel (Primer on Asia)*, subsequently reissued in expanded form under the title *Asien Lachelt Anders (Asia Smiles Differently)*, in which we meet Gebser the thoughtful traveler and bridge builder. He regarded the East/West encounter as central to our contemporary task of personal and cultural integration. He wrote, "The view that East and West are opposites is wrong. It is not permissible to apply opposite-creating rational thought in this context, which can, if we continue to persist in this faulty opposition, even lead to the suicide of our culture or civilization. West and East are complementarities. In comparison with the dual, divisive character of opposition, complementary is polar and unifying." [Dialectic Principle]

Gebser, as a spiritual pilgrim, also visited Tiruvannamalai in South India, where Ramana Maharshi, one of modern India's finest sages, had lived and taught until his death in 1950. But where he felt most in the presence of the emergent arational-integral consciousness was in the Pondicherry ashram of the twentieth-century philosopher-yogi and former political activist Sri Aurobindo, the creator of "integral yoga", who, incidentally, also died in 1950. Of that visit Gebser said, "There in Pondicherry is, to the best of my knowledge as far as India is concerned, the only place where the mutual flooding of rationalistic machine technology on the one hand and psycho-spiritual yoga technology on the other hand, has begun to be a radiant enrichment of both Asia and the West." [Dialectic Principle]

Undoubtedly, what attracted Gebser was the same clarity that he also appreciated in the Zen monasteries of Japan. According to him, clarity is an essential aspect of the arational structure of consciousness. He lived by this principle himself. Gebser stood for intensification, rather than mystical or psychedelic expansion, of consciousness. Clarity is both a means and a sign of such intensification. Gebser approvingly cited a remark by Paul Klee, one of the great pioneers of the aperspectival consciousness in art. "I begin more and more to see behind or, better, through things."

It would appear that this observation entails useful advice for anyone. [<https://gebser.org/jean-gebser-bio/> — retrieved 09 May 2021)

The paragraphs about Gebser's spiritually transformative experience was retained in this extraction because several other DevPsy researches reviewed in this *Cosmogony* book also espoused the spiritual component (the Cardinal component in the Natural Sequence schema) of the human psyche; this moves them beyond "humanistic psychology", to "transpersonal psychology". It would seem that Gebser, via his enlightenment experiences, was made self-aware enough to recognize his own transformation through the stages he discerned — his understanding of the stages was subjective; it was not just the product of an objective academic research project. Without this personal experience, it is unlikely that a DevPsy researcher will recognize and acknowledge the transcendent stages of the spectrum of human experience for what they are.

The following table will help you to follow the discussion of Gebser's model on the pages after the table.

Table V-2a — GEBSER'S STRUCTURES and the NATURAL SEQUENCE							
RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
DIALECTIC	–ORDINAL–			=NEUTRAL=	+CARDINAL+		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
PROCESS → ASPECT ↓	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
GEBSER	MAGIC	MYTHICAL	MENTAL	INTEGRAL	—	—	—
CENTER	+Endurance MOTION –Activity	+Sensibility EMOTION –Sentimental'ty	+Thought INTELLECT –Reason	+Intuition IMPULSE –Instinct	+Integration CONCEPT –Fantasy	+Empathy SYMPATHY –Sensitivity	+Vitality EXCITATION –Arousal
LIFE-STAGE	+Coordination INFANCY –Clumsiness	+Socialization CHILDHOOD –Codependence	+Independence YOUTH –Irresponsibility	+Authenticity MIDDLE AGE –Falseness	+Legacy SENIORITY –Self-indulgenc	+Gratitude ELDERHOOD –Regret	+Anticipation DYING –Disengagement
ZONE	+Institution RESOLUTION –Regulation	+Affiliation IMMANENCE –Indoctrination	+Individuation SEPARATION –Alienation	+Consolidation EXPERIENCE –Achievement	+Philosophy UNIFICAT'N –Ideology	+Ascension TRANSCEND'E –Exaggeration	+Causation ACTIVATION –Agitation
WORLDVIEW	+Preservation PRIMITIVISM –Security	+Propriety TRADITIONAL' –Conformity	+Production MATERIALISM –Exploitation	+Consensus COLLECTIVISM –Ambiguity	+Wisdom HOLISM –Speculation	+Liberation TRANSPERSON' –Catharsis	+Revolution MESSIANISM –Provocation
SOCIO- CULTURAL EVOLUTION	Paleolithic Hunter-Gatherer	Neolithic Agricultural- Pastoral	Bronze-Iron Technological Civilization	Scientific- Informational	Philosophical? (future)	Theological? (future)	Utopian? (future)

General comments on this table can be found below [Table Xa](#) in the Introduction to this Part. The only thing I would add to those comments is that Gebser posited a so-called “structure”, a zero-dimensional structure, prior to the numbered–dimensional (1-D, 2-D, 3-D, P-D) structures that he proposed. This data is discussed further on.

The Wikipedia article on Gebser and his work continues as follows. As usual, underlined words and phrases in the quotations are my emphasis, to alert the reader to ideas that I comment on between paragraphs of quoted material. Words and phrases in [brackets] in the quotations usually point out correlations with features of the Natural Sequence schema. So let's dig in.

CONSCIOUSNESS IN TRANSITION

Gebser's major thesis was that human consciousness is in transition, and that these transitions are “mutations” and not continuous. These jumps or transformations involve structural changes in both mind and body. Gebser held that previous consciousness structures continue to operate parallel to the emergent structure.

Mentioned in this quotation are Gebser's versions of the Hierarchy Principle (“emergence”) and the Transition Principle (“transition, mutation, jump, transformation”). If you need to, please refresh your memory by reading [Chapter 1-x in Part One](#), “Principles of the Natural Sequence”.

Consciousness is “presence”, or “being present”: As Gebser understands the term, “conscious is neither knowledge nor conscience but must be understood for the time being in the broadest sense as wakeful presence.”

If I were to correlate “consciousness” with only one stage of the Natural Sequence schema, it would be the Neutral Assimilation stage, because it encompasses both the Ordinal triad and the Cardinal triad of stages. Various DevPsy models reviewed here in [Part X](#) focus on various realms of development — physical,

behavioral, moral, social, cognitive, ego, faith — most of which can also be correlated with one or another of the stages of the Natural Sequence schema. Gebser seems to have something seemingly different in mind, but I would say that his understanding of “consciousness” includes the others as a subset. DevPsy as an academic field of study was nascent and primitive in the first half of the 20th Century when Gebser was formulating his model, and Gebser was interested in the arts and sciences rather than psychology, but, as we will see, he noticed the same stages that were being discovered in DevPsy research. He is aptly referred to as a philosopher because his work has proven to be a synthesis of other DevPsy models, even ones that came later.

The Wikipedia article continues:

Each consciousness structure eventually becomes deficient, and is replaced by a following structure. The stress and chaos in Europe from 1914 to 1945 were the symptoms of a structure of consciousness that was at the end of its effectiveness, and which heralded the birth of a new form of consciousness. The first evidence he witnessed was in the novel use of language and literature. He modified this position in 1943 so as to include the changes which were occurring in the arts and sciences at that time.

This statement is Gebser’s way of describing the Transition Principle of the Natural Sequence schema, even though, of course, he did not recognize it as such.

His thesis of the failure of one structure of consciousness alongside the emergence of a new one led him to inquire as to whether such had not occurred before. His work, *Ursprung und Gegenwart* is the result of that inquiry. It was published in various editions from 1949 to 1953, and translated into English as *The Ever-Present Origin*. Working from the historical evidence of almost every major field, (e.g., poetry, music, visual arts, architecture, philosophy, religion, physics, and the other natural sciences, etc.) Gebser saw traces of the emergence (which he called “efficiency”) and collapse (“deficiency”) of various structures of consciousness throughout history.

In Natural Sequence terminology, this is the Dialectic Principle (thesis > antithesis > synthesis): the so-called “deficiency” phase is the Negative (thesis) Pole of a stage, and the so-called “efficiency” phase is the Positive (antithesis) Pole of a stage. The synthesis of the two results in a subsequent higher-later stage, another plateau phase of the cycle of stages. That Gebser saw this phenomenon in history aligns his model with the Culture component of the Natural Sequence schema.

The Wikipedia article continues, and provides a list of five stages, which Gebser preferred to call “structures”. His reason for this choice of terminology is explained further on.

THE STRUCTURES OF CONSCIOUSNESS

Gebser distinguished the following structures:

- The archaic structure [0-D]
- The magic structure [1-D]
- The mythical structure [2-D]
- The mental structure [3-D]
- The integral structure [P-D]

The numbers in brackets (e.g. [2-D]) following the name of the structure, refer to the Natural Sequence schema Dimensionality Principle that correlates with the name of the structure.

The Wikipedia article continues with descriptions of each stage of consciousness, and there I will correlate them with stages of the Natural Sequence schema. Take note for future reference, because numerous DevPsy researchers that are discussed in subsequent chapters adopted Gebser’s names for some of these stages. Note as you read the following that Gebser seems to have been aware of what I refer to as the Dimensionality Principle of the Natural Sequence schema.

The archaic structure

The archaic structure is the first structure of consciousness to emerge from the “ever-present origin”:

The term “archaic” as used here is derived from the Greek *arce*, meaning inception, or origin. Origin (or *Ursprung*, in the original German) is the source from which all springs, but it is that which springs forth itself. It is the essence which is behind and which underlies consciousness.

No direct information on this structure is available; it is inferred from writings from later times. It is zero-dimensional; consciousness is only “a dimly lit mist devoid of shadows”. It is not individual, but “was totally identical with the whole”:

The human being was totally immersed in the world unable to extricate himself or herself from that world. They were identical with that world.

In the Natural Sequence schema, just as in geometry, “zero-dimensional” is a characteristic of the geometric “point”. Over and over again in subsequent chapters we will see that in many DevPsy models there is what is variously referred to as a physiology stage, an animal stage, or an instinctive stage, a stage that is prior to or forms the ‘foundation’ for the personality stages that are ‘built on the top of’ the mere physical body, one might say. Although it does not say so here, the archaic structure is the primate or pre-human phase of human cultural development. The archaic structure could also be correlated with the pre-natal phase of the human animal.

The next structure correlates with these features of the Natural Sequence schema: Ordinal Action Attributes, Motion Center, Infancy Life-Stage, Primitivism Worldview, and Hunter–Gatherer Culture.

The magic structure

In the magical structure events, objects and persons are magically related. Symbols and statues do not just represent those events, objects and persons, but are those same objects and persons. Gebser symbolizes this “one-dimensional” consciousness structure by the space-less, time-less “point”. Unlike the archaic structure in which there is a “perfect identity of man and universe”, man is aware of nature as something within his community to which it must “listen” and out of which it must act in order to survive.

In the Natural Sequence schema, Ordinal Action is One-dimensional also, but it is linear, not a point, just as in geometry. In the Natural Sequence schema, the interaction of self and not-self, which is mentioned in this quotation, is elevated to the status of a Principle, the Dialectic Principle. Some DevPsy models emphasize that this stage is focused primarily on the survival of the physical body, rather than on the nurturing of the emotional and social life of the person, as is the next higher–later stage. Elsewhere in this book we see that primitive Cultures in this stage are typically “animistic”, focused as they are on the struggle of life against death. In that case, the one-dimensional line with a beginning and end is symbolic of life and death.

The mythical structure

This structure correlates with these features of the Natural Sequence schema: Ordinal Inspiration, Emotion Center, Childhood Life-Stage, Traditionalism Worldview, and Agricultural–Pastoral Culture. Just as with the Natural Sequence schema, its Dimensionality is one higher than the previous stage or “structure”.

Gebser symbolizes the “two-dimensional” mythical structure by the circle and cyclical time, based on man’s discovery of the rhythmic recurrence of natural events and of his inner reflections on his experience of those events. “...[W]hereas the distinguishing characteristic of the magic structure was the emergent awareness of nature [physicality], the essential characteristic of the mythical structure is the emergent awareness of soul [metaphysicality].” In the mythical structure events, objects and persons are woven together in stories.

Mythologies give coherence to consciousness. An important element in myth is polarity; the etymology of myth itself implies both speaking (mouth, *mythos*) and silence (mute, *myein*).

With the use of the word “soul”, we see that this stage is said to have a religious component. There is an awareness of the contrast or polarity between metaphorically ‘higher’ realms of soul and ‘lower’ realms of nature. Other DevPsy models expand on this brief description considerably, making its correlation with Ordinal Inspiration components much clearer. In the Natural Sequence schema just as in geometry, a two-dimensional structure is a flat surface such as that enclosed by a circle with a top and a bottom side, but it has nothing to do with time *per se*.

Gebser explains that polarity makes myth particularly foreign to the mental consciousness structure [the next higher structure]: “Only when we acknowledge both meanings of the root can we discern the fundamental nature of the mythical structure. Only when taken together as an elemental ambivalence, and not a rational contradiction, are they constitutive for the mythical structure.” “Only a mental world requires laws; the mythical world, secure in the polarity, neither knows nor needs them.”

This quotation is Gebser’s version of the often-noted dichotomy between the “head” (rational intellect) and the “heart” (irrational emotionality). The latter is the mythic structure and the former is the mental structure, introduced and described below:

The mental structure

This structure correlates with these features of the Natural Sequence schema: Ordinal Expression, Intellect Center, Youth Life-Stage, Materialism Worldview, and Civilization Culture.

The mental structure appropriates events, objects and persons by the use of logic. In its efficient [positive pole] form, the mental structure is “three-dimensional”. Gebser symbolizes it with the “triangle”, which illustrates a “trinity” of thesis, antithesis, and synthesis [the Dialectic Principle of the Natural Sequence schema]: “the base of the triangle with its two points lying in opposition represents the dual contraries or antinomies which are unified at the point or apex.” For Gebser, this is the essence of “the emergence of directed or discursive thought” with which Western [technology and] science would be built. “It required centuries to sufficiently devitalize and demythologize the word so that it was able to express distinct concepts freed from the wealth of imagery [present in previous stages], as well as to reach the rationalistic extreme where the word, once a power [magic] and later an image [myth], was degraded to a mere formula.”

In the Natural Sequence schema just as in geometry, a three-dimensional structure is that of a solid object, with an inside and an outside, not a triangle, a flat structure with three vertices. In the Natural Sequence schema, the Dialectic Principle applies to the method of development within and between all stages: there is the negative ‘thesis’, then there is the positive ‘antithesis’ at the same level, and then there is the neutral ‘synthesis’, which is the assimilation of the thesis and the antithesis at the next higher-later stage.

The deficient [Negative Pole] form of the mental structure Gebser called the ‘rational’ structure. The rational structure of awareness seeks to deny the other structures with its claim that humans are exclusively rational.

In the Natural Sequence schema, the Positive Pole of the Intellect Center is +Thought and the Negative Pole is –Reason. Thus, there is no doubt about the correlation of Gebser’s so-called “mental structure” with instantiations of Ordinal Expression in various realms of life experience.

The rational structure is known for its extremes as evidenced in various “nothing but...” statements. Extreme materialism claims that “everything is nothing but matter — atoms”. Philosophy, the love of wisdom, is replaced with instrumental reason, the ability “to make”. Contemplation — looking inward — is devalued in relation to what one “can do”. “Wise men” fall out of favor and are replaced by the “man of action”. Successes in technologically re-shaping matter offer solutions to some problems but also give rise to problems of their own making. Mechanized slaughter of two world wars and the new atomic weapons exemplified and symbolized the expression of the ontology of the rational/mental structure. Living becomes hard to bear in such a consciousness structure.

In the Natural Sequence schema, this structure correlates with the Materialism Worldview. In my opinion, the emergence of materialistic technology and rationalism is not as recent a phenomenon as Gebser proposed. I place its earliest appearance with the rise of the Civilization Culture some 5000 years ago. I see the last few centuries and decades are its culmination.

Some saw the cause of this despair as a lack of values or ethics [present in the previous, Mythical, structure].

Gebser saw that it is the very consciousness structure itself which has played out to its inherent end. He saw that its metaphysical presumptions necessarily led to this ethical dead end. A “value-free” ontology like materialism leads of necessity to living “without value”. Any attempt to remedy the situation by a return to “values” would ultimately fail. But it was through this very quagmire of “the decline of the West” that Gebser saw the emergence of a new structure of consciousness which he termed the integral.

In the Natural Sequence schema, the characteristic of values/ethics belongs to the Inspiration Dimension, which is Two-dimensional. What Gebser apparently did not realize — but some transpersonal psychologists reviewed in subsequent chapters did realize — was that Two-dimensional Ordinal Inspiration (the so-called “mythic structure”) is complemented with Two-dimensional Cardinal Inspiration. There are three so-called “structures” between them, the first one being the so-called “mental structure”, the second one being the so-called “integral structure” (see next subsection), and the third one being a structure that Gebser did not have in his schema, but others did.

The Wikipedia article continues with a description of the fifth structure:

The integral structure

This structure correlates with these features of the Natural Sequence schema: Neutral Assimilation, Impulse Center, Middle Age Life-Stage, Collectivism Worldview, and Scientific-Informational Culture.

The integral consciousness structure was made evident by a new relationship to space and time. In the second part of his work, Gebser set out to document the evidence that he saw throughout various human endeavors. Of note here were the incorporation of time in physics, the attempts to “paint” time in the visual arts and the like.

Gebser noticed that the integral structure of consciousness was largely witnessed as the irruption of time into the

[space-like] “fixed-reality” of the mental structure. For Gebser, dualistically opposed and “static” categories of Being gave way to transparency.

Gebser saw the so-called “Integral” structure as non-dual, which is also the case with the Neutral Assimilation Aspect of the Natural Sequence schema; it is neither Cardinal nor Ordinal. If Gebser said it somewhere I have not seen it, but the natural extension of his ascending (0-D > 1-D > 2-D > 3-D) dimensionality metaphor is to refer to the Integral structure as “pan-dimensional” (P-D) as happens in the Natural Sequence schema. Further on we find that Gebser thought of the first four structures as metaphorically static in space (existing all at once), but the fifth structure included flow in time. The Natural Sequence schema has a different view, but the explanation is too lengthy, and inappropriate for the current discussion, to include here. However, one may read about how the Natural Sequence schema relates to space and time in my books *The Tao of Cosmology* and *The Tao of Personality*, which discuss the objective (space/time) and subjective (time/space) realms respectively.

Transparency points to how it is that the one is “given-through” and always “along-with” the other. For centuries, time was viewed as having distinct categories of past, present and future. These categories were said to be wholly distinct one from the other. Of course, this created all kinds of difficulties regarding how beings moved from one category to the other — from present to past, for example. What integral awareness notices is that though we may utilize categorical thinking for various purposes, we also have the realization that time is an indivisible whole. That various beings in the present are crystallized from the past, and which also extend into the future. In fact, without already having an integral awareness, one could have no notion of time as “past” or “present”, etc. Without the awareness of the whole, one would be stuck in a kind of “not-knowing” of an always only “now” not connected to any sense of past or future. Even the mental awareness which divides this whole into distinct categories could not have become aware of those categories without an awareness which was already integral. Thus, awareness is already integral.

Perhaps Gebser’s expanded understanding of space/time resulted from his mystical experience; such is typically the case when that happens. An alternative explanation of this paragraph is that Gebser was aware of the new understanding of time that Einstein revealed in his general theory of relativity: it posits a so-called “block universe”, where all time (past, present, future) is static, just as space is. Debates in the philosophy of the ontology and epistemology of time have been happening for millennia, and it is not appropriate to discuss them here. My opinion is that it was insightful of Gebser to correlate structures of space/time physical dimensionality with structures of time/space metaphysical dimensionality. The Natural Sequence schema has gone even further, and formalized this in ways that Gebser did not, as documented in my books alluded to above.

Gebser introduced the notion of presentation which means to make something present through transparency. An aspect of integral awareness is the presentation, or “making present”, of the various structures of awareness. Rather than allowing only one (rational) structure to be valid, all structures are recognized, presented, one through the other. This awareness of and acceptance of the various structures enables one to live through the various structures rather than to be subjected to them (“lived by” them in German).

My understanding of this quotation is informed by my understanding of the Natural Sequence schema and other DevPsy models, as follows. When a person’s consciousness is operating per the pan-dimensional (P-D) so-called “integral” *space/time* structure, it has an objective overview of life experiences; that person is unfettered by the limited mere *space* consciousness structures that prevail in the numbered–dimension structures (1-D, 2-D, 3-D). Thus, an integral person is said to be self- and other-aware enough to consciously and intentionally, from their holistic perspective, use the lower dimensional structures for their own purposes; the P-D person has more free-will agency than people whose consciousness is operating in the numbered–dimension structures.

To realize the various structures within one’s language and habits, and even within one’s own life and self is a difficult task. But Gebser says that it is a task that we cannot choose to ignore without losing ourselves. This means that our so-called “objective thinking” is not without consequences, is not innocent. That to live “objectively” means to give life to the horrors of nihilism combined with the know-how of highly “efficient” weapons. It means that “objectivity” gets applied to “engineering humanity” whether it is in the behavioral sciences or the physical sciences. He asks of us whether or not we have had our fill of those horrors yet. Are we willing to settle into the comfort of our daily life or to take on the process of change? He offers as a guiding note that just as there is also a time to act, there is also the much neglected time of contemplation. In a world where

know-how is overvalued, simple knowing must also be nurtured. Furthermore, he knew that thought was never simply a mental exercise restricted to one's writing. He calls upon us to realize that we are what we think.

Gebser was not the only person to realize that humanity, at this time in its cultural evolution, is experiencing the transition from the 3-D "mental" to the P-D "integral" structure of consciousness. In subsequent chapters of this Part, this is referred to as the transition from the so-called "first tier" to the so-called "second tier" in some DevPsy models. There are yet other chapters in other Parts that speak of the same transition with yet other terminology.

The Wikipedia article continues with some general descriptions of components of Gebser's model of the world of human consciousness.

TERMINOLOGY

Discontinuity

Gebser cautioned against using terms like evolution, progression, or development to describe the changes in structures of consciousness that he described.

Gebser traces the evidence for the transformations of the structure of consciousness as they are concretized in historical artifacts. He sought to avoid calling this process "evolutionary", since any such notion was illusory when applied to the "unfolding of consciousness". Gebser emphasized that biological evolution is an enclosing process which particularizes a species to a limited environment. The unfolding of awareness is, by contrast, an opening-up.

Any attempt to give a direction or goal to the unfolding of awareness is illusory in that it is based upon a limited, mentalistic, linear notion of time. Gebser notes that "to progress" is to move toward something and is thus also to move away from something else; therefore, progress is an inappropriate term to describe the structures of consciousness. Gebser wrote that the question as to the fate of humanity is still open, that for it to become closed would be the ultimate tragedy, but that such a closure remains a possibility. To Gebser, our fate is not assured by any notion of "an evolution toward", or by any kind of ideal way of being.

Space and time

Gebser notes that the various structures of consciousness are revealed by their relationship to space and time. For example, the mythical structure embodies time as cyclical/rhythmic and space as enclosed. The mental structure lives time as linear, directed or "progressive" and space becomes the box-like, vacuum-like homogeneous space of geometry.

The Natural Sequence schema is mostly about structure and development in time, but in the expanded version of the Natural Sequence schema, which I refer to as the Process/Aspect System, includes structure in space.

INFLUENCE

Gebser's work has formed the basis of a number of other studies and writers.

Ken Wilber

Ken Wilber referred to and quoted Gebser (along with many other theorists) in his 1981 *Up from Eden* and subsequent works. Wilber found Gebser's 'pioneering' work to align to his own model of consciousness, although Wilber finds evidence for additional later mystical stages beyond Gebser's integral structure.

Refer to the chapter "Ken Wilber — Integral Theory" further on in this Part. As with Wilber's model of the structure of consciousness, the Natural Sequence schema extends beyond Gebser's so-called "Integral" structure, with three Cardinal structures or stages.

William Irwin Thompson

In his 1996 *Coming into Being*, cultural critic William Irwin Thompson compared Gebser's structures of consciousness to Marshall McLuhan's conception of the development of communication technology from oral culture to [pictographic] script culture, alphabetic culture, print culture, and then to the emerging electronic culture. Thompson applied these insights to education theory in his 2001 *Transforming History: A Curriculum for Cultural Evolution*. In his 2004 *Self and Society: Studies in the Evolution of Consciousness*, and in collaboration with the mathematician Ralph Abraham, Thompson further related Gebser's structures to periods in the development of mathematics (arithmetic, geometric, algebraic, dynamical, chaotic) and in the history of music.

As with Gebser's five Structures, according to Thompson, both communication and mathematics allegedly have five stages of development. This might possibly be an interesting line of investigation, but I doubt it.

New Age

Gebser's integral philosophy is evaluated and applied to New Age thinking about a nascent shift in consciousness in the 2006 book *2012, The Return of Quetzalcoatl* by Daniel Pinchbeck. In *A Secret History of Consciousness* (2003) cultural historian Gary Lachman links Gebser's work to that of other alternative philosophers of consciousness, such as Owen Barfield, Rudolf Steiner, Colin Wilson, and Jurij Moskvitin.

Of these philosophers of consciousness, Steiner is discussed in my *Synthesis* book, in **Chapter Xx in Part X**, "Rudolf Steiner". If the reader wants to pursue information on Barfield, Wilson, and Moskvitin, know that Wikipedia has articles on them.

Other influences

Gebser's influence is also present in:

- Rudolf Bahro's *Logik der Rettung* (translated into English as *Avoiding Social and Ecological Disaster*),
- [Bernardo Kastrup]'s *Why Materialism Is Baloney*
- Hugo Enomiya-Lassalle's *Living in the New consciousness*
- Daniel Kealey's *Revisioning Environmental Ethics*
- Georg Feuerstein's *Wholeness or Transcendence*
- Eric Mark Kramer's *Modern/Postmodern: Off the Beaten Path of Antimodernism*
- Grant Maxwell's *The Dynamics of Transformation: Tracing an Emerging World View*.
[>https://en.wikipedia.org/wiki/Jean_Gebser< — retrieved 11 March 2021]

The above-mentioned persons are not discussed in this *Cosmogony* book, and I have not pursued these leads other than Kastrup and Maxwell, but I leave the information here in case any reader might wish to track these people down.

Scoring Gebser against the Natural Sequence Principles

In my view, each DevPsy model has its strengths and weaknesses in terms of accuracy and completeness, judged on the basis of the results of subsequent research by other developmental psychologists, and on its conformity to the Natural Sequence schema. Gebser's "structures of consciousness" model checks most of the boxes of the ideal and complete Natural Sequence schema. It also fits well with the Centers of the expanded Natural Sequence schema that I refer to as the Process/Aspect System.

- The Hierarchy Principle is a structure in time where each succeeding stage is built on previous stages because of the learning that happens over the course of a full lifetime. In the description of Gebser's model, the phrase "emergent new order" is used to describe the model, so that Principle is present.
- The words "transfiguration, transformation, change, transmutation, transition, restructuring, and shift" are used to describe the difference between structures in Gebser's model — this is the description and the meaning of the Transition Principle of the Natural Sequence schema.
- The Dialectic Principle — the notion that progress is made by reuniting dichotomies — is found in the Wikipedia description: "West and East are complementarities. In comparison with the dual, divisive character of opposition, complementary is polar and unifying." In the description of the Mental structure, the Dialectic Principle of "thesis > antithesis > synthesis" is mentioned explicitly.
- The Dimensionality Principle is strongly represented in Gebser's model: he even uses the word "dimension" as a metaphor to characterize the differences between structures. One can discern the notion that the Natural Sequence Dimensions of Action (visceral-behavioral), Inspiration (emotional-social), Expression (intellectual-cognitive), and Assimilation (perceptual-informational) were recognized and implemented in the model.
- The Feedback Principle — the notion that the inner world and the outer world work together to move a person forward through life — is a feature of Gebser's model, where it was noted in the extraction from Wikipedia that "individuality arises in participation with the larger reality".
- I have seen no evidence of the Me-We Principle in Gebser's model, which is more about restructuring human cultures than it is about restructuring human individuals as in typical DevPsy models. If Gebser noticed the swing between ego-centric and socio-centric phases of each Culture that other DevPsy researchers noticed, I do not know about it.

- Near as I can tell in my brief reading about Gebser's model, I do not see any evidence of the Fractality Principle, the notion that there is a septenarian cycle within the model, and/or a septenarian cycle 'earlier-below' the model and/or a septenarian cycle 'later-above' the model.

Considering that Gebser was one of the earlier researchers in the realm of DevPsy, it seems to me that he did a pretty good job of discerning the Principles.

Concluding Comments on Jean Gebser's Structures of Consciousness

There is nothing quite like a numbered list (or a table) for getting my thoughts in order, and for presenting them clearly to others.

1. Your favorite internet search engine will lead you to many other, and more thorough, discussions of Jean Gebser and his work.
2. Gebser's model is the first to be reviewed because most of it took place in the middle of the Twentieth Century, before the others reviewed in this book. Thus, Gebser was a pioneer in the field of DevPsy, even though he had no formal academic credentials in psychology.
3. ? borrow from other chapters ?





Chapter V-3

① ROBERTO ASSAGIOLI — PSYCHOSYNTHESIS

This chapter introduces the reader to the work of an Italian psychiatrist/psychologist name Roberto Assagioli, who lived from 1888 to 1974. Assagioli was originally influenced by Sigmund Freud and Carl Jung, but then he went off on his own track. Assagioli named his method of psychotherapeutic knowledge and techniques “*Psychosynthesis*” as a counterpoint to Freud’s “*psychoanalysis*”. Assagioli’s work was subsequently built upon by another psychotherapist, Kenneth Sorensen, from whom I quote extensively below. Both Assagioli and Sorensen are “transpersonal” psychologists, considering that they were, and are, open to the possibility of a non-material soul component of the human psyche that contributes to the development of the human personality.

Besides building on Freud’s and Jung’s work in the early 20th Century, part of Assagioli’s and Sorenson’s understanding of the human condition involves a developmental psychology based on some alleged channeling of a Neo-Theosophist named Alice Bailey in the second quarter of the 20th Century. Her work is discussed in [Chapter Xx in Part X, “Theosophy”](#). Assagioli and Sorensen also borrowed ideas in developmental psychology (DevPsy) from the work of Abraham Maslow, who also came to prominence in the middle of the 20th Century; he and his work are discussed in [Chapter Xx in Part X, “Abraham Maslow — Hierarchy of Needs”](#). Sorensen also borrowed ideas in DevPsy from the work of Ken Wilber, who came to prominence in the late 20th Century; Wilber is discussed in [Chapter Xx in Part X, “Ken Wilber — Integral Theory”](#).

The following section provides some more context to the man Roberto Assagioli, and to his proposed stages in the Psychosynthesis model.

Introduction to Psychosynthesis

There is information about Assagioli and Psychosynthesis in Wikipedia at these two internet website links: https://en.wikipedia.org/wiki/Roberto_Assagioli and <https://en.wikipedia.org/wiki/Psychosynthesis>. I have extracted some quotations relevant to this chapter, as follows; underlined words are my emphasis, and explanatory comments [in brackets] are mine.

Roberto Assagioli (27 February 1888 – 23 August 1974) was an Italian psychiatrist and pioneer in the fields of humanistic and transpersonal psychology. Assagioli founded the psychological movement known as Psychosynthesis, which is still being developed today by therapists and psychologists, who practice the psychological methods and techniques he developed. His work, expounded in two books and many monographs published as pamphlets, emphasized the possibility of progressive integration, or synthesis, of the personality [aka “developmental psychology”].

Assagioli is famous for developing and founding the science of Psychosynthesis, a spiritual and holistic approach to psychology that had developed from psychoanalysis [Freud’s version of developmental psychology]. He was largely inspired by Freud’s idea of the repressed mind and Jung’s theories of the collective unconscious. Trained in psychoanalysis but unsatisfied by what he regarded as its incompleteness as a whole, Assagioli felt that love [Cardinal Inspiration, Sympathy Center], wisdom [Cardinal Expression, Concept Center], creativity [Cardinality in general], and will [Cardinal Action, Excitation Center] all were important components that should be included in psychoanalysis. Assagioli’s earliest development of Psychosynthesis started in 1911, when he began his formal education in psychology. He continued his work on Psychosynthesis right up until his death.... Assagioli said, “Psychosynthesis presupposes psychoanalysis, or rather, includes it as a first and necessary stage.”

The last sentence of the above quotation could be interpreted to mean that Psychosynthesis recognizes the Hierarchy Principle of the Natural Sequence schema, where each higher-later stage is said to transcend and include the lower-earlier stage(s). There is more evidence that this is the case further on in this chapter.

The factors of “creativity, wisdom, love, will” show up as the Cardinal stages (Cardinal Expression, Inspiration, and Action) of the Natural Sequence schema, as explained in numerous chapters in this Part and other Parts of this book. These Cardinal stages are unknown to humanistic psychologists, but are known to transpersonal psychologists.

Speaking of “Cardinal” stages, let me emphasize that the contrast between “psychoanalysis” and “psychosynthesis” correlates with the contrast between the lower-earlier triad of stages and the higher-later triad of stages in the spectrum of psychological development. As explained throughout this book, the Natural Sequence schema has jargon words for these groups of stages, namely “Ordinal” and “Cardinal” respectively. In this context, I also remind the reader of some other jargon words in the Natural Sequence schema: the “Analysis Process” is an Ordinal Process, and the “Synthesis Process” is a Cardinal Process. “Humanistic” psychology, mentioned in the quotation, concerns itself with the Ordinal stages of human development, and “transpersonal” psychology, mentioned in the quotation, concerns itself with the Cardinal stages of human development. Also please note that, per the Me-We Principle introduced in the Introduction to this Part, the Ordinal stages are ego-centric — more concerned with “me” — and the Cardinal stages are socio-centric — more concerned with “we”; we see this Principle repeatedly, in other Chapters on developmental psychology in this Part. Because of the Fractalicity Principle, this Me-We Principle applies to each stage as well as to the entire septenary of stages.

Returning to the Wikipedia article on Assagioli, we find this:

However, Assagioli disagreed with theories formulated by Sigmund Freud that he considered limiting. He refused to accept Freud’s reductionism and neglect of the positive [Cardinal] dimensions of the personality. Psychosynthesis became the first approach born of psychoanalysis that also included the artistic [Cardinal Expression], altruistic [Cardinal Inspiration], and heroic [Cardinal Action] potentials of the human being. Assagioli’s work was more in alignment with psychologist, Carl Jung. Both Assagioli and Jung validated the importance of the spiritual [Cardinal] level of human existence. Assagioli shared with Jung the insight that psychological symptoms can be triggered by spiritual dynamics. Assagioli considered Jung’s theories to be closest to his understanding of Psychosynthesis.

Assagioli was said to be the “first” to include some higher human (superhuman?) functions, namely “artistic, altruistic, and heroic”. Based on those three words, these three so-called “spiritual” “potentials” can be correlated with the three Cardinal stages of the Natural Sequence schema, namely Cardinal Expression, Cardinal Inspiration, and Cardinal Action respectively. The mention of “psychological symptoms triggered by spiritual dynamics” might refer to traumatic transitions from stage to stage. If so, it would indicate that Assagioli recognized the Transition Principle of the Natural Sequence schema.

Returning again to the Wikipedia article on Assagioli, we find this:

Assagioli was also interested and active in the field of consciousness and transpersonal work. Having studied Theosophy and Eastern philosophy, his written work developed different meditation techniques, including reflective, receptive, and creative meditation. He also contributed to several spiritual groups in the tradition known as the “ageless wisdom”. He founded two groups intended to teach meditation based on the ideas of the New Age [Neo-Theosophy] teacher Alice Bailey: *The Group for Creative Meditation* and the *Meditation Group for the New Age*. He was also a co-founder of the *School for Esoteric Studies*, intended to teach the work of Alice Bailey at an advanced level. [https://en.wikipedia.org/wiki/Roberto_Assagioli — retrieved 24 February 2021]

Other Parts of this *Cosmogony* book discuss Theosophy, Eastern philosophy, and “ageless wisdom” because they are relevant to the Natural Sequence schema, as they were to Assagioli; refer to **Part X “Modern Day Spiritual Teachings”**, **Part X, “Ancient Religions”**, and **Part X, “Enlightenment”**. It is because of Assagioli’s interest in transpersonal psychology that I considered putting this chapter in some other Part of my book, but the fact is that several developmental psychologists reviewed in this Part also delved into the presumed spiritual dimension of the human psyche. In order to complete the full range of stages of developmental psychology in terms of the Natural Sequence schema, it is necessary to review what these transpersonal psychologists had to say. However, the transpersonal developmental psychology of Alice Bailey was placed in another Part, in **Chapter Xx in Part X, “Theosophy and Neo-Theosophy”**.

With that introduction to Psychosynthesis behind us, let’s begin to look at the stages that it proposed.

The Egg and the Star

The Wikipedia articles referenced above that are dedicated to Assagioli and his work provided two images that exhibit elements of the Natural Sequence schema.

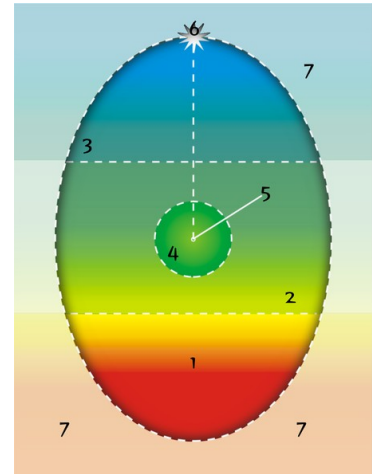
The Egg Model

For instance, Assagioli put forward an “egg” diagram that can be found here:

><https://en.wikipedia.org/wiki/Psychosynthesis><. The image was accompanied with a list of numbered stages:

- 1 = Lower Unconscious
- 2 = Middle Unconscious
- 3 = Higher Unconscious
- 4 = Field of Consciousness
- 5 = Conscious Self or "I"
- 6 = Higher Self
- 7 = Collective Unconscious

Near as I can tell from reading the Wikipedia page on Psychosynthesis, the so-called “egg model” represents more than the personality self; it also represents the body self, the soul self, and the Soul self, in the Great Chain/Nest of Being, which is a component of the so-called “Perennial Philosophy”. These alleged stages of reality beyond the physical realm are covered in other Parts of this book. This is another clue that tells me that Psychosynthesis has the Fractalicity Principle built in. Sorensen says as much with this statement:



He [Assagioli] is the only psychosynthesist who implements the Great Chain of Being and involution [approach to God in the Cardinal stages]. He is very cautious on this matter, but when comparing the quotes with his philosophical background in Gnosticism, Neo-Platonism, and Theosophy, I think there is sufficient reason to believe that he shares this conception with Wilber and the perennial philosophy.

[><http://www.integralworld.net/sorensen2.html>< — retrieved 26 February 2021]

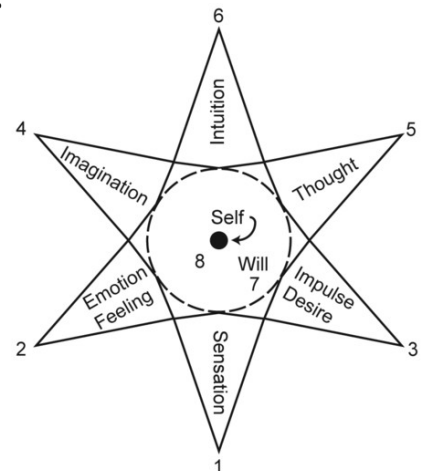
There are chapters on the **Perennial Philosophy**, **Gnosticism**, **Neo-Platonism**, and **Theosophy** in other Parts of this book.

Even though there are seven levels of the psyche in the egg model, the same number of elements as with the Natural Sequence schema, I have not been able to correlate the stages of the egg model with specific stages of the Natural Sequence schema. When I researched the egg model on the internet, I found that I am inclined to say that Assagioli's egg model is ambiguous with respect to the Natural Sequence schema. If the egg model is forced to be reinterpreted in order to correlate with the Natural Sequence schema, then perhaps the first three "unconscious" levels would correspond with the Ordinal stages of the Natural Sequence schema wherein there is not very much reflective self-awareness, the fourth level would correspond with Neutral Assimilation wherein there is awareness of the whole "field" of consciousness, and the last three levels would correspond with the Cardinal stages of the Natural Sequence schema wherein there is transpersonal consciousness.

There seems to be a similar but less ambiguous correlation of the Natural Sequence schema with Assagioli's so-called "star model".

The Star Model

Assagioli also put forward a six-pointed “star” diagram, and it is much less ambiguous, in my opinion, because it is a more accurate representation of the Natural Sequence schema. It can be found in the same Wikipedia article in which the egg diagram was reproduced. It has appropriate synonyms for all of the components of the Natural Sequence schema, and it places most of them in a sequence that mostly resembles the Natural Sequence schema, but it is not quite right and not quite complete. In order to be consistent with the Natural Sequence schema, and in order to be consistent with the names and descriptions of stages



discussed below, I modify the sequence and the number designations in the star diagram slightly, using the names of the Septenarian Attributes and the names of the Centers for the correlation, as follows (the equals sign (“ = ”) means “correlates with”):

- 0 = “Sensation” = Physiology Center
- 1 = “Impulse/Desire” = Ordinal Action = Motion Center
- 2 = “Emotion/Feeling” = Ordinal Inspiration = Emotion Center
- 3 = “Thought” = Ordinal Expression = Intellect Center
- 4 = “Self” = Neutral Assimilation = Impulse Center
- 5 = “Imagination” = Cardinal Expression = Concept Center
- 6 = “Intuition” = Cardinal Inspiration = Sympathy Center
- 7 = “Will” = Cardinal Action = Excitation Center

This list is provided without explanation, but astute readers, as they become more and more familiar with the Natural Sequence schema by reading this book, if they ponder the diagram and this list they will be able to figure out why I made these correlations as I did. In fact, the very next chapter, which is on Maslow’s Hierarchy of Needs, is actually adequate to do the job of correlating the two models, and Assagioli agreed with Maslow (see below).

What is obvious from the numbers on both the egg and star diagrams, and the quotations above, is that Psychosynthesis recognizes the Hierarchy Principle of the Natural Sequence schema and of other DevPsy models. There is also this quotation:

Writing about the model of the person presented above, Assagioli states that it is a “structural, static, almost ‘anatomical’ [space-like] representation of our inner constitution [as levels], while it leaves out its [time-like] dynamic aspect [as stages], which is the most important and essential one”. Thus he follows this model immediately with a stage theory outlining the process of psychosynthesis. This scheme can be called the “stages of psychosynthesis”, and is presented here.

It is important to note that although the linear progression of the following stages does make logical sense, these stages may not in fact be experienced in this sequence; they are not a ladder up which one climbs, but aspects of a single process. Further, one never outgrows these stages; any stage can be present at any moment throughout the process of psychosynthesis, Assagioli acknowledging “persisting traits belonging to preceding psychological ages” and the perennial possibility of “retrogression to primitive stages”.

[><https://en.wikipedia.org/wiki/Psychosynthesis>< — retrieved 25 February 2021]

In several chapters in this Part, we find that there is a recognition by some developmental psychologists that there are factors of the human personality that are space-like (levels) and that are time-like (stages), as was said of Assagioli in the quotation above. When properly understood, as explained in my book *The Process/Aspect System*, this is more than a metaphor; it is a correlation of physics and psyche, of body and mind, of nature and supernature.

Sorensen provided some descriptions and explanations of the egg and star models in his blog on the Integral World website, ><http://www.integralworld.net/sorensen2.html><, and the reader can certainly check that out; the description is vaguely close to my correlations with the Natural Sequence schema as shown above. However, compared to later PsyDev models reviewed in this Part, and compared to the Natural Sequence schema, the egg and star models seem primitive, muddled, and incomplete; they have the rudiments of the Natural Sequence schema, but they do not have the clarity, to say nothing of the logical and mathematical derivation. Nevertheless, the table near the end of this chapter shows their correlation with the Natural Sequence schema, which is obvious when considered as a whole.

Because the Wikipedia articles on Assagioli and his work were inadequate for my purposes in this book, I turned to the expositor of Assagioli’s work mentioned previously, namely Kenneth Sorensen, for a better description. For one thing, his website is ><https://kennethsorensen.dk/en/><, and for another thing, he has posted blogs on a different website, which happens to be dedicated to the discussion of Ken Wilber’s work, namely this: >www.integralworld.net<. On both websites you can find information about alleged space-like “levels of consciousness” and time-like “stages of development”, and that is what we are going to look at now.

Note that I have not done enough research to find out whether or not Assagioli himself correlated his Egg Model and/or Star Model with the stages of his psychosynthesis model discussed in the following section, but I have made the correlation and I show it in the table after the next section, and they seem reasonable to me.

Stages of the Psychosynthesis Model

The following lengthy quotation is from <http://www.integralworld.net/sorensen2.html><. Underlined words and phrases are my emphasis; I have added some clarifying and correlating words and phrases in [brackets]; I have interspersed some comments between paragraphs of quoted text.

Assagioli's theory of development is based on hierarchical [space-like levels] thinking. Generally it can be said that Assagioli never presented a detailed developmental [time-like stages] theory, but from ideas scattered around in his books and papers a very clear picture can be assembled.... He warmly encourages his students to study Maslow's books....

Abraham Maslow was a younger contemporary of Assagioli. Maslow had a developmental psychology similar to Assagioli, which he referred to as the Hierarchy of Needs. Refer to the next chapter in this book for an introduction to Maslow. The stage theories of both Assagioli and Maslow incorporated the Hierarchy Principle of the Natural Sequence schema.

Like Maslow, he considers human development an evolutionary progression through natural unfolding stages that can be stimulated through the various techniques used in Psychosynthesis....

Roberto Assagioli is well aware of the evolution of cultural consciousness and addresses this issue several times in *Transpersonal Development* and in several articles (Assagioli, undated 1, 4, 1965, 1973). Chapter Nine in *Transpersonal Development* is called "The Stages and Crises of Spiritual Development" and is introduced in the following manner:

With the word "crises" we see the Transition Principle in Psychosynthesis as well as in the Natural Sequence schema.

"Even if we take no more than a causal look at the people around us, we see at once that they are not equally developed from the psychological and spiritual point of view. Some of them are still in a primitive, even wild, state, others are a little more developed, yet others are more advanced, and finally there are those few who have transcended normal humanity and now stand at the threshold of the superhuman, spiritual stage" (Assagioli, 1993: 107).

With those five underlined words there are hints at the characteristics of the stages of Psychosynthesis and the Natural Sequence schema. From the above, and statements below, it seems that Assagioli's work is somewhat ambiguous about which Natural Sequence track (Culture, Worldview, Life-Stage) is being discussed in the description of each level/stage. I would say that, at this early time in the evolution of DevPsy research, these three Natural Sequence tracks had not been thoroughly delineated. Indeed, as instantiated in any particular individual, it is impossible to discern which Natural Sequence track provokes any particular manifestation.

In this chapter Assagioli brings out his developmental theory by comparing the individual growth from child to adult ... with the different cultural stages of development found in humanity during certain historical periods ... and it resembles in many respect Wilber's psycho-historical stages of consciousness. Assagioli (Undated 4:6) claims that according to the 'law of recapitulation' "the individual, in his development, actually goes through a rapid re-run of all the stages through which humanity has passed."

We discussed Cultural development in the previous Part of this book, particularly **Chapter Xx in Part X**, "Socio-cultural Evolution". Besides Ken Wilber, other developmental psychologists reviewed in this Part recognized that individual development during a lifetime "recapitulates" or "re-runs" socio-cultural development over the course of human history. This phenomenon is the so-called "Fractalicity Principle" of the Natural Sequence schema; many developmental psychologists reviewed in this Part have noticed the phenomenon and commented on it.

Assagioli works with the same three overall stages [that Wilber proposed]: pre-rational, rational, and trans-rational. He discriminates also between a higher and lower expression of the same stage or psychological age [Worldview]. Let me very briefly cover them from the above chapter:

As we will see when we discuss Assagioli's stages below, the so-called "Pre-rational" stages are the first two, which he named "Primitive" and "Mythic". Assagioli's third stage was named "Rational". Stages higher-later than the third stage are "trans-rational". Those three divisions of the Wilberian schema are discussed in the chapter devoted to him, further on in this Part. We now live in the "age of reason", so perhaps that is the reason that the pivotal stage is the Rational stage, with pre- and trans-rational stages.

The “higher and lower expression” in the same stage is the Cardinal and Ordinal, or We and Me, halves of each stage. Thus, the Me-We Principle of the Natural Sequence schema is also found in Psychosynthesis.

What Sorensen refers to as “psychological age” is what the Natural Sequence schema refers to as Worldview. Sorensen does not emphasize the fact that, with “psychological age”, Assagioli is referring to the progress that a spiritual soul makes via a series of reincarnations (><https://psychosynthesistrust.org.uk/7-remarkable-facts-about-roberto-assagioli/><). According to the Natural Sequence schema, Worldview is a developmental track that is on a time scale different from the Cultural evolution track during human history, and the Life-Stage track during the course of a lifetime. Alice Bailey had somewhat to say about the reincarnation of souls, as documented in Chapter **Xx in Part X, “Theosophy and Neo-Theosophy”**.

The Wikipedia article continues:

As you will see in chapter one, we each have [seven] dominant “types” in our overall [personality] typological make-up. In *Psychosynthesis Typology*, Assagioli vividly describes how the seven types are expressed in an individual at five different levels, namely the levels of body [1-D, Ordinal Action, Motion Center], feeling [2-D, Ordinal Inspiration, Emotion Center], thought [3-D, Ordinal Expression, Intellect Center], personality [P-D, Neutral Assimilation, Impulse Center], and soul [Cardinal stages in general]. Accordingly, this book will help you to identify your unique energy DNA. We each have a dominant type — one of the seven — expressed at each of the five levels; these dominant types can be seen in our body language [Ordinal Action], predominant moods [Ordinal Inspiration], thinking style [Ordinal Expression], personality [Neutral Assimilation], and our soul purpose [Cardinal Expression]. Discovering your unique combination of types can have the effect of bringing you home to yourself, leading to a deeper sense of self-acceptance and insight which can make life more exciting and meaningful.

The seven “types” mentioned in this quotation are the so-called “Roles” of the Process/Aspect System personality typology, which correlate with the seven so-called “rays” of Theosophy. Five levels or stages of development as listed above — which obviously follow the Natural Sequence when you consider the correlations shown in brackets — are described in more detail in the next subsections. The following descriptions of the stages appear to be an ambiguous amalgamation of Culture, Worldview, and Life-Stage.

One will recognize similarities in the names and descriptions of these stages with the work of Gebser, the subject of the previous chapter. The two men were close contemporaries, but when I did a cursory internet search, I did not find that Assagioli borrowed ideas from Gebser, though I could be wrong about that.

Stage 1. The primitive stage

This stage correlates with One-dimensional Ordinal Action in the Natural Sequence schema.

This is the stage of the primitive people [Culture track] and ordinary small children [Life-Stage track]. They are “characterized by being simple, impulsive, easily distracted. They live only in the present, they are sensitive and emotional, but their feelings, though they may be intense at the time, are lacking in depth and are short-lived” (Assagioli, 1993: 108). The moral stage on this level he [Assagioli] claims to be rather egocentric or pre-conventional.

As we will see in subsequent chapters, **pre-conventional corresponds to pre-rational, conventional corresponds to rational, and post-conventional corresponds to trans-rational**. These are different names used by different DevPsy researchers who are looking at the same general stages through specific ‘lenses’.

Stage 2. The mythic stage

This stage correlates with Two-dimensional Ordinal Inspiration in the Natural Sequence schema. Gebser also used the word “mythic” to refer to this stage.

Assagioli exemplified this psychological age [Worldview] and stage [Life-Stage] through the early Vedic age [Culture] in India or those of the Homeric period in Greece. According to Assagioli, human beings at this stage [Life-Stage] are rather naïve and childish in their belief systems. The higher qualities of this age are: “purity, spontaneity, devotion, and a childlike faith in God” (Assagioli, 1993: 108). He describes their moral development as very conventional with a lot of devotion to their superiors, to moral and religious precepts and to the law.

But Assagioli carries us further into the mental stages of development with the following words: “Men cannot and should not stay at this childish level. Their development is marked, as during adolescence, by a series of contrasts and conflicts, and this opens up to the next stage.” (1993: 109).

With the words “development, contrasts, conflicts, next stage” we find that Assagioli was aware of what the Natural Sequence schema refers to as the Dialectic Principle and the Transition Principle.

[Stage 3] The rational stage or the “Titanic or Promethean” stage

This stage correlates with Three-dimensional Ordinal Expression in the Natural Sequence schema. The reference to Greek mythology as applied to this stage can be understood via an internet search on those words. For instance, refer to this document: ><https://digitalcommons.unl.edu/dissertations/AAI8722411/><. Basically, this rational and technological stage can be partly understood as a rebellion against the religiosity of the previous stage.

At this stage [Life-Stage] we develop critical reflection and this gives rise to many problems and doubts. The cultural values [Culture] and theories are no longer taken for granted or accepted without discussion. The mind wants to know the facts about a given moral value or thing. The individual becomes very proud and independent and turns away from gods or any authority. According to Assagioli we also find “an accentuation of self-awareness and self-affirmation which often leads to subjective introspection and is the chief characteristic of the Romantic viewpoint” (1993:109). He also considers this stage [Life-Stage] to be very chaotic and disharmonic presumably because of the many battles between the individual and the collective [Culture] values.

The lower aspects [Negative Pole and/or Ordinal phase] of this psychological age [Worldview] are among more an excessive self-affirmation, destructive impulses, anarchy, fanaticism, pride, and lack of respect of and understanding of others. The higher qualities [Positive Pole and/or Cardinal phase] are idealism, generosity, courage and boldness, a sense of honor.

The overall purpose of this age [Life-Stage and Worldview] is “development of the mind and of the independent moral faculties, affirmation of self-awareness and of spiritual independence, the study of life and the gaining of a broader experience” (1993:110). This age corresponds to the psychological age of the adolescent [Life-Stage] and many people are according to Assagioli at this level today [Worldview]....

Sorensen was not consistent in his use of “psychological age” to refer only to the Natural Sequence equivalent, namely Worldview; here he used it to refer to the Natural Sequence equivalent, Life-Stage, as well.

[Stage 4] The stage of the consolidated personality or the adult soul

This stage correlates with Pan-dimensional Neutral Assimilation in the Natural Sequence schema.

This is the stage of the integrated personality which Assagioli compares to the adult man or woman [Life-Stage], and we also find a higher [Positive Pole] and lower [Negative Pole] expression of this stage. The emotions have been stabilized and the mental and rational faculties have been developed. The former states of chaos and rapid changes have settled due to a consolidation of the personality.

The lower expression [Negative Pole and/or Ordinal phase] of this stage shows itself through reactions to the harsh realities of life, the many failures and disappointments give rise to an undue skepticism and intellectual crystallization. This hardening of the personality can make it very extrovert in its pursuit of personal duties and ambitions and create an isolation and emphasis on selfishness.

The higher aspects [Positive Pole and/or Cardinal Phase] of this age [Worldview] and stage [Life-Stage] can according to Assagioli be summarized in three words: harmony, balance and effectiveness. The personality is now so integrated or “perfected” that it is a good vehicle for spirit, and man is able to demonstrate a good balance between spirit and form. This seems to represent the stage of personal Psychosynthesis or self-actualization [also a Maslow term; see next chapter]. This stage is a major turning point for the soul where it must choose between the lower [negative, Ordinal] or higher [positive, Cardinal] way. The lower way will intensify the suffering and crystallization into matter until a major crisis will interact and change the course [Transition Principle]. This crisis is a battle between the personality and the Self [Dialectic Principle] which will one way or another rejuvenate the entire personality with new spiritual energies, when the surrender is done [Plateau]. The positive outcome of this crisis, Assagioli calls: The awakening of the soul. The higher way will lead to a gradually closer rapport with the spiritual Self and the evolving self will enter the path of purification and the different crisis here....

The description of a “crisis” phase during the fourth stage is another mention in these quotations of what I refer to as the Transition Principle, which is said to happen at the initiation into all stages. In terms of Life-Stages, this particular transformation is commonly referred to as the “mid-life crisis”, as discussed in a previous subsection in the Introduction chapter to this Part. In terms of Worldviews, we will see in subsequent chapters that lower-earlier ages are referred to as “Tier 1” and higher-later ages are referred to as “Tier 2”, because there is such a qualitative difference between them, and the transition from Tier 1 to Tier 2 is very turbulent.

There are few people whose inborn ceiling of psycho–socio–spiritual development (Worldview) is beyond this stage, even when their Life-Stage is beyond this stage. Assagioli was probably one of them, or he might not have noticed these higher–later stages, because it is not easy to recognize and acknowledge and understand people who are at a higher–later stage of development than oneself. Humanistic psychologists are usually in the fourth stage, and their stage models reflect this limitation in perception, as we will see in subsequent chapters, whereas transpersonal psychologists are usually in the fifth stage; they are able to recognize people who are higher–later even than they are.

So what do these exalted stages, fifth and beyond, look like?

Transpersonal Stages

The following stages correlate with the Cardinal stages of the Natural Sequence schema.

The following stages in Assagioli's stage theory are purely transpersonal stages and follow a pattern of crisis, purification and expansion of consciousness from stage to stage. [Transition via Dialectic]

To Assagioli, individual Psychosynthesis ... is only one aspect of the synthesis he argues for: "Individual Psychosynthesis is not, and cannot be, an end in itself, since each one of us is closely linked in life with other persons and groups" (Assagioli, 2002: 185). The horizontal part of Psychosynthesis was meant to be a wider and more full integration of the individual in the collective without losing individuality. He argues that many of the same techniques that are used for personal Psychosynthesis also could be implemented in the interpersonal work. His idealistic vision was that Psychosynthesis could play a role in establishing right human relations among the couples, between groups, nations and ultimately lead to the Psychosynthesis of humanity (Assagioli, 1965: 7). He even went further and saw human evolution as part of a greater evolution that united all beings into the supreme or cosmic synthesis (Assagioli, 1975: 31). [Feedback Principle] [<http://www.integralworld.net/sorensen2.html>] — retrieved 25 February 2021]

With a little bit of research, I did not find whether or not Assagioli explicitly divided the Transpersonal stages into the three Cardinal stages that are found in some other DevPsy models that are discussed in subsequent chapters. However, if we interpret the egg and star diagrams, discussed in a previous section, as correlating with the Natural Sequence schema and therefore with transpersonal stages, then Assagioli's Psychosynthesis model is a complete septenary. That is the way I show it in the next section. In the chapter on Theosophy in **Part X**, we see that Alice Bailey also had a schema of psychological maturity or soul ages (Worldviews) that can be reconciled with Assagioli's stages.

Tabulation of Natural Sequence and Psychosynthesis Names

Various terms were used in previous sections, giving different names and descriptions of five and seven stages in the Psychosynthesis model, and comparison was made with names of Attributes of the Natural Sequence. For your convenience, this is tabulated below.

Table V-3a — PSYCHOSYNTHESIS and the NATURAL SEQUENCE							
DIALECTIC AXIAL PROCESS DIRECTION CENTER	ORDINAL ACTION RESOLUTION BACKWARD MOTION	ORDINAL INSPIRATION IMMANENCE DOWNWARD EMOTION	ORDINAL EXPRESSION SEPARATION OUTWARD INTELLECT	NEUTRAL ASSIMILATION EXPERIENCE CONVOLUTED IMPULSE	CARDINAL EXPRESSION UNIFICATION INWARD CONCEPT	CARDINAL INSPIRATION TRANSCEND' UPWARD SYMPATHY	CARDINAL ACTION ACTIVATION FORWARD EXCITATION
CULTURE	Hunter-Gatherer	Agricultural-Pastoral	Technological Civilization	Scientific-Informational	Philosophical (future)	Spiritual (future)	Utopian (future)
WORLDVIEW	Primitivism	Traditionalism	Materialism	Collectivism	Holism	Transpersonal	Messianism
LIFE-STAGE	Infancy	Childhood	Youth	Middle Age	Seniority	Elderhood	Dying
EGG MODEL	Lower Unconscious	Middle Unconscious	Higher Unconscious	Field of Consciousness	Conscious Self or "I"	Higher Self	Collective Unconscious
STAR MODEL	Impulse/Desire	Emotion/Feeling	Thought	Self	Imagination	Intuition	Will
STAGE	Primitive	Mythic	Rational	Consolidated	Transpersonal	—	—

My comments on this table are as follows:

1. ATTRIBUTES: The first row shows the Attributes of the Natural Sequence schema (Dialectic, Axial, Process, Directionality), plus one of the Aspects of the Natural Sequence schema, Centers, which figure into the descriptions of the stages in Psychosynthesis (and other DevPsy models). Refer to [Chapter Xx in Part X, "Attributes of the Natural Sequence"](#) for more information.
2. CULTURES: The second row shows the names of the Cultures per the Natural Sequence schema. Refer to [Chapter Xx in Part X, "Socio-cultural Evolution"](#) for more information.
3. WORLDVIEWS: The third row shows the names of the stages of psychic (soul) maturity per the Natural Sequence schema. Refer to [Chapter Xx in Part X, "Worldviews"](#), for more information.
4. Life-StageS: The fourth row shows the names of the stages of psychological maturity per the Natural Sequence schema. Refer to [Chapter Xx in Part X, "Life-Stages"](#) for more information. DevPsy models typically but not always perceive that Culture, Worldview, and Life-Stage ALL contribute to a person's expression.
5. EGG MODEL: The fifth row shows the names that Assagioli gave to features of his egg model of the alleged "stages of consciousness". Their descriptions do not match the Attributes and Aspects of the Natural Sequence schema at all well, but I show it that way here anyway.
6. STAR MODEL: The sixth row shows the names that Assagioli gave to numbered points on a six-pointed star. By comparing these names with the names of the Centers shown in the first row, one may begin to see that the star model correlates well with the Centers of the Natural Sequence schema. Refer to [Chapter Xx in Part X, "Centers"](#) for more information.
7. STAGE: The seventh row shows the names that Assagioli gave to stages of "psychosynthesis", aka psychological maturity. The descriptions of these stages fit with the worldviews of some models by some other transpersonal psychologists better than they do with what the Natural Sequence refers to as Life-Stages.

Scoring Assagioli against the Natural Sequence Principles

In my view, each DevPsy model has its strengths and weaknesses in terms of accuracy and completeness, judged on the basis of the results of subsequent research by other developmental psychologists, and on its conformity to the Natural Sequence schema. Assagioli's DevPsy psycho-synthesis model ticks all of the check boxes of the ideal Natural Sequence schema: [Holarchy](#), [Transition](#), [Dialectic](#), [Dimensionality](#), [Feedback](#), [Me-We](#), and [Fractalicity](#). I suggest that the reason that this is the case, is that Assagioli was accepting of transpersonal psychology and metaphysical teachings. The type of people who are interested in such higher

realms of inquiry are typically inclined to think in terms of principles, as part of their search for the grand synthesis of the cosmic archetypes.

Concluding Comments on Assagioli's Psychosynthesis Model

There is nothing quite like a numbered list (or a table) for getting my thoughts in order, and for presenting them clearly to others.

1. Roberto Assagioli was one of the pioneers of DevPsy in that he perceived the work of Sigmund Freud, who posited five stages of childhood development, as inadequate and incomplete. Assagioli not only extended the concept of human development beyond childhood and into adult stages, but also into the realm of “transpersonal” stages — of “spiritual” development.
2. To my knowledge, Assagioli did not do much in the way of original formal academic research on the stages of psychological development. Instead, Assagioli borrowed ideas about stages from Neo-Theosophy, and also from Abraham Maslow's Hierarchy of Needs.
3. Because Assagioli was a pioneer in this field, and because he borrowed so much from others, to me his work seems inadequate and incomplete compared to the work of others, his successors in the field of developmental psychology. We look at his successors in the following chapters.

In the next chapter, we take a look at the work of Abraham Maslow, from which Assagioli borrowed.





Chapter V-4

① ABRAHAM MASLOW — HIERARCHY OF NEEDS

Third up in the series of chapters on theories of human psycho-social development is the work of Abraham Maslow, who lived from 1908 to 1970. This lifespan made him an early contemporary of many other researchers in the field of developmental psychology (DevPsy), mostly during the middle half of the Twentieth Century. Each of these researchers contributed to the field from different perceptions and perspectives, but they basically discerned the same pattern, the Natural Sequence pattern, as I hope to demonstrate to the reader's satisfaction. Maslow referred to his model as a "hierarchy of needs" (HON).

Introduction and History

Before we get to his HON theory, let's begin with a brief introduction to Maslow himself from my usual primary source, Wikipedia; he wasn't just some random guy of little consequence:

Abraham Harold Maslow (1908 – 1970) was an American psychologist who was best known for creating Maslow's hierarchy of needs, a theory of psychological health predicated on fulfilling innate human needs in priority, culminating in self-actualization. Maslow was a psychology professor at Alliant International University, Brandeis University, Brooklyn College, New School for Social Research, and Columbia University. He stressed the importance of focusing on the positive qualities in people, as opposed to treating them as a "bag of symptoms". *A Review of General Psychology* survey, published in 2002, ranked Maslow as the tenth most cited psychologist of the 20th century. [https://en.wikipedia.org/wiki/Abraham_Maslow — retrieved 22 February 2021]

Thereafter follow several sections that described his youth, his education, and his academic career. Thereafter followed more sections describing his involvement with humanistic psychology, his research on peak and plateau experiences, and his research on the value system and belief system of people who had achieved a state of "being" that he referred to as "self-actualization". Unlike most other psychologists of his time, he was open to spirituality as a healthy motivation to achieve self-actualization. Out of this research he developed his famous theory of the hierarchy of needs, which included extraordinary stages of being (underlines are my emphasis):

During the 1960s Maslow founded with Stanislav Grof, Viktor Frankl, James Fadiman, Anthony Sutich, Miles Vich and Michael Murphy, the school of transpersonal psychology. Maslow had concluded that humanistic psychology was incapable of explaining all aspects of human experience. He identified various mystical, ecstatic, or spiritual states known as "peak experiences" as experiences beyond self-actualization. Maslow called these experiences "a fourth force in psychology", which he named transpersonal psychology. Transpersonal psychology was concerned with the "empirical, scientific study of, and responsible implementation of the finding relevant to, becoming, mystical, ecstatic, and spiritual states". (Olson & Hergenhahn, 2011).

Maslow published in 1962 a collection of papers on this theme, which developed into his 1968 book *Toward a Psychology of Being*. In this book Maslow stresses the importance of transpersonal psychology to human beings, writing: "without the transpersonal, we get sick, violent, and nihilistic, or else hopeless and apathetic" (Olson & Hergenhahn, 2011). Human beings, he came to believe, need something bigger than themselves that they are connected to in a naturalistic sense, but not in a religious sense: Maslow himself was an atheist and found it difficult to accept religious experience as valid unless placed in a positivistic [rational and empirical science] framework. In fact, Maslow's position on God and religion was quite complex. While he rejected organized religion and its beliefs, he wrote extensively on the human being's need for the sacred and spoke of God in more philosophical terms, as beauty, truth and goodness, or as a force or a principle.

[https://en.wikipedia.org/wiki/Abraham_Maslow — retrieved 23 February 2021]

It was probably not intentional on the part of the author of this Wikipedia article, but “Beauty” is an appropriate descriptive word for the Pan-dimensional Neutral Assimilation stage of the Natural Sequence schema, “Truth” for Three-dimensional Cardinal Expression, “Goodness” for Two-dimensional Cardinal Inspiration, and “Force” for One-Dimensional Cardinal Action. Notice that the author even placed them in the correct sequence in terms of the Dimensionality Attributes, namely =P-D= > +3-D+ > +2-D+ > +1-D+. These are the transpersonal components of the human experience as systematized in the Natural Sequence schema.

But I am getting ahead of the story here. Let’s go back to the early history of the HON, before Maslow added transpersonal stages to his HON. The following series of quotations were all extracted from this website: >https://en.wikipedia.org/wiki/Maslow%27s_hierarchy_of_needs<, on 14 September 2020. My comments are interspersed between blocks of quoted material.

Maslow’s hierarchy of needs is a theory in psychology proposed by Abraham Maslow in his 1943 paper “A Theory of Human Motivation” in *Psychological Review*. There is little scientific basis to the theory: Maslow himself noted this criticism. Maslow subsequently extended the idea to include his observations of humans’ innate curiosity. His theories parallel many other theories of human developmental psychology, some of which focus on describing the stages of growth in humans.

Of the developmental psychologies that have been presented to the world subsequent to Maslow, I have chosen to discuss, in the following chapters, those that best fit with the Natural Sequence. They also have a better scientific basis than Maslow’s original primitive theory, which he refined with subsequent research; other researchers subsequently built upon Maslow’s primitive foundation.

He then created a classification system which reflected the universal needs of society as its base and then proceeding to more acquired emotions. Maslow’s hierarchy of needs is used to study how humans intrinsically partake in behavioral motivation. Maslow used the terms “physiological” [0-D], “safety” [1-D], “belonging and love” [2-D], “social needs” or “esteem” [3-D], and “self-actualization” [P-D] to describe the pattern through which human motivations generally move. This means that in order for motivation to arise at the next stage, each stage must be satisfied within the individual themselves. Additionally, this theory is a main base in knowing how effort and motivation are correlated when discussing human behavior. Each of these individual levels contains a certain amount of internal sensation that must be met in order for an individual to complete their hierarchy. The goal in Maslow’s theory is to attain the fifth level or stage: self-actualization.

Note from what is said in this quotation that the HON satisfies the Holarchy Principle of the Natural Sequence schema, meaning that each higher stage includes and transcends the lower stage(s). Maslow originally proposed these named five stages, but in his later years, he divided the top stage into four more stages, making a total of eight. More is said about this below. In the next sub-section, all eight stages are described in detail, and near the end of this chapter all eight stages are included in [Table V-4b](#).

Maslow’s [original five-stage] theory was fully expressed in his 1954 book *Motivation and Personality*. The hierarchy remains a very popular framework in sociology research, management training, and secondary and higher psychology instruction. Maslow’s classification hierarchy has been revised over time. The original hierarchy states that a lower level must be completely satisfied and fulfilled before moving onto a higher pursuit. However, today scholars prefer to think of these levels as continuously overlapping each other. This means that the lower levels may take precedence back over the other levels at any point in time.

As stated above, Maslow’s HON is not exactly a developmental psychology on the order of the others reviewed in this Part; it is more fluid and flexible and ambiguous. With other hierarchical psychological systems, once a stage of development is attained, one does not normally regress to a lower, earlier stage, except occasionally under extreme duress. With Maslow’s HON, one can move up and down in it as required to deal with changes of conditions, circumstances, and situations within oneself and/or in the environment, over various time scales. This characteristic of the HON will be obvious as you read the descriptions below.

Maslow’s hierarchy of needs is often portrayed in the shape of a pyramid with the largest, most fundamental needs at the bottom and the need for self-actualization and transcendence at the top. In other words, the theory is that individuals’ most basic needs must be met before they become motivated to achieve higher level needs. However, it has been pointed out that, although the ideas behind the hierarchy are Maslow’s, the pyramid itself does not exist anywhere in Maslow’s original work.

Rather than use the five-stage HON pyramid that is often shown in publications, in this chapter I use the eight-stage pyramid graphic to illustrate the hierarchy (see below), but I also present the information in table format, showing its correlation with the Attributes of the Natural Sequence. Note in the quotation that the

additional stage beyond self-actualization is named “transcendence”; this is one of the higher stages that appeared in Maslow’s later formulation of his model.

The most fundamental four layers of the pyramid contain what Maslow called “deficiency needs” or “d-needs”: [listed in reverse order] esteem, friendship and love, security, and physical needs. If these “deficiency needs” are not met — except for the most fundamental (physiological) need — there may not be a physical indication, but the individual will feel anxious and tense. Maslow’s theory suggests that the most basic level of needs must be met before the individual will strongly desire (or focus motivation upon) the secondary or higher-level needs. Maslow also coined the term “metamotivation” to describe the motivation of people who go beyond the scope of the basic needs and strive for constant betterment.

This paragraph hints at the division of the HON into the same pattern of Ordinal (“deficiency”), and Cardinal (“higher”) groups, which is a feature of the Natural Sequence. This feature of the HON, and the correlation with stages of the Natural Sequence schema, is made clear in the descriptions to follow.

The human brain is a complex system and has parallel processes running at the same time, thus many different motivations from various levels of Maslow’s hierarchy can occur at the same time. Maslow spoke clearly about these levels and their satisfaction in terms such as “relative”, “general”, and “primarily”. Instead of stating that the individual focuses on a certain need at any given time, Maslow stated that a certain need “dominates” the human organism. Thus Maslow acknowledged the likelihood that the different levels of motivation could occur at any time in the human mind, but he focused on identifying the basic types of motivation and the order in which they would tend to be met. [https://en.wikipedia.org/wiki/Abraham_Maslow — retrieved 23 February 2021]

I would rephrase this paragraph by stating that a person tends to have a “center of gravity” somewhere in the HON. This is where they “hang out” the most. Per the research of other developmental psychologists, a person’s center of gravity in the HON rises from the lowest level, mere physiology at birth, to successively higher stages over the course of a lifetime. Because of various personality factors, most people reach a “ceiling” in terms of these stages, beyond which they are unlikely to rise, except during what Maslow referred to as “peak experiences”, noted previously. In other words, not everyone *needs* all of these Needs; in some people, if the higher Needs exist in them, they are potential or latent, rather than “actualized”. (Think of the low-IQ, no-ambition, primitive-soul, beer-swilling couch potato who watches professional sports when he is not working his menial job. Not that there is anything wrong with that.) In the Natural Sequence schema, the center of gravity — to which a person tends to rise through the Life-Stages naturally — is referred to as Worldview, which is said to be an inherent personality trait and/or soul maturity factor. As stated in all of these DevPsy chapters, there is a complex interplay between the factors of Culture, Worldview, Life-Stage, and Need. This fact of life makes it almost impossible to discern which factor is the “motivation” for any particular expression.

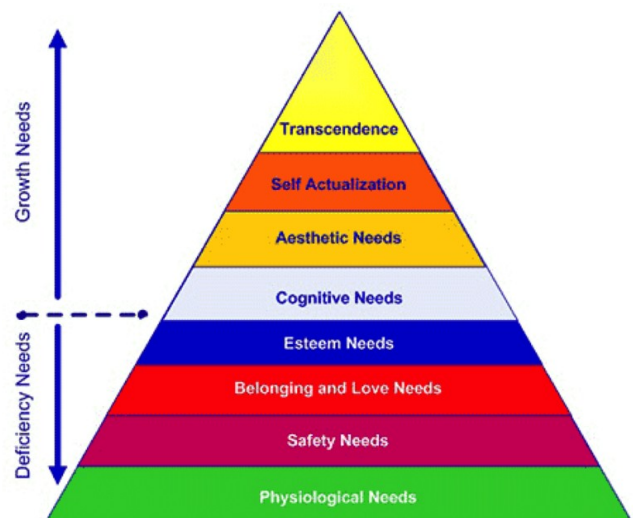
With that introduction behind us, we are ready to take a look at the descriptions of stages of the HON in some detail.

Eight Stages of the Hierarchy of Needs

The following quotation is not from the Wikipedia article quoted above.

It is important to note that Maslow’s (1943, 1954) five-stage model has been expanded to include cognitive and aesthetic needs (Maslow, 1970a) and later transcendence needs (Maslow, 1970b). Changes to the original five-stage model are highlighted and include a seven-stage model and an eight-stage model; both developed during the 1960s and 1970s. [<https://www.simplypsychology.org/maslow.html> — retrieved 14 September 2020]

Let’s take a look at the famous HON pyramid, the updated version with eight stages. In the original five-stage version, the top of the pyramid was named “Self-Actualization”, but in later publications, Maslow divided it into four stages, with Self-actualization being the seventh stage. Descriptions of the eight stages are found in the table below.



As usual with the tables in this chapter, the most primitive stage is shown at the bottom of the table, and the most advanced stage is shown at the top of the table. Think of stratification in geology as a metaphor for this practice: the earlier strata are covered over by later strata. Admittedly, this is a bit awkward until you become accustomed to it, but it does embody the Hierarchy Principle, where more primitive is toward the bottom and more advanced is toward the top. Therefore, you might prefer to start your review of this table (and other tables in other chapters) at the bottom and work your way up, stage by stage.

Table V-4a — HIERARCHY OF NEEDS per ABRAHAM MASLOW		
NO.	NAME and DESCRIPTION	ATTRIBUTES
7	<p>TRANSCENDENCE: A person is motivated by values which transcend beyond the personal self (e.g., mystical experiences and certain experiences with nature, aesthetic experiences, sexual experiences, service to others, the pursuit of science, religious faith, etc.). [>https://www.simplypsychology.org/maslow.html< — retrieved 14 September 2020]</p> <p>However, the 7-stage model was not the end. Maslow (1970b) further expanded the hierarchy to 8-stage model by adding transcendence needs as the ultimate level. Transcendence needs can also be referred to [as] spiritual needs. Through helping others, people can gain satisfaction and feelings of integrity, thus reaching another level of self-actualization. I also appreciate Maslow a lot as he added this stage in the Hierarchy of needs. The previous 7-stage model was just limited to a person himself, limited to how he maximize his potential and actualize himself in his world. But by adding the final stage which is the transcendence needs, after the person has self-actualized, they can also spread their love or cares to those who are in need and are unprivileged, so the person can reach a higher level of self-actualization. We can proof this by real world example. When the world become more and more developed and people gain more knowledge about the world, they can see the needs of the unprivileged population around them or around the world, so different Non-Governmental Organizations (NGOs) are established, such as World Vision, Red Cross and Orbis. Regardless of your gender, age, job and economic status, if you have a helping heart, you can also help others to actualize your role of being in this global village. Therefore, the level of transcendence needs in the Hierarchy of Needs proposed by Maslow reminded us that, a person cannot fully actualized if he just grow inside his own world. A true maturity concept is that how you devote into the society and recognize the needs of other and help them, then the person can be said to live well, develop well and maximizing his potential. This is how a mature person is formed. [>https://modelsofmaturityblog.wordpress.com/2016/11/29/maslows-model-of-maturity/<]</p>	<p>ACTIVISM EXCITATION KING + 1-D + CARDINAL ACTION FORWARD ORIGINATION</p>
6	<p>SELF-ACTUALIZATION: Self-actualization is the ... level of need in Abraham Maslow's hierarchy of needs which deals with the <u>desire</u> of people to develop their talents and potential that are hidden in them in the society. Self-actualization or self-realization needs help people to <u>develop</u> the desire to exploit all their talents that are hidden in them. This is in reality the achievement of self-actualization or self-realization needs as advocated by Abraham Maslow in the hierarchy of human needs in the society. Onah (2015) perceives self-actualization as self fulfillment — the need to develop a person's full potential in order to enable him or her to become the <u>best</u> that he or she is capable of being in the society. Self-actualization or self-realization becomes a reality when people develop the desire to exploit all the talents, gifts and potential that are hidden in them in the society. The self-actualization needs or self-realization needs <u>encourage</u> people to be innovative in their various social settings in order to <u>improve</u> their living conditions in the society. Onah (2015) states that self-actualization needs help people to be creative in the society. In this perspective, self-actualization or self-realizations needs demand for the development of human potential in order to improve the living conditions of people in various communities in the contemporary global environment. [>http://www.eajournals.org/wp-content/uploads/Abraham-Maslow%E2%80%99s-Hierarchy-of-Needs-and-Assessment-of-Needs-in-Community-Development.pdf< — retrieved 14 September 2020]</p>	<p>TRANSCEND- ENCE SYMPATHY PRIEST + 2-D + CARDINAL INSPIRATION UPWARD EVOLUTION</p>

Table V-4a — HIERARCHY OF NEEDS per ABRAHAM MASLOW

NO.	NAME and DESCRIPTION	ATTRIBUTES
5	<p>AESTHETIC: Appreciation and search for <u>beauty</u>, balance, form, etc. [https://www.simplypsychology.org/maslow.html< — retrieved 14 September 2020]</p> <p>Aesthetic needs refer to human desire to enjoy and promote the beauty of human environment. Anyanwu, Omolewa, Adeyeri, Okanlawon and Siddiqui (1985) remark that aesthetic needs are people's desire to enjoy and foster the beauty of their surroundings in the society. The focus of aesthetic needs is to conscientise people on the need to love, understand and promote the beauty of human surroundings in the society. In the views of Aruma (2013) aesthetic needs have to do with the beauty of human surroundings in the society. People are encouraged to love, understand, appreciate and promote the efficacy of beautiful things such as art, music, flowers, and painted background in human environment. [http://www.eajournals.org/wp-content/uploads/Abraham-Maslow%E2%80%99s-Hierarchy-of-Needs-and-Assessment-of-Needs-in-Community-Development.pdf< — retrieved 14 September 2020]</p>	<p>UNIFICATION</p> <p>CONCEPT</p> <p>SAGE</p> <p>+ 3-D +</p> <p>CARDINAL</p> <p>EXPRESSION</p> <p>INWARD</p> <p>SYNTHESIS</p>
4	<p>COGNITIVE/UNDERSTANDING: <u>Understanding</u> is the ... level of need in Abraham Maslow's hierarchy of needs which deals with the desire of people to know in human environment. This reminds human beings of the urgent need to acquire relevant <u>knowledge</u>, skills, <u>information</u>, and attitude in order to enable them to function very efficiently and effectively in various social settings in human environment. There is obviously an urgent need for people to acquire relevant knowledge, skills, information, and attitude in order to help them be able to contribute their own little quota in repositioning their various communities through their contributions to promotion of <u>community</u> development. The acquisition of relevant knowledge, skills, information, and attitude through the instrumentality of <u>education</u> will help the recipients at community level to see how the acquired knowledge, skills, information, and attitude will help them to participate in promotion of community development in the various communities in their society. [http://www.eajournals.org/wp-content/uploads/Abraham-Maslow%E2%80%99s-Hierarchy-of-Needs-and-Assessment-of-Needs-in-Community-Development.pdf< — retrieved 14 September 2020]</p>	<p>EXPERIENCE</p> <p>IMPULSE</p> <p>SCHOLAR</p> <p>= P-D =</p> <p>NEUTRAL</p> <p>ASSIMILATION</p> <p>COMPLEX</p> <p>COMBINATI'N</p>
3	<p>SELF-ESTEEM: Esteem needs are <u>ego</u> needs or <u>status</u> needs. People develop a concern with getting <u>recognition</u>, status, <u>importance</u>, and respect from others. Most humans need to feel respected; this includes the need to have <u>self-esteem</u> and <u>self-respect</u>. Esteem presents the typical human desire to be accepted and valued by others. People often engage in a profession or hobby to gain recognition. These activities give the person a sense of contribution or value. Low self-esteem or an inferiority complex may result from imbalances during this level in the hierarchy. People with low self-esteem often need respect from others; they may feel the need to seek fame or glory. However, fame or glory will not help the person to build their self-esteem until they accept who they are internal. Psychological imbalances such as depression can distract the person from obtaining a higher level of self-esteem. Most people have a need for stable self-respect and self-esteem. Maslow noted two versions of esteem needs: a "lower" version and a "higher" version. The "lower" version of esteem is the need for respect from others and may include a need for status, recognition, fame, prestige, and attention. The "higher" version manifests itself as the need for self-respect, and can include a need for strength, competence, mastery, self-confidence, independence, and freedom. This "higher" version takes guidelines, the "hierarchies are interrelated rather than sharply separated". This means that esteem and the subsequent levels are not strictly separated; instead, the levels are closely related. [https://en.wikipedia.org/wiki/Maslow%27s_hierarchy_of_needs< — retrieved 14 September 2020]</p>	<p>SEPARATION</p> <p>INTELLECT</p> <p>ARTISAN</p> <p>- 3-D -</p> <p>ORDINAL</p> <p>EXPRESSION</p> <p>OUTWARD</p> <p>ANALYSIS</p>

Table V-4a — HIERARCHY OF NEEDS per ABRAHAM MASLOW

NO.	NAME and DESCRIPTION	ATTRIBUTES
2	<p>SOCIAL BELONGING: After physiological and safety needs are fulfilled, the third level of human needs is interpersonal and involves <u>feelings</u> of belongingness. According to Maslow, humans possess an <u>affective</u> need for a sense of belonging and acceptance among <u>social</u> groups, regardless of whether these groups are large or small. For example, some large social groups may include clubs, co-workers, <u>religious</u> groups, professional organizations, sports teams, gangs, and online communities. Some examples of small social connections include family members, intimate partners, mentors, colleagues, and confidants. Humans need to <u>love</u> and be loved — both sexually and non-sexually — by others. Many people become susceptible to loneliness, social anxiety, and clinical depression in the absence of this love or belonging element. This need is especially strong in childhood and it can override the need for safety as witnessed in children who cling to abusive parents. Deficiencies due to hospitalism, neglect, shunning, ostracism, etc. can adversely affect the individual's ability to form and maintain emotionally significant relationships in general. Social Belonging needs include: Friendships, Intimacy, Family. This need for belonging may overcome the physiological and security needs, depending on the strength of the peer pressure. In contrast, for some individuals, the need for self-esteem is more important than the need for belonging; and for others, the need for creative fulfillment may supersede even the most basic needs.</p> <p>[>https://en.wikipedia.org/wiki/Maslow%27s_hierarchy_of_needs< — retrieved 14 September 2020]</p>	<p>IMMANENCE EMOTION SERVER – 2-D – ORDINAL INSPIRATION DOWNWARD INVOLUTION</p>
1	<p>SAFETY NEEDS: Once a person's physiological needs are relatively satisfied, their safety needs take precedence and dominate behavior. In the absence of <u>physical safety</u> — due to war, natural disaster, family violence, childhood abuse, etc. in the absence of <u>economic safety</u> — (due to an economic crisis and lack of work opportunities) these safety needs manifest themselves in ways such as a preference for job security, grievance procedures for protecting the individual from unilateral authority, savings accounts, insurance policies, disability accommodations, etc. This level is more likely to predominate in children as they generally have a greater need to feel safe. It includes shelter, job security, health, and safe environments. If a person does not feel safe in an environment, they will seek safety before attempting to meet any higher level of survival. Safety and Security needs include: Personal security, Emotional security, Financial security, Health and well-being, Against accidents/illness.</p> <p>[>https://en.wikipedia.org/wiki/Maslow%27s_hierarchy_of_needs< — retrieved 14 September 2020]</p>	<p>RESOLUTION MOTION WARRIOR – 1-D – ORDINAL ACTION BACKWARD TERMINATION</p>
0	<p>PHYSIOLOGICAL NEEDS: The physiological need is a concept that was derived to explain and cultivate the foundation for motivation. This concept is the main physical requirement for human survival. This means that physiological needs are universal human needs. Physiological needs are considered in internal motivation according to Maslow's hierarchy of needs. This theory states that humans are compelled to fulfill these physiological needs first to pursue intrinsic satisfaction on a higher level. If these needs are not achieved, it leads to an increase in displeasure within an individual. In return, when individuals feel this increase in displeasure, the motivation to decrease these discrepancies increases. Physiological needs can be defined as both traits and a state. Physiological needs as traits allude to long-term, unchanging demands that are required of basic human life. Physiological needs as a state allude to the unpleasant decrease in pleasure and the increase for an incentive to fulfill a necessity. To pursue intrinsic motivation higher up Maslow's hierarchy, Physiological needs must be met first. This means that if a human is struggling to meet their physiological needs, then they are unlikely to intrinsically pursue safety, belongingness, esteem, and self-actualization. Physiological needs include: Homeostasis, Health, Food and water, Sleep, Clothes. [>https://en.wikipedia.org/wiki/Maslow%27s_hierarchy_of_needs< — retrieved 14 September 2020]</p>	<p>0-D Zero Natural Sequence Attributes of this Need</p>

My comments on this table are as follows:

- NO. (NUMBER): The first column shows the ranking number of the Needs as correlated with the ranking order of the Attributes of the Natural Sequence shown in the third column. In order to correlate the two systems, it was necessary to give the Physiological Needs the rank of zero. When this is done, the correlation of Maslow's HON with the characteristics of the stages of the Natural Sequence is fairly easy to discern. The more you know about the Natural Sequence, the more obvious the correlation is. Also, the more you know about formulations of DevPsy other than Maslow's, the more obvious the correlation is. Also, note that both the HON system and the Natural Sequence schema can be used to enlarge one's understanding of both systems: they embellish and elucidate each other.

- **NAME and DESCRIPTION:** Information in the second column was extracted verbatim from the sources shown in brackets at the end of the quotation in each Need. Other sources are, of course, available on the internet, and Maslow's original journal article from 1943 is available for free on the internet at this location: ><http://psychclassics.yorku.ca/Maslow/motivation.htm><.
- **ATTRIBUTES:** The third column shows the names of the Zones, Centers, Roles, and Attributes (Dimensionality, Dialectic, Axial, Directionality, Process) of the Natural Sequence and the Process/Aspect System that correspond to Maslow's HON. Tables in previous and following chapters are usually shown in a similar way, so that the reader can more easily coordinate from chapter to chapter, from DevPsy model to DevPsy model. Attributes of the Natural Sequence schema are discussed in **Chapter Xx in Part X**, "Attributes of the Natural Sequence".
- **PHYSIOLOGICAL NEEDS:** Not all do, but several other DevPsy models have a zeroth level or stage as a foundation upon which their holarchy of stages is built.

Maslow and Chakras

The Wikipedia article on Maslow, >https://en.wikipedia.org/wiki/Abraham_Maslow<, indicates that Maslow was involved in the so-called "humanistic psychology" movement that was incipient in his day, but he found that perspective to be inadequate, so he became a co-founder of so-called "transpersonal psychology". The majority of psychologists are comfortable with the former, but they are not comfortable with the latter, perhaps because transpersonal psychology dares to delve into the alleged "spiritual" component of the human psyche. Maslow even participated in the Esalen Institute, a northern California teaching venue that was at the forefront of the so-called "human potential movement", a rather New-Agey endeavor. A lengthy biography of Maslow's own development as a psychologist, from behaviorism (the Ordinal stages of the Natural Sequence schema) to humanism (the Neutral stage of the Natural Sequence schema) to transpersonalism (the Cardinal stages of the Natural Sequence schema), can be found at this website: ><http://oaks.nvg.org/abraham-maslow.html><. It seems that Maslow ascended his own HON during his lifetime, ending up at the very top of the hierarchy.

The reason that I bring this up is because many people have noticed a similarity, to the point of close correspondence, between the HON and the chakra system of Oriental mysticism. An internet search on "maslow chakra" yields many hits, such as this one: ><https://www.psychologytoday.com/us/blog/the-resilient-brain/201804/maslows-hierarchy-vs-7-chakras-interestingly-similar><, and then there is this one: ><https://psychcentral.com/blog/maslow-revisited-the-hierarchy-of-chakras/><. If these articles had included the later version with eight stages, they would have gotten a more complete and accurate fit, in my opinion.

In the table below, I propose a correlation of chakras with the HON and the Natural Sequence schema.

Table V-4b — CORRELATION OF MASLOW'S HIERARCHY of NEEDS with CHAKRAS								
RANK	0	1	2	3	4	5	6	7
CHAKRA	Root	Gonad	Navel	Plexus	Heart	Throat	Brow	Crown
CENTER	Physiology	Motion	Emotion	Intellect	Impulse	Concept	Sympathy	Excitation
NEED	Physiology	Safety	Social	Self-esteem	Knowledge	Aesthetic	Self-actualiz'n.	Transcendence
NATURAL SEQUENCE ATTRIBUTES	NONE	– 1-D – ORDINAL ACTION BACKWARD TERMINATION	– 2-D – ORDINAL INSPIRATION DOWNWARD INVOLUTION	– 3-D – ORDINAL EXPRESSION OUTWARD ANALYSIS	= P-D = NEUTRAL ASSIMILATION COMPLEX COMBINATION	+ 3-D + CARDINAL EXPRESSION INWARD SYNTHESIS	+ 2-D + CARDINAL INSPIRATION UPWARD EVOLUTION	+ 1-D + CARDINAL ACTION FORWARD ORIGINATION

My comments on this table are as follows:

- **RANK:** The first row shows the same ranking numbers that are assigned to the stages of the HON in the previous table.

- CHAKRA: The second row shows some common names of the chakras. Refer to [Chapter Xx in Part X](#), “The Seven Chakras”, for more information about the chakras. Among other things, it explains why there are eight primary chakras shown here, rather than the usual seven.
- CENTER: The third row shows the names of the Centers. In the seven-Aspect expansion of the Natural Sequence known as the Process/Aspect System, the so-called “Centers” are components of the personality ‘body’ that correspond to the chakras of the physical body. In other words, the Centers and the chakras express the seven fundamental archetypes, but in different realms, the personality and the body respectively. Refer to the chapter on Centers in [Chapter Xx in Part X](#), “The Gurdjieff Teaching”. The Centers are one of the Attributes of the Natural Sequence schema that are shown in the right-most column of [Table Xa](#); look for them there. As you read the Description of each Need in the center column of that table, you will see hints of the Center expressed in the Need.
- NEED: The fourth row shows some common names for the stages of the HON. It might not be coincidental that there are eight of them, the same as the quantity of chakras.
- NATURAL SEQUENCE ATTRIBUTES: These Attributes of the Natural Sequence provide the abstract characteristics of the chakras and Needs in the rows above. The top row shows the Dimensionality Attribute, the second row shows the Dialectic Attribute, the third row shows the Axis Attribute, the fourth row shows the Directionality Attribute, and the fifth row shows the Process Attribute.

Maslow was Jewish, and although he was not a religious Jew, one might reasonably wonder if he borrowed his HON schema from the Kabbalah’s “Tree of Life” schema, the Kabbalah being the branch of Judaism that deals with cosmology and cosmogony. Others have wondered the same thing, but apparently that is not the case, as stated here: <https://www.psychologytoday.com/us/blog/the-peak-experience/202003/maslow-creativity-and-kabbalah>. Nevertheless, the Tree of Life of the Kabbalah tradition is correlated with the Natural Sequence in [Chapter Xx in Part X](#), “The Kabbalah”; thus, the HON can be correlated with the Kabbalah.

Scoring Maslow against the Natural Sequence Principles

The academic field of DevPsy primarily covers the stages that a human passes through during a full lifetime. Because the HON is not a DevPsy in the way that the others reviewed in this Part are, it need not be expected to satisfy all or even most of the Principles of the Natural Sequence schema. Rather, the HON classifies stages that a healthy adult can function in at any time during their lives.

The HON does satisfy the Holarchy Principle because the ‘top’ of the spectrum is said to be more ‘advanced’ than the ‘bottom’ of the spectrum. The HON also satisfies the Dimensionality Principle well enough when you consider the characteristics and qualities of each level. Therefore, the HON correlates well enough with the Natural Sequence schema in terms of the quantity of stages, and in the qualities of those stages, that one can reasonably point to it as a confirmation of the validity of the Natural Sequence schema. I also see the Feedback Principle in the HON as it acknowledges the interaction of agent and arena. I do not see any evidence that the HON embodies the other Natural Sequence schema Principles: [Transition](#), [Dialectic](#), [Fractality](#), [Me-We](#).

Even though the HON is not a full-fledged DevPsy model, I put the HON in this Part because there was not a better Part for it in the book, and because it corresponds well with actual DevPsy models. In fact, subsequent DevPsy researchers were familiar with the HON and were influenced by it, as we will see in other chapters.

A quotation from the Wikipedia article is relevant to the Holarchy Principle:

[Humans thus] can derive “happiness” from simultaneously working on a number of needs regardless of the fulfillment of other needs. This might be why people in impoverished nations, with only modest control over whether their basic needs [Needs 0 and 1] are fulfilled, can nevertheless find a measure of well-being through social relationships [Need 2] and other psychological needs [Need 3 and higher] over which they have more control. — Diener & Tay (2011), p. 364.

Maslow, however, would not be surprised by these findings, since he clearly and repeatedly emphasized that the need hierarchy is not a rigid fixed order as it is often presented:

We have spoken so far as if this hierarchy were a fixed order, but actually it is not nearly so rigid as we may have implied. It is true that most of the people with whom we have worked have seemed to have these

basic needs in about the order that has been indicated. However, there have been a number of exceptions.
— Maslow, *Motivation and Personality* (1970), p. 51.

Maslow also regarded that the relationship between different human needs and behavior, being in fact often motivated simultaneously by multiple needs, is not a one-to-one correspondence, i.e., that “these needs must be understood not to be exclusive or single determiners of certain kinds of behavior”.

Maslow’s concept of self-actualizing people was united with Piaget’s developmental theory to the process of initiation in 1993. [https://en.wikipedia.org/wiki/Abraham_Maslow — retrieved 23 February 2021]

A subsection was devoted to Piaget’s work in **Chapter Xx**, “Introduction to Developmental Psychology”. Developmental psychologists have been generally aware of each other’s work, and often compared and contrasted their work with others. And then there have been yet other people, such as myself, who have attempted to correlate the various models, and assemble them into one overall schema.

Concluding Comments on Maslow’s Hierarchy of Needs

There is nothing quite like a numbered list (or a table) for getting my thoughts in order, and for presenting them clearly to others.

1. In terms of its obvious correlation with the Natural Sequence schema, Maslow’s HON is one of the most straightforward models that is reviewed in this Part.
2. People can go up and down in this septenary in a moment, or in a lifetime, or anything in between, depending on circumstances.
3. Many people are at least vaguely aware of famous psychologist Abraham Maslow’s hierarchy of human needs. An Internet search will turn up enough hits to keep a person busy for weeks and months, if not years.
4. It has been said that most people are so busy satisfying the so-called “deficiency Needs” (Zero, One, Two, and Three) that they have little time or energy for the so-called “growth Needs” (Four, Five, Six, Seven). Besides that, DevPsy researchers have found that the majority of people are, by nature and nurture, in the stages of development that correspond to the deficiency Needs, so even if they had the time and energy to pursue growth Needs, those are not “needs” for them. Much more is said about this phenomenon in other chapters in this Part.
5. Many people have found Maslow’s HON system to be useful. I suggest that this is because Maslow hit upon the same pattern presented in the Natural Sequence, which is fundamental and archetypal — and therefore about as real as it gets.
6. If we number Maslow’s most basic need, “Physiological”, as “Zero” instead of “One”, the descriptions of the other seven needs correlate nicely with the numbers and meanings of the seven Processes arranged in the Natural Sequence. If the psychosomatic apparatus does not function at all well, then nothing else matters, so of course it is the starting point.
7. I correlate Maslow’s most basic need with Gurdjieff’s understanding of the “Instinctive Center”: it is also about physiology; refer to **Chapter Xx in Part X, “The Gurdjieff Teaching”**, for more information. I also correlate Maslow’s most basic need with the so-called “root” chakra, which is also about physicality; refer to **Chapter Xx in Part X, “The Seven Chakras”**, for more information.
8. In Maslow’s hierarchy, it is fairly obvious that, generally speaking, a person’s physical needs are more basic than the emotional needs, and the emotional needs are more basic than the intellectual needs, and the intellectual needs are more basic than the spiritual needs. Maslow even picked up on the Natural Sequence Ordinal/Cardinal dichotomy with his division of the hierarchy into his so-called “deficiency” (Ordinal) Needs and his so-called “growth” (Cardinal) Needs. This is, of course, an intrinsic feature of the Natural Sequence schema.
9. The lower the number on the HON, the more fundamental the need, the stronger the Need, generally and typically speaking. However, different people with different value and/or belief systems might rank them differently from the way that Maslow did. For instance, some people have such a weak Emotion Center and are so introverted that social interaction (Need 2) is mostly meaningless to them, so Intellect Center needs (Need 3) take precedence. Take a look and consider what is true for yourself.
10. The correlation of Maslow’s HON with the Natural Sequence schema is perhaps more tenuous than many of the others you will see in this *Cosmogony* book. Even so, it is different enough and similar

enough to other instances of the Natural Sequence schema that I regard it as an independent piece of evidence for the validity and the utility of the Natural Sequence schema. In other words, so far as I know, Maslow did not copy his HON from some septenary espoused by some other psychological or spiritual teaching. So far as I have been able to find in my limited research, he seems to have noticed or figured it out on his own.

11. I do not know what the original impetus and inspiration for Maslow's five-stage Need model was in the 1940's during the behaviorist and humanist psychology phase of his life. However, my guess is that his encounter with Esalen in the 1960s firmed up his ideas about adding the "growth" Needs, during the transpersonal psychology phase of his life.
12. This is another case, among several presented in this Part, where it seems to me that the information is a bit muddled. In other words, Maslow's hierarchy is not very clearly defined. Consequently, many psychologists have sought to modify and embellish it with their own ideas and observations. I believe the Natural Sequence schema provides a much clearer elucidation of what is going on in the development of human needs than various people's models about this subject, even when those models are based on empirical observations, which are subject to personal subjective interpretive bias. In other words, I believe that the Natural Sequence schema explains Maslow better than Maslow explains the Natural Sequence schema.
13. On the other hand, life is not always well defined either. Look at people and you see that it is often difficult to discern what is going on with them. Therefore it surprises me that Maslow was able to discern his eight levels as well as he did, confirmed as it is by numerous instances of the Natural Sequence schema that he was apparently unaware of, in the Great Chain/Nest of Being.
14. Maslow's pioneering insights also preceded the empirical investigations of subsequent DevPsy researchers, but they tended to confirm his model, as we will see in the following chapters. Maslow deserves a lot of credit, considering that previous models were even less definitive and complete.
15. Maslow's Hierarchy is self-evidently valid to most people, so it has been adopted and embellished by many professional and amateur psychologists. Once one sees all of the instantiations of the Natural Sequence schema archetypes in this document, "self-evident" would normally be said of the Natural Sequence schema also.
16. It appears to me that the research data in the academic field of DevPsy has been converging on the Natural Sequence at least since Maslow, a pioneer in the realm. Numerous academics built on Maslow's work over the following decades; we review their contributions in subsequent chapters.
17. Maslow was willing to tread into the realm beyond humanistic psychology, into the realm of transpersonal psychology. That is why, as we examine the models of other luminaries in the field of DevPsy, we will see that, if they are not of a transpersonal persuasion, they often stop short of the quantity and quality of stages that the HON covers.





Chapter V-5

① ERIK ERIKSON — PSYCHO-SOCIAL DEVELOPMENT

Next up in the series of chapters on theories of human psycho-social development is the work of Erik Erikson. He was a contemporary of many other researchers in the field of developmental psychology (DevPsy), mostly during the second half of the 20th Century. Each of these researchers contributed to the field from different perceptions and perspectives, but they basically discerned the same pattern, the Natural Sequence, Canonical Septenary pattern, as I hope to demonstrate to the reader's satisfaction.

Various DevPsy models can be found that cover all tracks of development that are found in the Natural Sequence schema: Life-Stages, Worldviews, and Culture. Different researchers have tended to focus on one or another of these tracks. My review of Erikson's work indicates that, of these three tracks, similarly to many of the other DevPsy models, it correlates best with the characteristics and qualities of the so-called "Life-Stages" of the Natural Sequence schema, better than it does with the so-called "Worldviews" of the Natural Sequence schema, as many of the other DevPsy models do. In my cursory review of Erikson's model, I have seen no mention of the correlation of it with Culture, but I could have missed it.

Various DevPsy models can be found that cover all Dimensions of the Natural Sequence schema: 1-D Action, 2-D Inspiration, 3-D Expression, and P-D Assimilation. Different researchers have tended to focus on one or another of these Dimensions. From the title of this chapter alone, one can see that Erikson's research emphasized the Inspiration (social) and Assimilation (psychological) Dimensions.

So, let's have a little introduction to Erikson from my usual primary source, Wikipedia, and then we will look at the stages of psycho-social development that he discerned in his academic research. Underlined words in the quoted material are my emphasis; they alert the reader to ideas upon which I tend to remark in the comments interspersed between quoted paragraphs. Also, there are words and phrases in [brackets] injected into the quoted text; these are intended to clarify the quote and correlate the DevPsy model with the Natural Sequence schema.

Biography of Erikson

To set the stage for this chapter, a brief biography of Erikson, sourced from Wikipedia as usual, is in order:

Erik Homburger Erikson (born Erik Salomonsen; 15 June 1902 – 12 May 1994) was a German-American developmental psychologist and psychoanalyst known for his theory on psychological development of human beings. He may be most famous for coining the phrase identity crisis.

Despite lacking a bachelor's degree, Erikson served as a professor at prominent institutions, including Harvard, University of California, Berkeley, and Yale. A Review of *General Psychology* survey, published in 2002, ranked Erikson as the 12th most cited psychologist of the 20th century. [https://en.wikipedia.org/wiki/Erik_Erikson — retrieved 03 April 2021]

No insignificant slouch be he.

Thereafter followed several paragraphs describing his childhood, which was full of crises, one after another, starting with the fact that he was an illegitimate child, with mixed Jewish and (apparently) Nordic parentage. This alone gave him an "identity crisis" of his own to work through, but there were other circumstances that caused confusion, such as career choice (artist versus teacher versus psychologist), nationality choice (German versus Danish versus American), name choice (Solomonson versus Homburger versus Erikson), religion (Jewish versus Christian). As the story goes, he had a difficult time sorting himself out, and this showed up in his model of psycho-social development. If we could learn something from his identity crises, it might be that we

should learn as much as we can from our identity crises, and share it with the world, as he did, for the betterment of suffering humanity.

Introduction to Erikson's Stages

Wikipedia provided one article on Erikson, as cited above, and another article on his stage theory, as cited below, where we find this:

Erikson's stages of psycho-social development, as articulated in the second half of the 20th century by Erik Erikson in collaboration with [his wife] Joan Erikson, is a comprehensive psychoanalytic theory that identifies a series of eight stages that a healthy developing individual should pass through from infancy to late adulthood. According to Erikson's theory the results from each stage, whether positive or negative, influences the results of succeeding stages. Erikson published a book called *Childhood and Society* around the 1950s that made his research well known on the eight stages of psycho-social development. Erikson was originally influenced by Sigmund Freud's psycho-sexual stages of development. He began by working with Freud's theories specifically. However, as he began to dive deeper into bio-psycho-social development and how other environmental factors affect human development, he soon progressed past Freud's theories and developed his own ideas.

The reference to "positive and negative" experiences influencing subsequent stages is an indication that Erikson's model embodied the Dialectic Principle and the Holarchy Principle of the Natural Sequence schema. Erikson's early decades of life were contemporaneous with Freud's late decades of life. A brief discussion of Freud's stages of childhood development are found in the introductory chapter to this Part of the *Cosmogony* book. In previous chapters, we saw that Roberto Assagioli and Jean Piaget also built on top of Freud's work.

Numerous Natural Sequence Principles can be discerned in Erikson's model:

Erikson's stage theory characterizes an individual advancing through the eight life stages as a function of negotiating their [internal] biological and [external] socio-cultural forces [the Feedback Principle]. The two conflicting forces each have a psycho-social crisis [the Transition Principle] which characterizes the eight stages. If an individual does indeed successfully reconcile these forces [the Dialectic Principle] (favoring the first mentioned attribute in the crisis), they emerge from the stage with the corresponding virtue [the Plateau Principle]. For example, if an infant enters into the toddler stage (autonomy versus shame and doubt) with more trust than mistrust, they carry the virtue of hope into the remaining life stages [the Holarchy Principle]. The challenges of stages not successfully completed may be expected to return as problems in the future.

[>https://en.wikipedia.org/wiki/Erikson's_stages_of_psychosocial_development< — retrieved 04 April 2021]

So far as I have been able to determine, Erikson's model does not include the Fractalicity Principle (stages within and below and above the range covered by the model), or the Me-We Principle, except to the extent that the stages show an overall progress from ego-centrism to socio-centrism in a healthy personality. The Natural Sequence Dimensions of Action, Inspiration, and Expression do show up in references to behavioral, socio-emotional, and mental-cognitive aspects, but the Dimensionality Principle was not emphasized by Erikson as much as it is in most other DevPsy models.

A Short Tabulation of Psycho-social Stages

Following the introduction to the stages, the Wikipedia article quoted above presented a table of the eight stages. It is shown below as redrawn by me, except that the Stage numbers are shown starting from the bottom instead of starting at the top as with the Wikipedia table. This is per the convention established for this Part of the *Cosmogony* book, per the Holarchy principle, where the 'higher-later' stages are 'built on top of' the 'lower-earlier' stages. The correlation of Erikson's stages with the Natural Sequence Attributes is attempted further on in this chapter.

Note that the table shows nine stages, not the eight mentioned heretofore. As we will see further on, the ninth stage was added by his wife, Joan. With my cursory review of their work, I was not able to find and fill in all the blanks for the ninth stage.

Table V-5a — PSYCHO-SOCIAL DEVELOPMENT per ERIK ERIKSON						
STG	APPROXIMATE AGE	VIRTUES	PSYCHOLOGICAL CRISIS	SIGNIFICANT RELATIONSHIP	EXISTENTIAL QUESTION	EVENTS
9	Senescence 80-90 years	—	—	—	—	—
8	Late adulthood 60-80 years	Wisdom	Ego Integrity versus Despair	Mankind, My kind	Is it okay to have been me?	Reflection on life
7	Middle adulthood 40-59 years	Care	Generativity versus Stagnation	Household, Workmates	Can I make life count?	Work, parenthood
6	Early adulthood 20-39 years	Love	Intimacy versus Isolation	Friends, Partners	Can I love?	Romantic relationships
5	Adolescence 13-19 years	Fidelity	Identity versus Role Confusion	Peers, Role Model	Who am I? Who can I be?	Social relationships
4	Middle childhood 7-12 years	Competence	Industry versus Inferiority	Neighbors, School	Can I make it in the world of people and things?	School, sports
3	Early childhood 3-6 years	Purpose	Initiative versus Guilt	Family	Is it okay for me to do, move, act?	Exploring, using tools, making art
2	Toddlerhood 2-3 years	Will	Autonomy vs. Shame / Doubt	Parents	Is it okay to be me?	Toilet training, clothing self
1	Infancy Under 2 years	Hope	Trust versus Mistrust	Mother	Can I trust the world?	Feeding, Abandonment

My comments on this table are as follows.

1. STG: The first column shows the designated number of each stage as assigned by Erikson. The earliest Stage is at the bottom of the table and the latest stage is at the top. This is in keeping with the metaphor of sedimentary stratification in geology, where layers deposited later in time are on top of earlier layers. This is the Hierarchy Principle: each stage is built 'on top of' prior stage(s).
2. AGE: The second column shows the years in age that a stage typically spans during the story arc of a full lifetime of healthy psycho-social development.
3. VIRTUES: The third column shows the character trait that is (optimally) developed as a result of the resolution of the crisis shown in the fourth column. More is said about this below, because it has relevance to Principles of the Natural Sequence schema.
4. CRISIS: The appearance of a crisis is at the start of each stage. This is the Transition Principle: stages are separated by turbulent transitions. The fourth column is the name of the crisis, posed as a dilemma between opposites that the psyche does well to resolve in a healthy way before moving on to the next crisis at the end of the Stage. This is the Dialectic Principle: the interplay of negative and positive valences that work toward neutralization of the complementary contraries at the next higher stage. In Eriksonian jargon, the positive pole of the crisis/dialectic was referred to as "syntonic" and the negative pole of the dialectic was referred to as "dystonic".
5. RELATIONSHIP: The significant external influences at each Stage are shown in the fifth column. Notice that the circle of influences increases at each stage, from one person, mother, in the beginning, to humankind in the end. (If Erikson had been a transpersonal psychologist, he might have included

“God” in the latter stages.) In the Natural Sequence schema, this phenomenon is referred to as the Feedback Principle: the influential interplay of subjective internal and objective external systems.

6. QUESTION: The sixth column shows another way to present the Dialectic Principle, namely as the appearance of a ‘question’ that is looking for an ‘answer’.
7. EVENTS: The seventh column shows the activities that are common to that stage of life, but these do not provide enough description of the characteristics and qualities of the stage to make a firm correlation with the Natural Sequence schema. A fuller description is found in the next section and in the next table.

Some explanation of the so-called “virtues” in Erikson’s model is appropriate at this point. Two Natural Sequence Principles are found in the quotation below, the Hierarchy Principle and the Dialectic Principle:

Favorable outcomes of each stage are sometimes known as virtues, a term used in the context of Erikson’s work as it is applied to medicine, meaning “potencies”. These virtues are also interpreted to be the same as “strengths”, which are considered inherent in the individual life cycle and in the sequence of generations. Erikson’s research suggests that each individual must learn how to hold both extremes of each specific life-stage challenge in tension with one another, not rejecting one end of the tension or the other. Only when both extremes in a life-stage challenge are understood and accepted as both required and useful, can the optimal virtue for that stage surface. Thus, ‘trust’ and ‘mis-trust’ must both be understood and accepted, in order for realistic ‘hope’ to emerge as a viable solution at the first stage. Similarly, ‘integrity’ and ‘despair’ must both be understood and embraced, in order for actionable ‘wisdom’ to emerge as a viable solution at the last stage. [https://en.wikipedia.org/wiki/Erik_Erikson — retrieved 04 April 2021]

My preference is to refer to these “virtues” and “potencies” and “strengths” that emerge from the healthy resolution of identity crises as good “character” traits. Note that each stage can be abdicated in a negative expression or successfully transited in a positive expression. In other words, some people never “grow up” into the healthy expression of a complete human being. We see this in other DevPsy models reviewed in chapters of this *Cosmogony* book. It is also a feature of Life-Stages in the Natural Sequence schema.

Descriptions of Psycho-social Stages

Table Xa above might be adequate in terms of names of crises (Metamorphoses Principle), but it is inadequate in terms of full descriptions of the resolution of the crises (Plateau Principle). Therefore, another table is in order. The descriptions therein were extracted from the Wikipedia article on Erikson and the Wikipedia article on his stages, both of which are referenced above.

Table V-5b — PSYCHO-SOCIAL DEVELOPMENT per ERIK ERIKSON		
STG	DESCRIPTION	LIFE-STAGE
9	Joan Erikson showed that all the eight stages “are relevant and recurring in the ninth stage”. In the ninth stage, the psycho-social crises of the eight stages are faced again, but with the quotient <u>order reversed</u> . // This ninth stage is experienced in the eighties and nineties and is accompanied by a loss of physical health, friends, family members, and independence, in addition to isolation from society. Often during this time, individuals are put into retirement communities and assisted living facilities, which Joan believed was isolating them from society and from youth. She believed that “aging is a process of becoming <i>free</i> [+]” and should not be treated as the opposite. As a result of these changes, individuals experience a <i>loss</i> [–] of autonomy, self-esteem, and trust. Death is near and seen as an inevitable <i>reality</i> [=].	Cardinal Action +Anticipation DECRIPITUDE –Disengagem’t
8	This stage affects the age group of 65 and on. During this time an individual has reached the last chapter in her life and RETIREMENT is approaching or has already taken place. Ego-integrity means the <i>acceptance</i> [+] of life in its <i>fullness</i> [+]; the victories and the defeats, what was accomplished and what was not accomplished. <i>Wisdom</i> [=] is the result of successfully accomplishing this final developmental task. Wisdom is defined as “informed and detached <i>concern</i> [+] for life itself in the face of death itself.” Having a guilty conscience about the past or <i>failing</i> [–] to accomplish important goals will eventually lead to <i>depression</i> [–] and <i>hopelessness</i> [–]. Achieving the virtue of the stage involves the feeling of living a successful life.	Cardinal Inspiration +Appreciation ELDERHOOD –Regret

Table V-5b — PSYCHO-SOCIAL DEVELOPMENT per ERIK ERIKSON

STG	DESCRIPTION	LIFE-STAGE
7	The second stage of [LATE] ADULTHOOD happens between the ages of 40–65. During this time people are normally <i>settled</i> [=] in their lives and know what is important to them. A person is either making <i>progress</i> [+] in his career or treading lightly in his career and <i>unsure</i> [-] if this is what he wants to do for the rest of his working life. Also during this time, if a person is enjoying raising his children and <i>participating</i> [+] in activities, that gives him a sense of purpose. This is one way of <i>contributing</i> [+] to society along with <i>productivity</i> [+] at work and <i>involvement</i> [+] in community activities and organizations. If a person is <i>uncomfortable</i> [-] with the way his life is progressing, he's usually <i>regretful</i> [-] about the decisions that he has made in the past and feels a sense of <i>uselessness</i> [-].	Cardinal Expression SENIORITY and MIDDLE AGE Neutral Assimilation
6	This is the first stage of adult development. This development usually happens during YOUNG ADULTHOOD , which is between the ages of 18 to 40. Dating, marriage, family, and friendships are important during the stage in their life. This is due to the increase in the growth of <i>intimate</i> [+] relationships with others. By successfully forming loving relationships with other people, individuals are able to experience love and intimacy. They also feel safety, care, and <i>commitment</i> [+] in these relationships. Furthermore, if individuals are able to successfully resolve the crisis of <i>intimacy</i> [+] versus <i>isolation</i> [-], they are able to achieve the virtue of <i>love</i> [=]. Those who fail to form lasting relationships may feel isolated and alone.	← Cardinal phase of Ordinal Expression
5	This section deals with ADOLESCENCE , meaning those between twelve and eighteen years old. Questioning of self: Who am I, how do I fit in? Where am I going in life? The adolescent is exploring and seeking for her own unique identity. This is done by looking at personal beliefs, goals, and values. The morality of the individual is also explored and developed. Erikson believes that if the parents allow the child to <i>explore</i> [], she will determine her own identity. If, however, the parents continually push her to <i>conform</i> [-] to their views, the teen will face identity confusion. The teen is also looking towards the future in terms of employment, relationships, and families. Learning the roles she provides in society is essential since the teen begins to develop the desire to fit in to society. <i>Fidelity</i> [=] is characterized by the ability to commit to others and acceptance of others even with differences. Identity crisis is the result of role confusion and can cause the adolescent to try out different lifestyles.	+Independence YOUTH -Irresponsibil'y ← Ordinal phase of Ordinal Expression
4	This area covers SCHOOL AGE children from six to eleven. Child <u>comparing self-worth to others</u> (such as in a classroom environment). Child can recognize major disparities in personal abilities relative to other children. Erikson places some emphasis on the teacher, who should ensure that children do not feel inferior. During this stage the child's <u>friend group</u> increases in importance in his life. Often during this stage the child will try to prove competency with things <u>rewarded in society</u> , and also develop satisfaction with his abilities. <i>Encouraging</i> [+] the child increases feelings of adequacy and competency in ability to reach goals. <i>Restriction</i> [-] from teachers or parents leads to doubt, questioning, and reluctance in abilities and therefore may not reach full capabilities. <i>Competence</i> [=], the virtue of this stage, is developed when a healthy balance between the two extremes is reached.	← Cardinal phase of Ordinal Inspiration +Socialization CHILDHOOD
3	This stage covers PRESCHOOL CHILDREN from ages three to five. Does the child have the ability to do things on her own, such as dress herself? Children in this stage are <u>interacting with peers</u> , and creating their own games and activities. If allowed to make these decisions, the child will develop <i>confidence</i> [+] in her ability to lead others. If the child is not allowed to make certain decisions the sense of <i>guilt</i> [-] develops. Guilt in this stage is characterized by a sense of being a burden to others, and the child will therefore usually present herself as a follower. Additionally, the child is asking many questions to build knowledge of the world. If the questions earn responses that are critical and condescending, the child will also develop feelings of guilt. Success in this stage leads to the virtue of <i>purpose</i> [=], which is the normal balance between the two extremes.	-Codependence ← Ordinal phase of Ordinal Inspiration

Table V-5b — PSYCHO-SOCIAL DEVELOPMENT per ERIK ERIKSON

STG	DESCRIPTION	LIFE-STAGE
2	This stage covers EARLY CHILDHOOD around 1–3 years old and introduces the concept of <i>autonomy</i> [+] versus shame and <i>doubt</i> [–]. The child begins to discover the beginnings of his or her independence, and parents must facilitate the child’s sense of doing basic <u>tasks</u> “all by himself/herself”. Discouragement can lead to the child doubting his or her <i>efficacy</i> [+]. During this stage the child is usually trying to master toilet <u>training</u> . Additionally, the child discovers his talents or <u>abilities</u> , and it is important to ensure the child is able to explore those <u>activities</u> . Erikson states it is essential to allow the children freedom in <u>exploration</u> but also create an environment welcoming of failures. Therefore, the parent should not punish or reprimand the child for failing at the <u>task</u> . Shame and doubt occurs when the child feels <i>incompetent</i> [–] in ability to complete <u>tasks</u> and <u>survive</u> . <i>Will</i> [=] is achieved with success of the stage. Children successful in this stage will have “self-control without a loss of self-esteem”.	← Cardinal phase of Ordinal Action +Exploration INFANCY
1	This stage covers the period of INFANCY , 0–18 months, which is the most fundamental stage of life. Whether the baby develops basic <i>trust</i> [+] or basic <i>mistrust</i> [–] is not merely a matter of nurture. It is multi-faceted and has strong social components. It depends on the quality of the maternal relationship. The mother carries out and reflects her inner perceptions of trustworthiness, a sense of personal meaning, etc. on the child. An important part of this stage is providing stable and constant care of the infant. This helps the child develop <i>trust</i> [+] that can transition into relationships other than parental. Additionally, children develop trust in others to support them. If successful in this, the baby develops a sense of trust, which “forms the basis in the child for a sense of <i>identity</i> [=].” Failure to develop this trust will result in a feeling of <i>fear</i> [–] and a sense that the world is inconsistent and unpredictable.	–Frustration ← Ordinal phase of Ordinal Action

My comments on this table are as follows:

1. STG: The first column shows the numbers that Erikson assigned to the stages, with the lowest–earliest stage at the bottom of the table, and successive stages stacked on top. This is the convention that I have chosen to use in this Part of this *Natural Sequence* book, because it is in keeping with the metaphor of stratification of sedimentary rock in geology, where later strata are laid down on top of earlier strata.
2. DESCRIPTION: The second column shows the brief descriptions of each stage, copied verbatim from the Wikipedia article of Erikson’s biography. The descriptions in the Wikipedia article that is dedicated to Erikson’s stages are longer than what I copied into this table; interested readers are invited to take a look at the full descriptions. Underlined words are those that I deemed to be most relevant to the fundamental characteristics and qualities of the Life-Stages of the Natural Sequence schema.
3. Notice the lengthy age range in the seventh stage, shown above. In order to be consistent with the Natural Sequence schema, and with the DevPsy models reviewed in subsequent chapters, here I would prefer to divide Erikson’s seventh stage into two stages. This provides a correlation with the #4 MIDDLE AGE Life-Stage (age 35–50) and the #5 SENIORITY Life-Stage (age 50–65).
4. LIFE-STAGES: The third column shows the names of the Life-Stages of the Natural Sequence schema and their Positive and Negative Poles. Also shown are the Dialectic Attributes (Ordinal, Neutral, Cardinal) and Axial Attributes (Action, Inspiration, Expression, Assimilation) of the Life-Stages. Note that the three Ordinal Life-Stages cover the first six of Erikson’s stages. This works well enough because of the Fractality Principle, where septenaries are nested inside of each other from top to bottom of the Great Chain/Nest of Being. This means that there are Ordinal and Cardinal phases to each Life-Stage. Erikson was astute enough to notice this, but he was not the only one; we will see the same division in most subsequent DevPsy models reviewed in this Part of the *Cosmogony* book. Unlike many other DevPsy models, in Erikson’s descriptions I found no hint of what in the Natural Sequence schema are referred to as Worldviews or Cultures.
5. Unlike the earlier stages where it usually works best to combine two of Erikson’s stages into one Life-Stage, it works best, in my opinion, to divide Erikson’s seventh stage into two Life-Stages, but that does not mean that the Neutral Assimilation and Cardinal Expression Life-Stages do not have Ordinal and

Cardinal phases. Other DevPsy models discern stages differently than Erikson did, and they make the same division that I suggest, and that are inherent in the Natural Sequence schema.

6. Stage 9 did not have a thorough description in the Wikipedia article, other than to say that it recapitulated the eight stages, but in reverse order, as the personality experienced the deterioration before death. The quoted text after // is from the Wikipedia article on Joan Erikson. This description fits well enough with my understanding of characteristics and qualities of the last Life-Stage, which I have named Decripitude.
7. In the description of each stage I mark *keywords* (italicized for emphasis) for a positive pole [+] and a negative pole [-] and the neutral “virtue” [=] for that stage. These do not always conform to the name of the Poles of the corresponding Life-Stage. Whatever the names, this is the Dialectic Principle (Thesis + Antithesis = Synthesis) as it manifests in DevPsy models. Subsequent researchers also noted that there were healthy and unhealthy manifestations of each stage, and these are noted as appropriate in subsequent chapters.
8. Joan Erikson characterized the ninth stage, which is experienced during the decrepitude before death, as a decline that recapitulated the ascent, but in reverse order. This is reminiscent of Maslow’s Hierarchy of Needs. In the idealized instantiation of the HON, the person ascends the HON pyramid during the first maybe two-thirds or three-quarters of the full lifespan, until they peak at their ceiling Need, then they descend the HON pyramid in the reverse sequence during the final years.

The discrepancy between DevPsy models and the Natural Sequence schema decreases over the history of the subject, as we will see in subsequent chapters. Erickson was a pioneering researcher, so his work found improvements by subsequent researchers during subsequent decades.

Scoring Erikson against the Natural Sequence Principles

In my view, each DevPsy model has its strengths and weaknesses in terms of accuracy and completeness, judged on the basis of the results of subsequent research by other developmental psychologists, and on its conformity to the Natural Sequence schema. Erickson’s DevPsy model checks practically all of the boxes of the ideal Natural Sequence schema. Erikson’s model embodies several of the Natural Sequence Principles very well, namely the Holarchy Principle, the Transition Principle, the Dialectic Principle, the Plateau Principle, and the Feedback Principle. It is weak in terms of the Dimensionality Principle, the Me-We Principle, and the Fractality Principle.

- The Holarchy Principle is a structure in time where each succeeding stage is built on previous stages because of the learning that happens over the course of a full lifetime.
- Erikson emphasizes the Transition Principle in their model, perhaps more than any other modeler; he invented of the phrase “identity crisis”; each stage was said to be a transformative experience.
- In Erikson’s model, the Transition was explicitly said to be the result of the reconciliation and assimilation of positive and negative experiences, which is the description of the Dialectic Principle of the Natural Sequence schema.
- The Dimensionality Principle is weakly represented in Erikson’s model. One can only vaguely discern, if at all, the notion that the Natural Sequence Dimensions of Action (visceral-behavioral), Inspiration (emotional-social), Expression (intellectual-cognitive), and Assimilation (perceptual-informational) were recognized and implemented in the model.
- The fifth column “Significant Relationship” of **Table Xa** is an explicit assertion of the Feedback Principle, the notion that the inner world and the outer world work together to move the person forward through life.
- Regarding the Me-We Principle, even though the first six stages of Erikson’s model cover the first three stages of the Natural Sequence schema, based on what I see in the brief descriptions, I cannot say with conviction that Erikson recognized that this was a swing between ego-centric (Ordinal) and socio-centric (Cardinal) phases as one ascends the Natural Sequence schema stages.
- Near as I can tell in my brief reading about Erikson’s model, I do not see any evidence of the Fractality Principle, the notion that there is a septenarian cycle within the model, and/or a cycle ‘earlier–below’ the model and/or a cycle ‘later–above’ the model. For instance, I have not seen where

Erikson discerned sub-stages within each stage, or that Erikson recognized that cultural evolution followed the same pattern.

Considering that Erikson was one of the earlier researchers in the realm of DevPsy, it seems to me that he did a pretty good job.

Concluding Comments on Erikson's Psycho-social Model

There is nothing quite like a numbered list (or a table) for getting my thoughts in order, and for presenting them clearly to others.

1. Erikson's model is typical of most DevPsy models in that the stages higher-later than the correlate of Neutral Assimilation are murky and ambiguous, thus difficult to correlate. My speculation about the reason for this is that developmental psychologists are usually in the Collectivism Worldview, so they cannot discern the Worldview stages that are above and beyond that stage. Life-Stages are a different matter. In that regard, the Erikson model does extend higher-later than the Neutral Assimilation stage because the Erikson married couple lived to about age ninety, which gave them the perspective to observe people in the latest-highest stages of the Life-Stage spectrum.
2. My suggestion throughout this Part of the *Cosmogony* book is that research academics might have been less ambiguous and more in agreement with each other in the development of their DevPsy models if they had had the Natural Sequence schema to guide their perceptions.
3. Much of Erikson's work has been improved upon by subsequent researchers, as we see in subsequent chapters. In spite of the fact that they did not have the Natural Sequence schema to guide them, each academic researcher added to the accuracy of this field of study, and in my opinion, approached the clarity of the Natural Sequence schema as the decades rolled by.
4. Erikson frames the crises as time-like: the personality moves from the negative pole of an experience to the positive pole of an experience on the way to the neutral resolution — the Dialectic Principle. The Natural Sequence schema does this also, but it also frames the Life-Stages and Worldviews as having space-like Negative and the Positive Poles, which are not necessarily time-dependent.

In the next chapter we will see some improvements that Lawrence Kohlberg made to the investigation.





Chapter V-6

① LAWRENCE KOHLBERG — MORAL DEVELOPMENT

Next up in the series of chapters on theories of developmental psychology (DevPsy) is the work of Lawrence Kohlberg. He was a contemporary of many other researchers in the field, mostly during the second half of the 20th Century. Each of these researchers contributed to the field from different perceptions and perspectives, but they basically discerned the same pattern, the Natural Sequence, Canonical Septenary pattern, as I hope to demonstrate to the reader's satisfaction.

Various DevPsy models can be found that cover all tracks of development that are found in the Natural Sequence schema: Life-Stages, Worldviews, and Culture. Different researchers have tended to focus on one or another of these tracks. My review of Kohlberg's work indicates that it correlates best with the characteristics and qualities of the so-called "Life-Stages" of the Natural Sequence schema, better than it does with the so-called "Worldviews" of the Natural Sequence schema, as many of the other DevPsy models do. In my cursory review of Kohlberg's model, I have seen no mention of the correlation of it with Culture, but I could have missed it.

Various DevPsy models can be found that cover all Dimensions of the Natural Sequence schema: 1-D Action, 2-D Inspiration, 3-D Expression, and P-D Assimilation. Different researchers have tended to focus on one or another of these Dimensions. My review of Kohlberg's work indicates that it fits best into the so-called "Inspiration Dimension" of the Natural Sequence schema. The title of this chapter is a dead giveaway to me: I regard morality as a phenomenon of the Inspiration Dimension. Let's take a look at this Dimension in some detail as it relates to Kohlberg's model.

Morality versus Ethics

As I understand things, Kohlberg's research emphasized the Inspiration Dimension, what with its focus on the spectrum of development from morality to ethics. What do I mean by that? A distinction can be made between morality and ethics, and I apply the term "morality" to the lower-earlier (Ordinal) end of the Inspiration spectrum, and I apply the term "ethics" to the higher-later (Cardinal) end of the Inspiration spectrum.

I believe my application of these terms is justified, and that the differentiation is useful. A quotation borrowed from the internet will begin to make this distinction clearer:

The words derive respectively from the word in Greek (*ethos*, *ethikos*) and Latin (*mores*, *moralis*), variously translated as customs, manners or social norms. In fact, however, it is possible to differentiate the Greek root of ethics from the Latin root of morality in a way that may be practically helpful. According to this understanding, "ethics" leans towards decisions based upon individual character [a Cardinal phenomenon], and the more subjective understanding of right and wrong by individuals — whereas "morals" emphasizes the widely-shared communal or societal norms about right and wrong. Put another way, ethics is a more individual assessment of values as relatively good or bad, while morality is a more inter-subjective community assessment of what is good, right or just for all [an Ordinal phenomenon]. [<https://theconversation.com/you-say-morals-i-say-ethics-whats-the-difference-30913> — retrieved 31 March 2021]

There is much more to that article, and there are many other internet resources on the subject that one may choose to pursue, in order to refine the distinction further. Beyond those, I make a further distinction in this chapter, and I will make clarifying remarks in other chapters in this Part. Basically, what this distinction means to me is that when a person is young, they are socialized and acculturated to accept the moral codes of their tribe — this is at the Ordinal pole of the Inspiration Dimension, Stage Two in the Natural Sequence

schema. As a person matures and individuates, they develop their own sense of ethics — this is at the Cardinal pole of the Inspiration dimension, Stage Six in the Natural Sequence schema.

Let's expand on this just a bit.

As we will see in the exposition of Kohlberg's work below, there is a spectrum of development of a person's value system over the course of a lifetime. It starts with "morality" being imposed by parents and school as part of the socialization and acculturation process, and it ends with an internal "ethical" value system hierarchy, which can be different from, and more "mature" than, the cultural norms. In fact, one of the aspirations of ethical philosophers and spiritual teachers is to enlighten people about a standard of ethics that is higher—later than whatever morality prevails in one's culture at the time. Beyond individual development, one of the features of socio-cultural evolution is the improvement from "morality" to "ethics" as I and others define it; that is why, for example, we in the "developed" world no longer find slavery acceptable in the "undeveloped" world.

With that distinction between morality and ethics settled, let's have a little introduction to Kohlberg from my usual primary source, Wikipedia, and then, second, also from another Wikipedia article, we will look at the stages of moral development that Kohlberg discerned in his academic research. Underlined words in the quoted material are my emphasis; they alert the reader to ideas upon which I tend to remark in the comments interspersed between quoted paragraphs. Also, there are words and phrases in [brackets] injected into the quoted text; these are intended to clarify the quote, and/or indicate the correlation with the Natural Sequence schema.

Biography of Kohlberg

To set the stage for this chapter, a brief biography of Kohlberg, sourced from Wikipedia as usual, is in order:

Lawrence Kohlberg (25 October 1927 – 19 January 1987) was an American psychologist best known for his theory of stages of moral development.

He served as a professor in the Psychology Department at the University of Chicago and at the Graduate School of Education at Harvard University. Even though it was considered unusual in his era, he decided to study the topic of moral judgment, extending Jean Piaget's account of children's moral development from twenty-five years earlier. In fact, it took Kohlberg five years before he was able to publish an article based on his views. Kohlberg's work reflected and extended not only Piaget's findings but also the theories of philosophers George Herbert Mead and James Mark Baldwin. At the same time he was creating a new field within psychology: "moral development".

In an empirical study using six criteria, such as citations and recognition, Kohlberg was found to be the 30th most eminent psychologist of the 20th century. [https://en.wikipedia.org/wiki/Lawrence_Kohlberg] — retrieved 27 February 2021]

Before Kohlberg, developmental psychologists typically were focused on the behavioral (1-D Ordinal Action) and cognitive (3-D Ordinal Expression) Dimensions of the human experience, whereas Kohlberg broke new ground and focused on the Inspiration (2-D Ordinal Inspiration) Dimension. Piaget is discussed in a subsection in **Chapter Xa**, the Introduction to this Part. I looked at Mead's and Baldwin's Wikipedia entries, and, in my view, whatever they said that inspired Kohlberg, it was not enough to inspire me to include a review of their work in this Part; what they contributed to the field early in its existence is not relevant enough to the Natural Sequence to be included here. Nevertheless, readers are invited to question my judgment, and investigate them and their work on their own recognizance, and for their own edification and education.

The Wikipedia article continues:

In his unpublished 1958 dissertation, Kohlberg wrote what are now known as Kohlberg's stages of moral development. These stages are planes of moral adequacy conceived to explain the development of moral reasoning. Created while studying psychology at the University of Chicago, the theory was inspired by the work of Jean Piaget and a fascination with children's reactions to moral dilemmas.

Moral dilemmas are the Inspiration Dimension version of the Dialectic Principle, where people — as they grow up and interact with it and others in a larger and more complicated world — must resolve increasingly difficult conflicts between different and contrary values in order to advance in a healthy way through the succession of developmental stages per the Holarchy Principle.

The Wikipedia article continues:

Kohlberg's approach begins with the assumption that humans are intrinsically motivated to explore, and become competent at functioning in their environments. In social development, this leads us to imitate role models we perceive as competent and to look to them for validation. Thus our earliest childhood references on the rightness of our and others' actions are adult role models with whom we are in regular contact. Kohlberg also held that there are common patterns of social life, observed in universally occurring social institutions, such as families, peer groups, structures and procedures for clan or society decision-making, and cooperative work for mutual defense and sustenance. Endeavoring to become competent participants in such institutions, humans in all cultures exhibit similar patterns of action [behavior system] and thought [belief system, and value system, I might add] concerning the relations of self, others, and social world. Furthermore, the more one is prompted to imagine how others experience things and imaginatively to take their roles, the more quickly one learns to function well in cooperative human interactions. The sequence of stages of moral development [value system] thus corresponds to a sequence of progressively more inclusive social circles (family, peers, community, etc.), within which humans seek to operate competently. When those groups function well, oriented by reciprocity and mutual care and respect, growing humans adapt to larger and larger circles of justice, care, and respect. Each stage of moral cognitive development is the realization in conscious thought of the relations of justice, care, and respect exhibited in a wider circle of social relations, including narrower circles within the wider.

[>https://en.wikipedia.org/wiki/Lawrence_Kohlberg< — retrieved 13 September 2020]

The paragraph above is an excellent description of the Feedback Principle of the Natural Sequence schema as it is instantiated in Kohlberg's model: the "reciprocal, mutual, cooperative" interaction of internal and external realities propels psychological and sociological development in terms of one's behavior system (Action Dimension), one's value system (Inspiration Dimension), and one's belief system (Expression Dimension). Therefore, Kohlberg's DevPsy model is aware of the Dimensionality Principle of the Natural Sequence schema, and it emphasized the Inspiration Dimension, because that is where moral development functions.

Introduction to Kohlberg's Stages

The following series of quotations were all extracted from >https://en.wikipedia.org/wiki/Lawrence_Kohlberg%27s_stages_of_moral_development< on 13 September 2020. My comments are interspersed among the quotations.

Lawrence Kohlberg's stages of moral development constitute an adaptation of a psychological theory originally conceived by the Swiss psychologist Jean Piaget. Kohlberg began work on this topic while being a psychology graduate student at the University of Chicago in 1958 and expanded upon the theory throughout his life.

Beyond a subsection about Piaget in the Introduction to this Part, Piaget's work is not discussed in this book because it only covers childhood; see below.

The theory holds that moral reasoning, a necessary (but not sufficient) condition for ethical behavior, has six developmental stages, each more adequate at responding to moral dilemmas than its predecessor. Kohlberg followed the development of moral judgment far beyond the ages studied earlier by Piaget, who also claimed that logic and morality develop through constructive stages. Expanding on Piaget's work, Kohlberg determined that the process of moral development was principally concerned with justice and that it continued throughout the individual's life, a notion that led to dialogue on the philosophical implications of such research.

From this quotation we see that Kohlberg's model accords with the Holarchy Principle of the Natural Sequence schema, where each stage transcends and includes the previous stage(s). Notice that it also accords with the Dialectic Principle, where contrary forces (thesis and antithesis) in terms of "moral dilemmas" must be reconciled (synthesis) in order to advance. The philosophical implications were discussed in a section further on in the Wikipedia article, but they are of no concern to the subject of this chapter and this Part, which is to correlate DevPsy stage models with the Natural Sequence schema.

The six stages of moral development occur in [three groups of two = six] phases of [so-called] Pre-conventional, Conventional and Post-conventional morality. For his studies, Kohlberg relied on stories such as the Heinz dilemma and was interested in how individuals would justify their actions if placed in similar moral dilemmas. He analyzed the form of moral reasoning displayed, rather than its conclusion and classified it into one of six stages.

There is a discussion of the Heinz dilemma here: >https://en.wikipedia.org/wiki/Heinz_dilemma<. It has to do with a person's *value* system holarchy (Inspiration Dimension) more than anything else, such as their *behavior* system holarchy (Action Dimension) or their *belief* system holarchy (Expression Dimension). As such,

we see again that Kohlberg's model applies mostly to the Inspiration Dimension of the Natural Sequence schema.

Other researchers have found that Kohlberg's model fails to cover many aspects of psychological development:

There have been critiques of the theory from several perspectives. Arguments include that it emphasizes justice to the exclusion of other moral values, such as caring; that there is such an overlap between stages that they should more properly be regarded as domains [what I refer to as Dimensions], or that evaluations of the reasons for moral choices are mostly *post hoc* rationalizations (by both decision makers and psychologists) of intuitive decisions.

It is because of the defects and deficiencies in Kohlberg's models that subsequent researchers worked to improve it. Some of those efforts are discussed in subsequent chapters of this Part.

A new field within psychology was created by Kohlberg's theory, and according to Haggbloom *et al.*'s study of the most eminent psychologists of the 20th century, Kohlberg was the 16th most frequently cited in introductory psychology textbooks throughout the century, as well as the 30th most eminent. Kohlberg's scale is about how people justify behaviors, and his stages are not a method of ranking how moral someone's behavior is; there should be a correlation between how someone scores on the scale and how they behave. The general hypothesis is that moral behavior is more responsible, consistent, and predictable from people at higher levels.

I would add to this that as a person matures in their Inspiration Dimension development, it becomes more "ethical", as well as responsible, consistent, and predictable.

A brief introduction to Kohlberg's six levels is presented at that location in the article, with this introduction:

Kohlberg's six stages can be more generally grouped into three levels of two stages each: Pre-conventional, Conventional and Post-conventional. Following Piaget's constructivist [structured rather than non-structured] requirements for a stage model, as described in his theory of cognitive [3-D Ordinal Expression, Intellect Center] development, it is extremely rare to regress in stages — to lose the use of higher stage abilities. Stages cannot be skipped; each provides a new and necessary perspective, more comprehensive and differentiated than its predecessors but integrated with them.

This is a firm indication that both Piaget's and Kohlberg's models adhere to the Holarchy Principle of the Natural Sequence schema. Other researches make similar assertions about the holarchy of this and other DevPsy models. The following list is a brief outline of the six stages; the table further on in this chapter is more lengthy.

Kohlberg's Model of Moral Development

Level 1 (Pre-Conventional)

1. Obedience and punishment orientation (How can I avoid punishment?)
2. Self-interest orientation (What's in it for me?) (Paying for a benefit)

Level 2 (Conventional)

3. Interpersonal accord and conformity (Social norms) (The good boy/girl attitude)
4. Authority and social-order maintaining orientation (Law-and-order morality)

Level 3 (Post-Conventional)

5. Social contract orientation
6. Universal ethical principles (Principled conscience)

The understanding gained in each stage is retained in later stages, but may be regarded by those in later stages as simplistic, lacking in sufficient attention to detail.

In his empirical studies of individuals throughout their life, Kohlberg observed that some had apparently undergone moral stage regression. This could be resolved either by allowing for moral regression or by extending the theory. Kohlberg chose the latter, postulating the existence of sub-stages in which the emerging stage has not yet been fully integrated into the personality. In particular Kohlberg noted a stage 4½ or 4+, a transition from stage four to five, that shared characteristics of both. In this stage the individual is disaffected with the arbitrary nature of law-and-order reasoning; culpability is frequently turned from being defined by society to viewing society itself as culpable. This stage is often mistaken for the moral relativism of stage two, as the individual views those interests of society that conflict with their own as being relatively and morally wrong. Kohlberg noted that this was often observed in students entering college.

What Kohlberg referred to as “regression” and “sub-stages” is understood in the Natural Sequence schema as the Me-We Principle, where each of seven primary stages has the Me (Ordinal) phase in the first half and a We (Cardinal) phase in the second half. In subsequent chapters, we will see that other researchers formalized what Kohlberg regarded as intermediate sub-stages into three full-blown stages of their own, namely a 2/3 stage, a 4/5 stage, and a 5/6 stage. This brings Kohlberg’s model into alignment with the first four stages of the Natural Sequence schema, and I have shown it that way in the following table. This complicated the tidy division of the model into three levels with two stages in each level, and that procedure ambiguated the correlation with the first four stages of the Natural Sequence schema, but I believe I figured it out; see below.

Six (or Seven) Stages of Moral Development

As usual with various models discussed in these chapters, it is helpful to show Kohlberg’s stages correlated with the Attributes of the Natural Sequence schema in table form. As usual, the stages are shown in order from bottom to top in the table (rather than top to bottom), to emphasize the metaphor that the “later” (in terms of maturity) stages are “higher” (in terms of perspective) stages; thus each stage transcends but includes the previous stages, according to the Holarchy Principle, which is a feature of the Natural Sequence schema and all DevPsy models. The descriptions of the stages are from Wikipedia; the names of the Natural Sequence schema Attributes are from the chapter by that name in Part One. Underlines are my emphasis of keywords that clinch the correlation of Kohlberg’s Stages with the Life-Stages of the Natural Sequence schema.

Table V-6a — MORAL DEVELOPMENT per LAWRENCE KOHLBERG		
STG	NAME and DESCRIPTION	ATTRIBUTES
S-7	Kohlberg suggested that there may be a seventh stage — <u>Transcendental Morality, or Morality of Cosmic Orientation</u> — which linked religion with moral reasoning. Kohlberg’s difficulties in obtaining empirical evidence for even a sixth stage, however, led him to emphasize the speculative nature of his seventh stage.	DYING FORWARD ORIGINATION MESSIANISM
S-6	In Stage six (universal ethical principles driven), moral reasoning is based on abstract reasoning using <u>universal ethical principles</u> . Laws are valid only insofar as they are grounded in justice, and a commitment to justice carries with it an obligation to disobey unjust laws. Legal rights are unnecessary, as social contracts are not essential for deontic [obligatory, dutiful] moral action. Decisions are not reached hypothetically in a conditional way but rather categorically in an absolute way, as in the philosophy of Immanuel Kant. This involves an individual imagining what they would do in another’s shoes, if they believed what that other person imagines to be true. The resulting consensus is the action taken. In this way action is never a means but always an end in itself; the individual acts because it is right, and not because it avoids punishment, is in their best interest, expected, legal, or previously agreed upon. Although Kohlberg insisted that stage six exists, he found it difficult to identify individuals who consistently operated at that level. Touro College Researcher Arthur P. Sullivan helped support the accuracy of Kohlberg’s first five stages through data analysis, but could not provide statistical evidence for the existence of Kohlberg’s sixth stage. Therefore, it is difficult to define/recognize as a concrete stage in moral development.	ELDERHOOD + 2-D + CARDINAL INSPIRATION UPWARD EVOLUTION TRANSPER- SONALISM
S-5	In Stage five (social contract driven), the world is viewed as holding different opinions, rights, and values. Such perspectives should be <u>mutually respected as unique to each person or community</u> . Laws are regarded as social contracts rather than rigid edicts. Those that do not <u>promote the general welfare</u> should be changed when necessary to/that meet “ <u>the greatest good for the greatest number of people</u> ”. This is achieved through <u>majority decision and inevitable compromise</u> . Democratic government is ostensibly based on stage five reasoning.	SENIORITY + 3-D + CARDINAL EXPRESSION INWARD SYNTHESIS HOLISM

Table V-6a — MORAL DEVELOPMENT per LAWRENCE KOHLBERG

STG	NAME and DESCRIPTION	ATTRIBUTES
<p>The POST-CONVENTIONAL level, also known as the principled level, is marked by a growing realization that individuals are separate entities from society, and that the individual's own perspective may take precedence over society's view; individuals may disobey rules inconsistent with their own principles. Post-conventional moralists live by their own ethical principles — principles that typically include such basic human rights as life, liberty, and justice. People who exhibit post-conventional morality view rules as useful but changeable mechanisms — ideally rules can maintain the general social order and protect human rights. Rules are not absolute dictates that must be obeyed without question. Because post-conventional individuals elevate their own moral evaluation of a situation over social conventions, their behavior, especially at stage six, can be confused with that of those at the pre-conventional level. Some theorists have speculated that many people may never reach this level of abstract moral reasoning.</p>		
S-4	<p>In Stage four (authority and social order obedience driven), it is important to obey laws, dictums, and social conventions because of their importance in <u>maintaining a functioning society</u>. Moral reasoning in stage four is thus beyond the need for individual approval exhibited in stage three. A <u>central ideal</u> or ideals often prescribe what is right and wrong. If one person violates a law, perhaps everyone would — thus there is an obligation and a duty to uphold laws and rules. When someone does violate a law, it is morally wrong; culpability is thus a significant factor in this stage as it separates the bad domains from the good ones. Most active members of society remain at stage four, where morality is still predominantly dictated by an outside force.</p>	<p>MIDDLE AGE = P-D = NEUTRAL ASSIMILATION COMPLEX COMBINATION COLLECTIVISM</p>
S-3	<p>In Stage three (good intentions as determined by social consensus), the self enters society by conforming to social standards. Individuals are receptive to approval or disapproval from others as it reflects society's views. They try to be a "good boy" or "good girl" to live up to these expectations, having learned that being regarded as good benefits the self. Stage three reasoning may judge the morality of an action by evaluating its consequences in terms of a person's relationships, which now begin to include things like respect, gratitude, and the "golden rule". "I want to be liked and thought well of; apparently, not being naughty makes people like me." Conforming to the rules for one's social role is not yet fully understood. The intentions of actors play a more significant role in reasoning at this stage; one may feel more forgiving if one thinks that "they mean well".</p>	<p>YOUTH – 3-D – ORDINAL EXPRESSION OUTWARD ANALYSIS MATERIALISM</p>
<p>The CONVENTIONAL level of moral reasoning is typical of adolescents and adults. To reason in a conventional way is to judge the morality of actions by comparing them to society's views and expectations. The conventional level consists of the third and fourth stages of moral development. Conventional morality is characterized by an acceptance of society's conventions concerning right and wrong. At this level an individual obeys rules and follows society's norms even when there are no consequences for obedience or disobedience. Adherence to rules and conventions is somewhat rigid, however, and a rule's appropriateness or fairness is seldom questioned.</p>		
S-2	<p>Stage two (self-interest driven) expresses the "what's in it for me" position, in which right behavior is defined by whatever the individual believes to be in their best interest, or whatever is "convenient," but understood in a narrow way which does not consider one's reputation or relationships to groups of people. Stage two reasoning shows a limited interest in the needs of others, but only to a point where it might further the individual's own interests. As a result, concern for others is not based on loyalty or intrinsic respect, but rather a "You scratch my back, and I'll scratch yours" mentality, which is commonly described as <i>quid pro quo</i>, a Latin term that means doing or giving something in order to get something in return. The lack of a societal perspective in the pre-conventional level is quite different from the social contract (stage five), as all actions at this stage have the purpose of serving the individual's own needs or interests. For the stage two theorist, the world's perspective is often seen as morally relative....</p>	<p>CHILDHOOD – 2-D – ORDINAL INSPIRATION DOWNWARD INVOLUTION TRADITION- ALISM</p>

Table V-6a — MORAL DEVELOPMENT per LAWRENCE KOHLBERG

STG	NAME and DESCRIPTION	ATTRIBUTES
S-1	In Stage one (obedience and punishment driven), individuals focus on the direct consequences of their actions on themselves. For example, an action is perceived as morally wrong because the perpetrator is punished. “The last time I did that I got spanked, so I will not do it again.” The worse the punishment for the act is, the more “bad” the act is perceived to be. This can give rise to an inference that even innocent victims are guilty in proportion to their suffering. It is “egocentric”, lacking recognition that others’ points of view are different from one’s own. There is “deference to superior power or prestige”. An example of obedience and punishment driven morality would be a child refusing to do something because it is wrong and that the consequences could result in punishment. For example, a child’s classmate tries to dare the child to skip school. The child would apply obedience and punishment driven morality by refusing to skip school because he would get punished.	<p>INFANCY</p> <p>– 1-D –</p> <p>ORDINAL</p> <p>ACTION</p> <p>BACKWARD</p> <p>TERMINATION</p> <p>PRIMITIVISM</p>
<p>The PRE-CONVENTIONAL LEVEL of moral reasoning is especially common in children and is expected to occur in animals, although adults can also exhibit this level of reasoning. Reasoners at this level judge the morality of an action by its direct consequences. The pre-conventional level consists of the first and second stages of moral development and is solely concerned with the self in an egocentric manner. A child with pre-conventional morality has not yet adopted or internalized society’s conventions regarding what is right or wrong but instead focuses largely on external consequences that certain actions may bring.</p>		

My comments on this table are as follows:

- **STG:** The first column shows the stage numbers that Kohlberg ascribed to them.
- **DESCRIPTION:** The second column shows the description of each stage extracted verbatim from https://en.wikipedia.org/wiki/Lawrence_Kohlberg%27s_stages_of_moral_development<. This article does not assign an age or age range for when these stages are initiated or sustained in the development of a value system holarchy; most DevPsy models do that. My opinion is that the higher-later the Worldview a person is born with as a personality factor, the faster the person advances through the Moral stages from S1 to whatever, until the person achieves the Moral stage that corresponds to the Worldview. For this reason, I show both the Life-Stage and the Worldview in the right-most column.
- **ATTRIBUTES:** The third column shows the names of the Life-Stages, and the names of the Attributes (Dimensionality, Dialectic, Axial, Directionality) and the names of the Processes of the Natural Sequence schema. It also shows the Worldviews. The fitness of the descriptions of Kohlberg’s Stages and the Life-Stages / Attributes / Worldviews is close enough that the two can be used to improve one’s understanding of both. The correlation that does not work so well is the second half of life, where one may continue to develop morally while one is on the decline physically and cognitively. Getting old works that way. Kohlberg could not find any people at S6 and S7 to validate his theory about them; Per the Natural Sequence schema, people in the Transpersonal and Messianic Worldviews are also extremely rare in the population.
- Piaget devised, and Kohlberg adopted, the three categories of Pre-conventional, Conventional, and Post-conventional. Many other DevPsy modelers also followed the lead of these two pioneers, as we will see in subsequent chapters. Broadly speaking, these can be correlated with Ordinal, Neutral, and Cardinal phases of various instantiations of the Natural Sequence schema, including DevPsy models.

Scoring Kohlberg against the Natural Sequence Principles

In my view, each DevPsy model has its strengths and weaknesses in terms of accuracy and completeness, judged on the basis of the results of subsequent research by other developmental psychologists, and on its conformity to the Natural Sequence schema. Kohlberg’s DevPsy model checks most of the boxes of the ideal Natural Sequence schema. This is how I see Kohlberg’s model in terms of its recognition of the Natural Sequence schema Principles:

- The Holarchy Principle is a structure in time where each succeeding higher-later stage is built on previous stages because of the learning that happens over the course of a full lifetime. By the very

definition of a “developmental stage”, this Principle cannot be absent from any of the DevPsy stage models reviewed in this Part.

- The Transition Principle is defined as the transformation that happens with the reconciliation and assimilation of positive and negative experiences (the Dialectic Principle), but I do not see where this is emphasized in Kohlberg’s model. There is merely the mention of “moral dilemmas” that can potentially happen at each stage of the developmental holarchy, but the emphasis is not on the struggle to reconcile them.
- The Dimensionality Principle is represented in Kohlberg’s model in the sense that he recognized that the arena of moral and ethical interaction included all four Natural Sequence schema Dimensions: Action (visceral-behavioral), Inspiration (emotional-social), Expression (intellectual-cognitive), and Assimilation (perceptual-informational).
- Kohlberg was very aware of the Feedback Principle in essence (the notion that the inner world and the outer world work together to move the person forward through life), though not in name, of course. The whole thing about moral dilemmas (“what is the right thing to do in this situation with this person”) is that they take place in the arena of social interactions, and other interactions of a person with the environment.
- Regarding the Me-We Principle — ego-centrism and socio-centrism — there are two types of this in the Natural Sequence schema: 1) the swing back and forth from stage to stage, and 2) the lower-earlier stages versus the higher-later stages. There are hints of 2) In Kohlberg’s model, the first two stages, the so-called “pre-conventional” stages, are explicitly said to be ego-centric, and the so-called “conventional” and the so-called “post-conventional” stages are obviously increasingly socio-centric. There are hints that Kohlberg picked up on the swing between ego-centric and socio-centric morality/ethics within major stages, necessitating the theory of intermediate sub-stages.
- Near as I can tell in my brief reading about Kohlberg’s model, I did not see any evidence of the Fractality Principle, the notion that there is a septenarian cycle within each stage of the model, and/or that there is a cycle ‘earlier-below’ the time-span that the model covered and/or a cycle ‘later-above’ the model.
- I have not seen where Kohlberg discerned that cultural evolution followed the same pattern, but my review of his work is very far from exhaustive.

Considering that Kohlberg was one of the earlier researchers in the realm of DevPsy, it seems to me that he did a pretty good job. Subsequent researchers built on and expanded and clarified his work.

Concluding Comments on Kohlberg’s Stages of Moral Development

There is nothing quite like a numbered list (or a table) for getting my thoughts in order, and for presenting them clearly to others.

1. In terms of the behavioral (1-D Ordinal Action) Dimension of human development, there is a waxing of physical prowess during youth, and then there is a waning of physical prowess during the second half, the senescent half, of the normal story arc of a typical human lifetime. Kohlberg focused on the moral (2-D Ordinal Inspiration) Dimension of human development. In this Dimension, the progress usually waxes for the entire lifespan, and there is not necessarily a waning during senescence, perhaps even for curmudgeons.
2. Several Natural Sequence Principles are evident in Kohlberg’s model: Holarchy, Transition, Dialectic, and Feedback, but it is not evident to me, from what little I know, that Kohlberg understood the Dimensionality, Me-We, or Fractality Principles.
3. Kohlberg’s stages are not as well defined as the Natural Sequence spectrum. Subsequent researchers got closer to the Natural Sequence schema, but none of them discerned the logic-mathematics-physics structure of the Natural Sequence schema, with its Attributes.
4. Also, the correlation seems to work better with the Attributes than they do with the Life-Stages in the later stages than in the earlier stages, where the descriptions seem to overlap if one regards the Natural Sequence schema stages as canonical.
5. Some people are born with such a primitive consciousness that they never grow out of the reward/punishment stage of moral development; others are stuck at the acculturation/imprinting

phase. This is described more fully in subsequent chapters in this Part, and in [Chapter II-8 in Part Two, “Worldviews”](#).





Chapter V-7

① JANE LOEVINGER — EGO DEVELOPMENT

Next up in the series of chapters on theories of human psycho-social development is the work of Jane Loevinger. She was a contemporary of many other researchers in the field of developmental psychology, mostly during the second half of the 20th Century. Each of these researchers contributed to the field from different perceptions and perspectives, but they basically discerned the same pattern, the Natural Sequence pattern, as I hope to demonstrate to the reader's satisfaction.

Developmental psychology (DevPsy) covers all Dimensions of the Natural Sequence: Action, Inspiration, Expression, and Assimilation. Different researchers have tended to focus on one or another of these Dimensions. Based on my definition of the word "ego" as referring to one's "self-concept", I would say that Loevinger's research emphasized the Assimilation Dimension, what with its focus on the spectrum of development from immature self-concept to a mature self-concept.

What do I mean by that? The word "ego" does not fit with physical/behavioral development in the Action Dimension. Nor does it fit with the Inspiration Dimension, which is about morality/ethics as we saw with Kohlberg in the previous chapter. Nor does it fit with the Expression Dimension, which is about mental/cognitive development as we saw with Piaget in the Introduction chapter. Rather, it seems to fit with all aspects of a person's entire being, therefore, their self-concept.

A quotation borrowed from the internet will begin to make this notion clearer:

One's self-concept (also called self-construction, self-identity, self-perspective or self-structure) is a collection of beliefs about oneself. Generally, self-concept embodies the answer to "Who am I?".

Self-concept is distinguishable from self-awareness, which refers to the extent to which self-knowledge is defined, consistent, and currently applicable to one's attitudes and dispositions. Self-concept also differs from self-esteem: self-concept is a cognitive or descriptive component of one's self (e.g., "I am a fast runner"), while self-esteem is evaluative and opinionated (e.g., "I feel good about being a fast runner").

Self-concept is made up of one's self-schemas, and interacts with self-esteem, self-knowledge, and the social self to form the self as a whole. It includes the past, present, and future selves, where future selves (or possible selves) represent individuals' ideas of what they might become, what they would like to become, or what they are afraid of becoming. Possible selves may function as incentives for certain behavior.

The perception people have about their past or future selves relates to their perception of their current selves. The temporal self-appraisal theory argues that people have a tendency to maintain a positive self-evaluation by distancing themselves from their negative self and paying more attention to their positive one. In addition, people have a tendency to perceive the past self less favorably (e.g. "I'm better than I used to be") and the future self more positively (e.g., "I will be better than I am now"). [<https://en.wikipedia.org/wiki/Self-concept> — retrieved 31 March 2021]

In that quotation, we see that one's self-concept changes over the course of a lifetime, making it a proper object of studies in DevPsy. There is much more to that article, and there are many other internet resources on the subject that one may choose to pursue, in order to clarify what I mean, and what Loevinger meant, by the word "ego". The basic premise of Loevinger's ego-development model is that a person gets a more accurate answer to the question, "Who am I?", over the course of their lifetime.

Now, let's have a little introduction to Loevinger's work from my usual primary source, Wikipedia, and then, second, also from the Wikipedia article, we will look at the stages of "ego development" that she discerned in her academic research.

Biography and Introduction

A brief biography of Loevinger is appropriate. As usual, I turn to Wikipedia.

Jane Loevinger Weissman (February 6, 1918 – January 4, 2008) was an American psychologist. Born the third out of five children of a Jewish American family, the daughter of Gustavus Loevinger and Millie Strause. She was a developmental psychologist who developed a theory of personality which emphasized the gradual internalization of social rules and the maturing conscience for the origin of personal decisions. She also contributed to the theory of measurements by introducing the coefficient of test homogeneity. In the tradition of developmental stage models, Loevinger integrated several “frameworks of meaning-making” into a model of humans’ constructive potentials that she called ego development (or in German, Ich-Entwicklung). The essence of the ego is the striving to master, to integrate, and make sense of experience. She also is credited with the creation of an assessment test, the Washington University Sentence Completion Test.

As a child, Loevinger showed proficiency among her classmates, often achieving far above the rest. She went to the University of Minnesota in hopes of pursuing Psychology, where she was told that this major was too mathematical for her. Despite the odds, Loevinger declared her major as Psychology and managed to graduate magna cum laude at the young age of 19 years old. She then went on to earn her master of science degree in psychometrics at the age of 21. Still intrigued with the world of psychology, Loevinger went on to enroll in graduate school at the University of California, Berkeley, where she was a research assistant for Erik Erikson.

After growing frustrated with her time teaching and facing the societal pressures of being a working mother, Loevinger decided to begin her own research, specifically about women and mothers. During this time, Loevinger and her research team developed a number of studies and findings, including the renowned Washington University Sentence Completion Test. [https://en.wikipedia.org/wiki/Jane_Loevinger — retrieved 27 February 2022]

The following series of quotations were all extracted from https://en.wikipedia.org/wiki/Loevinger%27s_stages_of_ego_development on 12 September 2020. My comments are interspersed among the quotations. The underlined words and phrases are my emphasis, and that practice also serves to alert the reader to information that I might comment on. I have also inserted some clarifications in [brackets] within the quotations.

Loevinger’s stages of ego development are proposed by developmental psychologist Jane Loevinger (1918-2008) and conceptualize a theory based on Erik Erikson’s psycho-social model and the works of Harry Stack Sullivan (1892-1949) in which “the ego was theorized to mature and evolve through stages across the lifespan as a result of a dynamic interaction between the inner self and the outer environment”. Loevinger’s theory contributes to the delineation of ego development, which goes beyond the fragmentation of trait psychology and looks at personality as a meaningful whole.

The chapter on Loevinger is placed after the chapter on Erikson because she built on his work. My review of Sullivan’s work concluded that it was not relevant enough to my work to have an entire chapter in my book, but his stages do make an appearance further on in the chapter. From the quotation above, we see that Loevinger’s model incorporates the Feedback Principle, the mutual interaction of inner and outer worlds.

Erik Erikson discerned eight, and then nine, stages of psycho-social development. One can read about that in a previous chapter. A superficial look indicates that it does not correlate with the Natural Sequence schema as neatly as other developmental psychologies presented by others and reviewed in this *Cosmogony* book. My view is that subsequent research fits the Natural Sequence schema better than Erikson’s model because it is ‘getting to the bottom’ of what is going on, and it is therefore converging on the substrate of reality, the Natural Sequence schema. The trend has been that early researchers were more *subjective* in discerning categories, and later researchers have been more *objective*, more “empirical” (see below). Subjectivity, based on one’s own limited perspective provided by one’s personality, results in errors and omissions and distortions and defects and deficiencies.

Loevinger’s method of discerning stages was said to be “empirical” (see below). This is in contrast to “theoretical”. She built on the empirical work of her mentors and predecessors, but she furthered their preliminary work by devising a test to measure the ego-maturity of her subjects. The Natural Sequence works in somewhat the opposite way, the theoretical way, in that I put it forward as a theoretical framework of logic–math–physics, and then I research to see if the empirical research confirms it. My premise is that empirical research has provided a *description* of psycho-social development, but the Natural Sequence schema provides the deepest known *explanation*, from first principles, of psycho-social development — and a whole lot more.

The entire point of DevPsy is to discern the consequences of the feedback system between the characteristics of the person and the characteristics of the environment in which that person lives. Mere “trait psychology” is not the entirety of psychology. My book *The Process/Aspect System (aka The Tao of Personality)* is entirely about trait psychology, and the chapter on Worldviews discusses the trait category that is an instantiation of the Natural Sequence, just as these various developmental psychologies are instantiations of the Natural Sequence.

Let’s continue now with more from the Wikipedia article on Loevinger.

Loevinger conceived of an ego-development system which closely resembles moral development, but is broader in scope and uses empirical methods of study.

Loevinger’s scheme was said to be broader than “moral development”. This might be a reference to the work of one of her predecessors, Lawrence Kohlberg, which is examined in the previous chapter, [Chapter V-6](#), “Lawrence Kohlberg — Moral Development”. Comparing the two models, we see that Kohlberg’s six stages correspond to the first six stages of the Loevinger model, and that Loevinger has additional stages.

The Wikipedia article continues with a description of the “empirical methods of study” that Loevinger used.

She created an objective test of mothers’ attitudes to problems in family life, which Loevinger called the Family Problems Scale. Although this first test did not yield the expected results, she noted a strong similarity between authoritarian family ideology and the authoritarian personality concept being developed at UC Berkeley in the early 1960s. Loevinger noticed that the women who were at the extreme ends of the authoritarian scale also tended to be the most immature. These women tended to agree with such statements as “[a] mother should be her daughter’s best friend”, at the same time endorsing punitive behavior. She also observed that a liberal, non-authoritarian personality was not the opposite of a high authoritarian personality; anomie [lawlessness, anarchy] (a disorganized and detached social style) was the opposite of high authoritarianism, indicating a curvilinear [not exactly polarized] relationship.

The “authoritarian” versus “liberal” spectrum mentioned in the quotation will be discussed in more detail in the following list of, and descriptions of, the stages. The point I want to emphasize here is that the more primitive the person, the more authoritarian they are even though they know so little, and the more mature the person, the more epistemic humility they have. This is the Dunning–Kruger effect writ large, over the span of a lifetime. The spectrum of “maturity” from “authoritarianism” at the lower–earlier end to “liberalism” at the higher–later end is just one of the trends in maturity that she discerned; more trends are noted further on in this chapter and in other chapters. The non-academic observation of this phenomenon is that people tend to “mellow in their old age”.

Loevinger theorized that this [“curvilinear relationship”] was because the Authoritarian Family Ideology scale measured [not] just authoritarianism, but a broader concept which affected the other constructs she measured. By combining this theoretical [Authoritarian Family Ideology] framework with [Clyde] Sullivan and [Marguerite and Douglas] Grant’s interpersonal-maturity continuum, she created the concept of ego development. Loevinger then developed the Washington University Sentence Completion Test, the primary method of determining ego development on her scale.

The word “ego” is from Latin and means “I”, but in Loevinger’s view, this ego is not a static, stable personality trait that spans from birth to death; rather, it is said to be like a ‘moving target’ that changes over the course of a lifetime in response to feedback from the environment, which includes so-called “interpersonal” relationships — interactions with other people. In the Process/Aspect System matrix and in the Natural Sequence schema, there is an Ego that is stable over the course of a lifetime. This factor is recognized in so-called “transpersonal” psychology. For instance, in the work of one of Loevinger’s successors, Susanne Cook-Greuter (see Chapter V-14), that transpersonal Ego is referred to as the Watcher or the Witness. It is often awkward to correlate DevPsy models with the Natural Sequence schema because DevPsy models do not typically make a distinction that the Natural Sequence schema makes, namely that there is a difference between the ego that develops during a lifetime and is referred to as passing through stages called Life-Stages, and then there is also the Ego that does not significantly develop during a lifetime and is referred to as Worldview/Zone.

Therefore, whereas the inner Ego is a “thing” — an unbiased observer (Watcher, Witness) of the outer world — the ego is a biased sense-maker of the world, a “process”:

Loevinger describes the ego as a process, rather than a thing; it is the frame of reference (or lens) one uses to construct and interpret one’s world. This [worldview] contains impulse control and character development with

interpersonal relations and cognitive preoccupations, including self-concept. Sullivan (1958) proposed four levels of “interpersonal maturity and interpersonal integration”: impulsive, conformist, conscientious, and autonomous. Although I will not describe it here, it is obvious to me that Sullivan’s four levels, “Impulsive, Conformist, Conscientious, Autonomous”, correlate nicely with the first four Life-Stages (Infancy, Childhood, Youth, Middle Age) and with the first four Worldviews (Primitivism, Traditionalism, Materialism, Collectivism) of the Natural Sequence schema. Refer to https://en.wikipedia.org/wiki/Harry_Stack_Sullivan for an introduction to more information. We see below, and in other chapters, that **some of** HSS’s terms were used by Loevinger and others.

Developing from that initial framework, Loevinger completed a developmental model of nine sequential stages, each representing a progressively more-complex way of perceiving oneself in relation to the world. Every stage provides a frame of reference to organize and define experience over an individual’s life: “Since each new ego stage or frame of reference builds on the previous one and integrates it, no one can skip a stage.... One has not yet acquired the interpersonal logic.”

From the underlined words we see that Loevinger’s model is aware of the Hierarchy Principle. Loevinger’s successors added a tenth stage; see below. The simple-to-complex spectrum is one of the common elements of all DevPsy models. In DevPsy models, the learning process of a lifetime is often compared to school, where you cannot skip a grade, because the knowledge is cumulative.

As the adult ego develops, Loevinger considered the emergence of a sense of self-awareness in which one becomes aware of discrepancies between [external socio-cultural] conventions and one’s behavior. For some, development reaches a plateau and does not continue; for others, greater ego integration and differentiation continue. Loevinger proposed eight or nine stages of ego in development, six of which occur in adulthood: Conformist, [Self-aware], Conscientious, Individualistic, Autonomous, and Integrated. She believed that most adults were at the Conscientious[, Self-aware, and] Conformist level[s].

(The list of the adult stages given above did not match the names of the stages given further on, so I fixed it with words in brackets.) Other DevPsy researchers noticed that people reach a “ceiling” of development beyond which they cannot rise. Statistics for the percentage of people in each Stage are presented in other researcher’s models, reviewed in subsequent chapters; the distribution follows the so-called “bell-curve”, similar to IQ scores: the majority of the population is in the hump of the curve, in the middle stages.

Almost all people grow out of the first three childhood stages (Pre-social, Impulsive, Self-protective — see below) as they achieve a healthy adulthood, but some do not. If Loevinger speculated on a reason why some people “plateau” at less than full maturity in the ninth stage in old age, the Integrated Stage, **I have not seen it [should I look harder?]**. I offer my speculation below.

Susanne Cook-Greuter has refined Loevinger’s sentence-completion test instrument and her definitions and distinctions among the stages of ego development. According to Drew Westen, Loevinger’s model suffers from a lack of clinical grounding, and “like Kohlberg’s theory ... it confuses content and structure.” Based on the assessment of verbalized material, “the measure focuses so heavily on conscious verbal responses, it does not discriminate intelligent, liberal people with severe ego defects from those who actually are quite integrated.”

However, the extent of her [Cook-Greuter] research adds weight to her [Loevinger] findings. “Loevinger’s (1976) model of development is derived entirely from empirical research using her sentence completion test The manuals contain hundreds of actual completions, organized by exemplary categories.”

Susanne Cook-Greuter is one of the researchers that is discussed in a subsequent chapter; Kohlberg’s model was reviewed in the previous chapter.

Because there are nine (or ten, see below) sequential stages rather than seven as in the Natural Sequence, it is both necessary — and obviously correct when you see the correlation — that the correlation includes the Ordinal and Cardinal phases of each of the first five (of seven) Life-Stages/Zones/Worldviews. This method of making the correlation is strengthened by the fact that the same pattern was found by subsequent researchers.

Ten Stages of Ego Development

As usual, it is best to show Loevinger’s stages correlated with the Attributes of the Natural Sequence in table form. As usual, the stages are shown in order from bottom to top in the table (rather than top to bottom), to emphasize the metaphor that the “later” (in terms of maturity) stages are “higher” (in terms of perspective) stages; thus each stage includes and transcends the previous stages. The descriptions of the stages are from

Wikipedia; the names of the Attributes are from the chapter by that name in this *Cosmogony* book. Underlines are my emphasis of key words that clinch the correlation of Ego Stages with Attributes.

Table V-7a — EGO DEVELOPMENT per JANE LOEVINGER			
STG	NAME and DESCRIPTION		NS ATTRIBUTES
E10	UNNAMED: As differentiation increases, the model of ego development has found broader acceptance among international researchers. Therefore, a new stage E10 has been mentioned in reference to “Ich-Entwicklung”, the German equivalent of Loevinger’s stages. “Need to evaluate things and persons is abandoned. <u>Merging</u> with the world, no more holding, but engaging in the <u>flow</u> of things. Playful alternation between seriousness and triviality, <u>intermingling</u> of different states of consciousness, thinking in time cycles and historical dimensions, full <u>acceptance</u> of differences and people as they are.”	W E	← DYING HOLISM UNIFICATION + 3-D + CARDINAL EXPRESSION INWARD SYNTHESIS
E9	INTEGRATED: According to Loevinger, this stage is rarely attained. At the integrated stage, “learning is understood as unavoidable... the unattainable is renounced.” The ego exhibits <u>wisdom</u> , broad <u>empathy</u> towards oneself and others, and a capacity to be aware of inner conflicts (like the individualistic ego) or to tolerate them (like the autonomous ego) and make peace with them. “ <u>Reconciling</u> inner conflicts ... [and the] <u>cherishing of individuality</u> ” are key elements of self-actualization, along with a formed identity which includes “reconciliation to one’s destiny.”	M E	← ELDERHOOD
E8	AUTONOMOUS: Loevinger described this stage as the “ <u>freeing</u> of the person from oppressive demands of conscience in the preceding stage.” People at this stage are “ <u>synthesizers</u> ”, able to conceptually <u>integrate</u> ideas. The autonomous person “recognizes the limitations to autonomy, that emotional <u>interdependence</u> is inevitable”, and may experience a “confrontation with the limitations of abilities and roles as part of deepening <u>self-acceptance</u> .” “ <u>Self-fulfillment</u> becomes a frequent goal, partly supplanting achievement”, and there may be a greater “capacity to acknowledge and to cope with inner conflicts” (such as that between needs and duties). “A high <u>toleration for ambiguity</u> ... [and] <u>conceptual complexity</u> ” (the capacity to embrace polarity, complexity and multiple facets, and to integrate ideas) and “respect for other people’s need for autonomy in clear terms” are other features of the autonomous stage.	W E	← LATE ADULthood COLLECTIVISM EXPERIENCE = P-D = NEUTRAL ASSIMILATION COMPLEX COMBINATION
E7	INDIVIDUALISTIC: During this stage, persons demonstrate a respect for individuality and interpersonal ties. According to Loevinger, “To proceed beyond the Conscientious Stage, a person must become more <u>tolerant</u> of himself and of others ... out of the recognition of individual differences and of complexities of circumstances”. The individualistic ego has a broad-minded tolerance of, and respect for, the autonomy of oneself and others. With a new distancing from role identities, “moralism begins to be replaced by an awareness of inner conflict” and the new stage is “marked by a heightened sense of individuality and a concern for emotional dependence.” <u>Subjective</u> experience is opposed to objective reality, <u>inner</u> reality to outward appearance: “vivid and personal versions of ideas presented as cliches at lower levels”. A growing concern for psychological causality and development goes hand-in-hand with “greater complexity in conceptions of interpersonal interaction.”	M E	← MIDDLE ADULthood
E6	CONSCIENTIOUS: At “the conscientious stage ... individuals at this level, and even more often at higher levels, refer spontaneously to psychological development.” <u>Internalization of rules is complete by this stage</u> , although “exceptions and contingencies are recognized.” Goals and ideals are acknowledged, and there is a new <u>sense of responsibility</u> ; guilt is triggered by hurting another, rather than by breaking rules. “The tendency to <u>look at things in a broader social context</u> ” is offset by a self seen as apart from the group, but from another’s point of view; as a result, “descriptions of people are more realistic ... [with] more complexities.” Standards are self-chosen, and are distinguished from manners; people are seen in terms of their motives, not just their actions. A conscientious person “sees life as presenting choices; s/he holds the origin of his own destiny ... <u>aspires to achievement</u> , <i>ad astra per aspera</i> ”.	W E	← EARLY ADULthood MATERIALISM SEPARATION – 3-D – ORDINAL EXPRESSION OUTWARD

Table V-7a — EGO DEVELOPMENT per JANE LOEVINGER			
STG	NAME and DESCRIPTION		NS ATTRIBUTES
E5	SELF-AWARE: Loevinger considered the Self-Aware (also known as <u>Conscientious-Conformist</u>) stage the “model for adults in our society,” and thought that few [completely] passed [through] the stage before at least age twenty-five. The stage has two characteristics; “An increase in self-awareness and the capacity to imagine multiple possibilities in situations ... [was] a stable position in mature life, one marked by the development of ‘rudimentary self-awareness and self-criticism’”. “However, the closeness of the self to norms and expectations reveal[s] the transitional nature of these conceptions, midway between the group stereotypes of the Conformist and the appreciation for individual differences at higher levels.” She believed that the level produces a “deepened interest in interpersonal relations.”	M E	ANALYSIS ADOLESCENCE
E4	CONFORMIST: “Most children around school age ... progress to the next stage, Conformity.” Individuals begin to view themselves and others as conforming to <u>socially-approved codes or norms</u> . Loevinger describes this stage as having “the greatest <u>cognitive simplicity</u> . There is a <u>right way and a wrong way</u> and it is the same for everyone ... or broad classes of people”. One example of groups conforming at this age is by gender: boys and girls; individuals are invested in belonging to, and obtaining the approval of, groups. Behavior is judged externally, not by intentions, and this concept of “belonging to the group (family or peers) is most valued.” “The child starts to identify his welfare with that of the group”; for the stage “to be consolidated, there must be a strong element of trust.” An ability to <u>understand rules of the group</u> appears; a group member’s disapproval becomes a sanction, in addition to the fear of punishment. Rules and norms, however, are not yet distinguished. “While the Conformist likes and trusts other people within his own group, he may define that group narrowly and reject any or all outgroups, and stereotypes roles on the principle of <i>social desirability</i> : people are what they ought to be.”	W E	← LATE CHILDHOOD TRADITIONAL’ IMMANENCE – 2-D – ORDINAL INSPIRATION DOWNWARD INVOLUTION
E3	SELF-PROTECTIVE: The Self-protective stage is “the first step towards self-control of impulses. The Self-Protective person has the notion of blame, but he <u>externalizes</u> it to other people or to circumstances.” At this level, the child “craves a <u>morally prescribed</u> , rigidly enforced, <u>unchanging order</u> ”; if maintained too long, “an older child or adult who remains here may become <u>opportunistic</u> , <u>deceptive</u> , and preoccupied with <u>control</u> ... naive instrumental hedonism”. Although a degree of conceptual cohesion has been reached, <u>morality</u> is essentially a matter of anticipating rewards and punishments (with the motto “Don’t Get Caught”).	M E	← EARLY CHILDHOOD
E2	IMPULSIVE: The child “asserts his growing sense of self”, and views the world in <u>egocentric</u> terms; “the child is preoccupied with <u>bodily impulses</u> , particularly (age-appropriate) sexual and aggressive ones.” <u>Immersed in the moment</u> , they view the world solely in terms of how things affect him or her. Impulses affirm a sense of self, but are “curbed by the environment.” When someone meets the child’s needs, they are considered “good”; if they do not meet his or her needs, they are considered “bad” (often resulting in impulsive <u>retaliation</u> , such as running away or running home). Discipline is viewed by the child as restraint; <u>rewards and punishments</u> are seen as “nice to me” or “mean to me”. The child’s “needs and feelings are experienced mostly in <u>bodily modes</u> ,” and “the child’s orientation at this stage is almost exclusively to the present rather than to past or future.”	W E	TODDLERHOOD PRIMITIVISM RESOLUTION – 1-D – ORDINAL ACTION BACKWARD TERMINATION
E1	PRE-SOCIAL (infancy): the baby, which is at the mercy of the world around it (and its own needs), really has <u>no ego</u> to speak of until it begins to differentiate itself from its caregivers and the demands of the outer environment.	M E	INFANCY

My comments on this table are as follows.

- STG: The first column shows the ten designations that Loevinger assigned to the ego (E) stages, except E10 was assigned by some successor researchers to accommodate what they discerned, beyond what Loevinger discerned.
- DESCRIPTION: The second column provides the description of each Stage, copied verbatim from the Wikipedia article. Some of the names of the Stages were adopted from previous researches and adapted by subsequent researchers, and the descriptions are more than vaguely similar from

researcher to researcher. One would do well to compare and contrast them to get a more complete understanding of them all, provided by the different perceptions and perspectives of each researcher.

- **FOCUS:** The third column shows the focus on either ME or WE at each Stage. These alternating distinctions were not made by Loevinger, *so far as I have been able to determine*, but they were by other researchers, as we will see in subsequent chapters, and the descriptions affirm the pattern for the most part. ME corresponds to the Ordinal Zones of a Worldview, and WE corresponds to the Cardinal Zones of a Worldview. This is the Me-We Principle of the Natural Sequence schema.
- **ATTRIBUTES:** The fourth column provides the names of the Attributes of the Natural Sequence, including the Dimensionality (1-D, 2-D, 3-D, P-D), Dialectic (Ordinal, Neutral, Cardinal), Axial (Action, Inspiration, Expression, Assimilation), Directionality (Backward, Downward, Outward, Complex, Inward, Upward, Forward), and Process (Termination, Involution, Analysis, Combination, Synthesis, Evolution, Origination) Attributes, respectively, of each Worldview. Above and below the Attributes are the names of the Aspects of Life-Stage, Zone, and Worldview that correspond to Loevinger's stages. These Attributes and Aspects are all described and explained in Part One of this book, but even without reading that, some comparison on the reader's part will show the correlation with the names and descriptions of the stages.
- Positive and negative poles of each stage can be discerned in the descriptions. In other words, there is a healthy or well-adjusted expression of each stage, and there is an unhealthy or maladjusted expression of each phase. Discerning these poles is often one of the best clues for discerning what stage a person under observation is in. Other DevPsy researchers have noticed this phenomenon, and the Natural Sequence refers to it as the Dialectic Principle; integrating the Positive and Negative Poles is what drives the ego to develop from stage to stage.
- The Wikipedia article correlates Loevinger's stages with actual and potential ego development over the span of a full lifetime, but nothing is said in the Wikipedia article about correlations with stages of socio-cultural evolution over the millennia of the history of humanity. *So far as I have been able to determine*, Loevinger was not aware of the correlation, but this fact was not lost on other researchers, as we see in other chapters. Thus, Loevinger appears to have not been aware of the Fractality Principle.
- The bottom stage, E1, was not described in the Wikipedia article, but it was elsewhere, along with descriptions of the nine later stages. I borrowed the description of stage E1 from the following website: ><https://www.institute4learning.com/2020/01/31/the-stages-of-ego-development-according-to-jane-loevinger/><.
- Regarding the top stage, E10, it was unnamed in the Wikipedia article and other references, but other researchers did name it, as we see in chapters below. The description of E10 mentions "Ich-Entwicklung". This German phrase translates as "Ego Development", and the German version of Wikipedia has an article on it: ><https://de.wikipedia.org/wiki/Ich-Entwicklung><. It has a table with descriptions of Loevinger's stages, and the information there makes a good supplement to the table here.

Scoring Loevinger against the Natural Sequence Principles

In my view, each DevPsy model has its strengths and weaknesses in terms of accuracy and completeness, judged on the basis of the results of subsequent research by other developmental psychologists, and on its conformity to the Natural Sequence schema.

Loevinger discerned, as did others, that there are stages of maturity that cover a lifespan from birth to death; this is per the Hierarchy Principle of the Natural Sequence schema. She also discerned that these stages are shaped by *nurture* in the particular environment of every individual; that is to say, the environment influences how the stages manifest; this is per the Feedback Principle of the Natural Sequence schema. My perception is that Loevinger did not adequately appreciate how much *nature* a person is born with; infants are not *tabula rasa* = "blank slates", upon which the entirety of personality is written by *nurture* after birth. There has been a longstanding debate among psychologists about how much of an ego is made up of inner *nature* versus how much is made up of outer *nurture*. It depends on what personality traits one is talking about, but generally speaking, the consensus has settled on about fifty-fifty nature-nurture, as one may find here:

>https://en.wikipedia.org/wiki/Nature_versus_nurture<. The Natural Sequence schema was unknown to

Loevinger, but per the Natural Sequence schema, the difference between nature and nurture is understood as different time “tracks” at increasingly longer time scales, which go by the names Needs > Life-Stages > Worldviews > Culture. Loevinger’s model correlates best with the Life-Stages track, which concerns development over a lifetime, and which concerns how the nature side of the equation interacts with the nurture side of the equation. Inborn personality traits are on the *nature* side of the equation.

Concluding Comments on Loevinger’s Model

There is nothing quite like a numbered list (or a table) for getting my thoughts in order, and for presenting them clearly to others.

1. There are different realms of developmental psychology, and several of them have been discussed in previous chapters, and several more are discussed in subsequent chapters. The chapter title includes the name of the realm investigated by the named researcher, such as “needs”, “morality”, and “faith”. Loevinger’s preferred realm of investigation was of “ego” development. I take this to refer to Neutral Assimilation in the Natural Sequence schema, the factor that is concerned with overall self-concept.
2. One observation made by Loevinger (and other developmental psychologists) is that each person has a highest stage that they can achieve, a ‘ceiling’ so to speak, which they cannot exceed no matter the environmental influences. This tells me that stages cannot be entirely about *nurture* subsequent to birth. It also tells me that developmental psychologists should recognize that lifetime *nature* (Worldview) and lifetime *nurture* (Life-Stage), should be recognized as two different things that follow the same pattern, the Natural Sequence pattern.
3. Loevinger’s stages are said to cover the psycho-social development that happens in the normal course of full lifetime in relationship to environment. I believe that, even though this scheme can be correlated with Maslow’s Hierarchy of Needs, the latter is less dependent on the span of a lifetime, and more dependent on immediate circumstances and situations. In other words, it is much more difficult to regress and advance in Loevinger’s system than it is in Maslow’s system. It is important to make this kind of distinction as to the appropriate application of various systems.





Chapter V-8

① ROBERT KEGAN — THE EVOLVING SELF: FORMS OF MIND

Next up in this series of chapters on developmental psychology (DevPsy) models is the work of Robert Kegan. In previous chapters, we have seen stage models that propose a hierarchy of needs, a holarchy of morals, a holarchy of psycho-social development, and a holarchy of ego. Kegan formulated a stage model of psychological development that he referred to as a process of “meaning-making”. Considering that there are various ways to understand the changes that happen to a person over the course of a lifetime, and considering that different researchers bring their own proclivities to the study of people, it should not be surprising that there are various ways of interpreting what is seen. If the Natural Sequence schema is valid, then it should also not be surprising that the same general stages apply to the different perspectives.

Various DevPsy models can be found that cover all tracks of development that are found in the Natural Sequence schema: Enlightenment, Life-Stages, Worldviews, and Culture. Different researchers have tended to focus on one or another of these tracks. My review of Kegan’s work indicates that it correlates best with the characteristics and qualities of the so-called “Life-Stages” of the Natural Sequence schema, as many of the other DevPsy models do, better than it does with the so-called “Worldviews” of the Natural Sequence schema. In my cursory review of Kegan’s model, I have seen no mention of the correlation of it with Culture, but I could have missed it since I did not look everywhere.

Various DevPsy models can be found that cover all Dimensions of the Natural Sequence schema: 1-D Action, 2-D Inspiration, 3-D Expression, and P-D Assimilation. Different researchers have tended to focus on one or another of these Dimensions. My review of Kegan’s work indicates that it fits best into the so-called “Inspiration Dimension” of the Natural Sequence schema. The title of this chapter is a dead giveaway to me: I regard evolution as primarily a phenomenon of the Inspiration Dimension.

Introduction to Kegan and His Model

As usual, the following quotation was extracted from the Wikipedia article on this man and his work. As usual, underlined words are my emphasis. As usual, I insert some words in [brackets] for clarification and correlation with the Natural Sequence schema. As usual, I intersperse some comments between blocks of quotations for further comparison and contrast with the Natural Sequence schema.

The Wikipedia article first describes the man and his education. For you to know this information sets the stage for what he accomplished with that education:

Robert Kegan (born August 24, 1946) is an American developmental psychologist, author, and consultant. He is a licensed psychologist and practicing therapist, has lectured widely to professional and lay audiences, and consults in the area of professional development and organization development.

DevPsy models are often used to understand what is happening and why — within individuals, within groups, between groups — so that improvements can be made. The very notion that there is such a thing as a developmental holarchy means that progress can (and should) be made, in oneself and in one’s group and in business affiliations.

He was the William and Miriam Meehan Professor in Adult Learning and Professional Development at Harvard Graduate School of Education, where he taught for forty years until his retirement in 2016. Additionally, he was the Educational Chair for the Institute for Management and Leadership in Education and the Co-director for the Change Leadership Group.

Many, if not all, of the DevPsy models documented in this Part have been used in educational institutions and business organizations all over the world, mostly since World War II. In Natural Sequence terms, the information about Life-Stages and Worldviews is enormously useful in all facets and realms of life. Thus, there is a useful, helpful, practical application of this knowledge.

Born in Minnesota, Kegan attended Dartmouth College [in Hanover, NH], graduating *summa cum laude* in 1968. He described the civil rights movement and the movement against the Vietnam War as formative experiences during his college years. He took his “collection of interests in learning from a psychological and literary and philosophical point of view” to Harvard University, where he earned his Ph.D. in 1977.

The Wikipedia article then describes his first book (of several to follow), the one where he presented his developmental model, which to some extent was based on the models of his predecessors, as we will see:

In his book *The Evolving Self* (1982), Kegan explored human life problems from the perspective of a single process which he called meaning-making, the activity of making sense of experience through discovering and resolving problems. “Thus it is not that a person makes meaning, as much as that activity of being a person is the activity of meaning-making”, Kegan wrote. The purpose of the book is primarily to give professional helpers (such as counselors, psychotherapists, and coaches) a broad, developmental framework for empathizing with their clients’ different ways of making sense of their problems.

Most DevPsy models present the notion that progress through life involves “resolving problems” and/or dilemmas and/or crises of one psychological sort or another, in a predictable sequence. This is the Transition Principle (transformation) plus the Dialectic Principle (transcendence via the harmonization of contraries) of the Natural Sequence schema, which claims that the phenomenon of transformation through the holarchy is built into the fundamental structure of the entire Cosmos, not just the personality. No wonder then that people find “resolving problems” to be “meaningful”. More is said about this further on.

Kegan described meaning-making as a lifelong activity that begins in early infancy and can evolve in complexity through a series of “evolutionary truces” (or “evolutionary balances”) that establish a balance between self and other (in psychological terms), or subject and object (in philosophical terms), or organism and environment (in biological terms). Each evolutionary truce is both an achievement of and a constraint on meaning-making, possessing both strengths and limitations. Each subsequent evolutionary truce is a new, more refined, solution to the lifelong tension between how people are connected, attached, and included (integrated with other people and the world), and how people are distinct, independent, and autonomous (differentiated from other people and the rest of the world).

The paragraph above contains several Natural Sequence Principles. First, there is what I refer to as the Dialectic Principle, which is about the struggle between contraries that urge one to some resolution at a higher level of integration and integrity. Also found in the quotation is the Holarchy Principle, the notion that each stage has particular characteristics and qualities that are built on the foundation of previous stages. Also found in the quotation is a statement of the Plateau Principle, in the use of the terms “truce” or “balance” within each stage, and between self and not-self: basically and briefly, this is the inherent tendency of the Cosmos as a whole to seek a dynamic equilibrium between self and not-self. Also in the quotation above is the Feedback Principle of the Natural Sequence schema, which is about the consequences of the interaction of self and not-self, which is a corollary to the more-general Dialectic Principle.

Kegan apparently focused primarily on the Feedback Principle:

Kegan adapted Donald Winnicott’s idea of the holding environment and proposed that the evolution of meaning-making is a life history of holding environments, or cultures of embeddedness. Kegan described cultures of embeddedness in terms of three processes: confirmation (holding on), contradiction (letting go), and continuity (staying put for reintegration).

For Kegan, “the person is more than an individual”; developmental psychology studies the evolution of cultures of embeddedness, not the study of isolated individuals. “One of the most powerful features of this psychology, in fact, is its capacity to liberate psychological theory from the study of the decontextualized individual.

Constructive-developmental psychology reconceives the whole question of the relationship between the individual and the social by reminding that the distinction is not absolute, that development is intrinsically about the continual settling and resettling of this very distinction.”

All this to say that our life seems meaningless without interaction with, and feedback from, the environment, the most meaningful interaction for most people being the social relationships with other people.

Kegan argued that some of the psychological distress that people experience (including some depression and anxiety) are a result of the “natural emergencies” that happen when “the terms of our evolutionary truce must be renegotiated” and a new, more refined, culture of embeddedness must emerge.

The paragraph above is yet another way to state what I refer to as the Transition plus Dialectic Principles, which is one of the key components of the Natural Sequence schema. The basic idea here is that there is a crisis of some kind inside or outside of the person that must be resolved in a healthy way in order for the person to move forward into the next higher–later stage of development.

The Evolving Self attempted a theoretical integration of three different intellectual traditions in psychology. The first is the humanistic and existential–phenomenological tradition (which includes Martin Buber, Prescott Lecky, Abraham Maslow, Rollo May, Ludwig Binswanger, Andras Angyal, and Carl Rogers). The second is the neo-psychoanalytic tradition (which includes Anna Freud, Erik Erikson, Ronald Fairbairn, Donald Winnicott, Margaret Mahler, Harry Guntrip, John Bowlby, and Heinz Kohut). The third is what Kegan calls the constructive–developmental tradition (which includes James Mark Baldwin, John Dewey, George Herbert Mead, Jean Piaget, Lawrence Kohlberg, William G. Perry, and Jane Loevinger). The book is also strongly influenced by dialectical philosophy and psychology, and by Carol Gilligan’s psychology of women.

Note again from this quotation that the Dialectic Principle (thesis > antithesis > synthesis) of the Natural Sequence schema is explicitly found in Kegan’s model. The people whose names are underlined in the above paragraph are the ones who are reviewed in other chapters in this Part of the *Cosmogony* book. I looked at the biographies of the others in this list, and their work is not very much about DevPsy staged models, so they are not relevant enough to advance my theoretical integration of various DevPsy models.

Kegan presented a sequence of six evolutionary balances [which he named]: incorporative, impulsive, imperial, interpersonal, institutional, and inter-individual. The following table is a composite of several tables in *The Evolving Self* that summarize these balances. The object (O) of each balance is the subject (S) of the preceding balance. Kegan uses the term *subject* to refer to things that people are “subject to” but not necessarily consciously aware of. He uses the term *object* to refer to things that people are aware of and can take control of. The process of emergence of each evolutionary balance is described in detail in the text of the book; as Kegan said, his primary interest is the ontogeny [origination and developmental history] of these balances, not just their taxonomy [description and categorization]. [https://en.wikipedia.org/wiki/Robert_Kegan< — retrieved 11 April 2021]

Table of Kegan’s Stages

The table from the Wikipedia article referenced above is redrawn below, except one Analogue column (McClelland/Murray) was omitted and the Natural Sequence Attributes column was added on the right side. Also, the top-to-bottom order was reversed in order to conform to the convention established for the DevPsy Part of this *Cosmogony* book. That is to say, the most primitive stage is on the bottom of the chart, and the succeeding stages of maturity in meaning–making evolution are stacked on top, per the metaphor of geological sedimentary stratification where higher in space = later In time.

Table V–8a — FORMS OF MIND per ROBERT KEGAN							
Evolutionary balance	Culture of embeddedness	Analogue in Piaget	Analogue in Kohlberg	Analogue in Loevinger	Analogue in Maslow	Analogue in Erikson	NATURAL SEQUENCE
(5) Interindivid'l S: inter-penetration of systems O: personal autonomy, self-system identity	Culture of intimacy (in love and work). Typically: genuinely adult love relationship.	(Post-formal, Dialectical?)	Principled orientation	Autonomous	Self-Actualization	—	+ 3-D + CARDINAL EXPRESSION INWARD HOLISM UNIFICATION SENIORITY

Table V-8a — FORMS OF MIND per ROBERT KEGAN							
Evolutionary balance	Culture of embeddedness	Analogue in Piaget	Analogue in Kohlberg	Analogue in Loevinger	Analogue in Maslow	Analogue in Erikson	NATURAL SEQUENCE
(4) Institutional S: personal autonomy, self-system identity O: mutuality, interpersonal concordance	Culture of identity or self-authorship (in love or work). Typically: group involvement in career, admission to public arena.	Full formal operational	Societal orientation	Conscientious	Esteem and self-esteem orientation	Identity versus identity diffusion	= P-D = NEUTRAL ASSIMILATION COMPLEX COLLECTIVISM EXPERIENCE MID-LIFE
(3) Interpersonal S: mutuality, interpersonal concordance O: enduring disposition, needs, interests, wishes	Culture of mutuality. Mutually reciprocal one-to-one relationships.	Early formal operational	Interpersonal concordance orientation	Conformist	Love, affection, belongingness orientation	(Affiliation versus abandonment?)	– 3-D – ORDINAL EXPRESSION OUTWARD MATERIALISM SEPARATION ADULTHOOD
(2) Imperial S: enduring disposition, needs, interests, wishes O: impulse and perception	Role-recognizing culture. School and family as institutions of authority and role differentiation. Peer gang which requires role-taking.	Concrete operational	Instrumental operation	Opportunistic	Safety orientation	Industry versus inferiority	– 2-D – ORDINAL INSPIRATION DOWNWARD TRADITIONALISM IMMANENCE CHILDHOOD
(1) Impulsive S: impulse and perception O: reflexes, sensing, and moving	Parenting culture. Typically, the family triangle.	Pre-operational	Punishment and obedience orientation	Impulsive	Physiological satisfaction orientation	Initiative versus guilt	– 1-D – ORDINAL ACTION BACKWARD PRIMITIVISM RESOLUTION INFANCY
(0) Incorporative S: reflexes, sensing, and moving O: nothing	Mothering culture. Mothering one(s) or primary caretaker(s).	Sensori-motor	—	Pre-social	Physiological survival orientation	—	PHYSIOLOGY

My comments on this table are as follows:

- **EVOLUTIONARY BALANCE:** The first column shows the Dialectic Principle in action, according to Kegan: people in each stage are engaged in resolving a crisis. This column is about the interiority of the individual. The numbers in parentheses are the so-called and named “Orders” that Kegan proposed; refer to section below for the explanation.

- **CULTURE OF EMBEDDEDNESS:** The second column provides a brief description of the environment in which a person is functioning and from which they receive feedback. This column is about the exteriority of the individual.
- **ANALOGUES:** The third, fourth, fifth, sixth, and seventh columns are suggested correlations of Kegan's stages with the stage models of other prominent developmental psychologists. All of these people and their models are discussed in other chapters in the DevPsy Part of this *Cosmogony* book. Although the sequence is the same, some of these correlations are different from my correlations, so refer to those other chapters if you want to understand how and why I did what I did. The situation is that the models are ambiguous enough that there can be no exact correlation from model to model, but some correlations seem to be more obviously correct than others. In the last chapter of this Part, I provide a table showing my correlation of the Natural Sequence schema with all of the models discussed in this Part.
- **NATURAL SEQUENCE:** The eighth column shows the names of the four Attributes of the Natural Sequence stages (Dimensionality, Dialectic, Axial, Directionality), plus the names of Worldviews and Zones and Life-Stages. Note that sometimes I am not even consistent with my other correlations of various DevPsy models with the Natural Sequence because of these ambiguities, and because sometimes the correlations are more tidy one way rather than another. For instance, sometimes a lowest-earliest DevPsy stage is said to correlate with a Stage Zero or Physiology (which precedes numbered stages) and sometimes it is said to correlate with the Ordinal levels of the Ordinal Action Stage.
- With some study and thought, one can see that this table has hints that Kegan's model is a combination of both Life-Stages and Worldviews in the Natural Sequence schema. It was the Michaelian teachings, reviewed in Chapter II-4 in Part Two, that taught me to make a distinction between these two time tracks that might not otherwise be easily discernible. Basically and briefly, Life-Stages are changes that happen within a full lifetime, whereas Worldview is innate from birth and does not change, although it can be obscured and ambiguated by the Life-Stage that a person is in.

The information in the table above is so sparse that it could obviously use some elaboration in order to be more useful and complete. Elaboration is the function of the next section.

Description of Kegan's Stages

In my opinion, the names and descriptions of Kegan's stages in the table above (and the Wikipedia article) were inadequate to come to much understanding of what they actually mean, so I searched for a better and fuller description of them, and this is what I found: ><https://tomprof.stanford.edu/posting/1110><.

Kegan (Robert) introduced his theory of self-evolution in 1982 in his book, *The Evolving Self*. In his later book, *In over Our Heads: The Mental Demands of Modern Life* (1994), he presented a revised version of his theory and further discussion of the implications of his work for society. Kegan (1982) noted that [Jean] Piaget's work served as inspiration for his own. Pointing out that Piaget had attended very little to emotion or to the process and experience of development, Kegan sought to address these omissions, drawing on the work of object-relation theorists such as Kernberg (1966), who explored how interpretations of self-other relationships evolved over time, and psycho-social theorists, particularly [Erik] Erikson. Kegan especially valued "building strong intellectual bridges" (Scharmer, 2000, n.p.) to educational practice, leadership, and organizational development.

Piaget and Erikson were discussed in previous chapters. Others have noted Piaget's lack of attention to the Inspiration Dimension (Emotion Center) in his research, but some DevPsy researchers filled in the gap, as we see in yet other chapters in this Part. The so-called "self-other" relationship is yet another reference to what I refer to as the Feedback Principle of the Natural Sequence schema.

Kegan's Theory: The focus of Kegan's (1994) theory is the "evolution of consciousness, the personal unfolding of ways of organizing experience that are not simply replaced as we grow but subsumed into more complex systems of mind" (p. 9). Growth involves movement through five progressively more complex ways of knowing, which Kegan referred to as stages of development in 1982, orders of consciousness in 1994, and forms of mind in 2000. The process of growth involves an evolution of meaning that is marked by continual shifts from periods of stability to periods of instability, leading to ongoing reconstruction of the relationship of persons with their

environments (Kegan, 1982). Each succeeding order consists of cognitive, intra-personal, and inter-personal components.

(It seems as if Kegan took a while to settle on “Forms of Mind” for the name of this model, so I adopted that last one for the title of this chapter.) The period of “instability” is referred to as the Transition Principle in the Natural Sequence schema, the period of “stability” is referred to as the Plateau Principle, and the interaction of persons and their environment is referred to as the Feedback Principle.

Kegan (1982, 1994) saw the process of development as an effort to resolve the tension between a desire for differentiation and an equally powerful desire to be immersed in one’s surroundings (Kegan, 1994). The evolutionary truces evident at each developmental stage of Kegan’s (1982) model are “temporary solution[s] to the lifelong tension between the yearnings for inclusion and distinctness” (p. 107). While initially stating that his ways of knowing alternated between favoring autonomy at one stage and favoring embeddedness at the next (Kegan, 1982), he later modified his view, stating that “each order of consciousness [stage] can favor either of the two fundamental longings” (Kegan, 1994, p. 221) and that neither position is better than the other. He suggested that increased differentiation could mean finding new ways to stay connected. Paradoxically, as people make meaning in a more differentiated way, they also develop the capacity to become closer to others.

The above quotation is another way to state the Feedback Principle, the Dialectic Principle, and the Me-We Principle. All of those Principles are corollaries to the fundamental Ordinal/Cardinal dichotomy of the Cosmos, which is perhaps better known as the yin/yang dualism and its dance: as stated in Chapter 42 of the Tao-te-Ching: “All things carry the yin and embrace the yang, and through the blending of the chi they achieve harmony”. As discussed in the Introduction to this book, the most primitive epistemological principle of the manifest Cosmos is the fractilic infinite regress of paradoxical self-contradiction, the immanent Being/Doing experiencing itself *as if* it were not itself in order to know Itself better. The last sentence of the paragraph above is the human-level instantiation of the ultimate primordial episteme.

In the descriptions below, the names of the Orders in [brackets] are from the table above, which appears to be those used in the book published in 1982; the names in the descriptions below were said to be taken from the book published in 2000. In the descriptions below, it is fairly easy to correlate Kegan’s so-called “orders” of consciousness or “forms” of mind with the Dimensionality Attribute of the Natural Sequence schema, and that is the primary rationale for my correlation of the two systems. Therefore, I would say that Kegan’s model is aware of the Dimensionality Principle of the Natural Sequence schema: the view that a person has from each Dimension is more diverse and more complex and more inclusive of more facets of the environment. As usual, underlined words are my emphasis on characteristics and qualities of an Order that helps to make an accurate and mutually-informative correlation with the Natural Sequence schema.

The descriptions start out looking most like the Life-Stages of the Natural Sequence schema, but they end up looking most like the Worldviews of the Natural Sequence schema. The same thing happens with some of the other DevPsy models reviewed in this Part.

Order 0 [Incorporative Mind]: Kegan (1982) described newborn infants as “living in an objectless world, a world in which everything sensed is taken to be an extension of the infant” (p. 78). As a result, when the infant cannot see or experience something, it does not exist. By the time infants are eighteen months old, they begin to recognize the existence of objects outside themselves, propelling them into the next stage. Parents must remain steadfast as the child pushes against them to determine where the boundaries are between its self and the environment.

“Incorporative Mind” means that the infant has not really differentiated very much from the function of the biochemical organism. It is fairly easy to correlate this Order with the Zero-dimensional state of being in the world, where the person is operating out of physiological instincts more than anything else; there is no Me-We Principle at the Zero-dimensional stage of human development (or emergence of the Cosmos).

Order 1 [Impulsive Mind]: Children develop Order 1 meaning-making at about age two, when they realize that they have control over their reflexes (Kegan, 1982) and become aware of objects in their environment as independent from themselves (Kegan, 1994). Their thinking tends to be “fantastic and illogical, their feelings impulsive and fluid, [and] their social-relating egocentric” (p. 29) in that they are attached to whatever or whoever is present at the moment. Parents should support their children’s fantasies while challenging them to take responsibility for themselves and their feelings as they begin to perceive the world realistically and differentiate themselves from others while moving into Order 2.

It is fairly easy to see that Order #1 — where the child is learning about how their bodily actions affect things (including people) in their environment — correlates with the One-dimensional Ordinal Action stage of the Natural Sequence schema.

Order 2: Instrumental [Imperial] Mind. Individuals in Order 2 are able to construct “durable categories” — classifications of objects, people, or ideas with specific characteristics (Kegan, 1994). As a result, their thinking becomes more logical and organized, their feelings are more enduring, and they relate to others as separate and unique beings. Kegan and others (2001) noted that at this time, “rules, sets of directions, and dualisms give shape and structure to one’s daily activity” (pp. 4-5). In this Order, individuals develop a sense of who they are and what they want. “Competition [Me] and compromise [We]” (Kegan, 1982, p. 163) are characteristic themes of the second Order and are often played out within peer group settings. Support at this stage requires confirmation of the person the child has become. Challenge to develop further involves encouragement to take into consideration the expectations, needs, and desires of others.

It is fairly easy to see that Order #2 — where the child has differentiated itself from the body and the environment (including people), and when it is developing within the limited social-emotional dimension of life — correlates with the Two-dimensional Ordinal Inspiration stage of the Natural Sequence.

Order 3: Socialized [Interpersonal] Mind. Cross-categorical thinking — the ability to relate one durable category to another — is evident in the third order of consciousness. As a result, thinking is more abstract, individuals are aware of their feelings and the internal processes associated with them, and they can make commitments to communities of people and ideas (Kegan, 1994). Kegan and his colleagues (2001) noted that in this Order of consciousness, “other people are experienced ... as sources of internal validation, orientation, or authority” (p. 5). How the individual is perceived by others is of critical importance since acceptance by others is crucial in this order. Support is found in mutually rewarding relationships and shared experiences, while challenge takes the form of resisting codependence and encouraging individuals to make their own decisions and establish independent lives.

It is fairly easy to see that Order #3 — where the emphasis is on thinking about the dichotomy between individuation versus alienation — correlates with the Three-dimensional Ordinal Expression stage of the Natural Sequence.

Order 4: Self-Authoring [Institutional] Mind. Cross-categorical constructing — the ability to generalize across abstractions, which could also be labeled systems thinking — is evident in the fourth Order of consciousness (Kegan, 1994). In this Order, self-authorship is the focus. Individuals “have the capacity to take responsibility for and ownership of their internal authority” (Kegan & others, 2001, p. 5) and establish their own sets of values and ideologies (Kegan, 1994). Relationships become a part of one’s world rather than the reason for one’s existence. Support at this stage is evident in acknowledgment of the individual’s independence and self-regulation. Individuals are encouraged to develop further when significant others refuse to accept relationships that are not intimate and mutually rewarding.

It is fairly easy to see that Order #4 — where the emphasis is on reconciling the preceding behavioral, emotional, and cognitive stages of the internal reality and the external reality — correlates with the Pan-dimensional Neutral Assimilation stage of the Natural Sequence.

Order 5: Self-Transforming [Inter-individual] Mind. In this Order of consciousness, which is infrequently reached and never reached before the age of forty (Kegan, 1994), individuals see beyond themselves, others, and systems of which they are a part to form an understanding of how all people and systems interconnect (Kegan, 2000). They recognize their “commonalities and interdependence with others” (Kegan, 1982, p. 239). Relationships can be truly intimate in this order, with nurturance and affiliation as the key characteristics. Kegan (1982) noted that only rarely do work environments provide these conditions and that long-lasting adult love relationships do not necessarily do so either.

It is fairly easy to see that Order #5 — where the emphasis is on seeing one’s life in the entire context of internal and external reality — correlates with the Three-dimensional Cardinal Expression stage of the Natural Sequence.

Research: Several studies have built on Kegan’s theory. A four-year longitudinal study of twenty-two adults conducted by Kegan, Lahey, Souvaine, Popp, and Beukema using the Subject-Object Interview (Lahey, Souvaine, Kegan, Goodman, & Felix, 1988) revealed that “at any given moment, around one-half to two-thirds of the adult population appears not to have fully reached the fourth order of consciousness” (Kegan, 1994, pp. 188, 191). Drawing on thirteen other studies conducted mainly by his doctoral students, Kegan (1994) reported that in the

composite sample of 282 relatively advantaged adults, 59 percent had not reached the fourth order. Findings from a longitudinal study of identity development of West Point cadets using Kegan's (1982, 1994) theory as a framework indicated that for most cadets, the challenge of college is moving from self-interest (Order 2) to thinking in terms of being part of a community (Order 3), a goal that must be accomplished before self-authorship can be considered (Lewis et al., 2005). [<https://tomprof.stanford.edu/posting/1110> — retrieved 03 March 2021]

Most of the DevPsy models discussed in this Part have discovered the same thing, namely most people do not develop into the higher-later stages of "consciousness" — or whatever word they use to name what their model is about. Usually this means that the person did not resolve the dilemma or transcend the crisis that is typical of a lower-earlier stage. In the light of the Natural Sequence schema, this might correlate with the Life-Stage not being completed in the Positive Pole, but I would also suggest that people cannot transcend whatever Worldview they are born with, and this limits how well they resolve the dilemma or crisis provided by whatever Life-Stage they are transiting.

Scoring Kegan against the Natural Sequence Principles

In my view, each DevPsy model has its strengths and weaknesses in terms of accuracy and completeness, judged on the basis of the results of subsequent research by other developmental psychologists, and on its conformity to the Natural Sequence schema. Kegan's DevPsy model checks practically all of the boxes of the ideal Natural Sequence schema. Kegan's model embodies several of the Natural Sequence Principles very well, namely the Hierarchy Principle, the Transition Principle, the Dialectic Principle, the Plateau Principle, and the Feedback Principle. It is weak in terms of the Dimensionality Principle because it does not make explicit distinctions between Action, Inspiration, Expression, and Assimilation dimensions in the descriptions of Orders #1, #2, #3, and #4. So far as I know, Kegan said nothing about the Fractality Principle, the notion that there are stages below and above his model, and sub-stages within his Orders. Regarding the Me-We Principle, it was stated in the quotations above that Kegan at one time endorsed the notion of a swing between ego-centric and socio-centric focus from stage to stage, but later he disavowed this. The way that some DevPsy researchers, discussed in subsequent chapters, understand the Me-We Principle is that Kegan's five Orders are divided in half, with ego-centric focus in the first half and socio-centric focus in the second half.

Concluding Comments on Kegan's Evolving Self Model

There is nothing quite like a numbered list (or a table) for getting my thoughts in order, and for presenting them clearly to others.

1. The table above shows correlations of Kegan's DevPsy model with the models of others. As noted in the comments thereon, some of these correlations differ from the ones that I have made. My view is that this is because there are ambiguities within and between the various models, and my suggestion is that the Natural Sequence schema, with its well-defined Attributes and Principles, provides an unambiguous framework that can be used to make more accurate observations within models, and more accurate correlations between models.
2. So far as I know, Kegan is apparently not a transpersonal psychologist, so he might not be aware of, or be friendly toward, stages beyond Order 5, which transpersonal psychologists typically are, as documented in some subsequent chapters.
3. Kegan's model does not seem to be as connected to chronological age (Life-Stages) or psychological age (Worldviews/Zones) as some other models are. It looks to me as if it is an ambiguous blend of the two.
4. In what little I have seen of Kegan's work, I did not see a correlation of it with stages of socio-cultural evolution during human prehistory and history, which is something that many DevPsy models are aware of.





Chapter V-9

① JAMES FOWLER — STAGES OF FAITH DEVELOPMENT

Next up in this series of chapters on developmental psychology (DevPsy) models is the work of James Fowler. In previous chapters, we have seen stage models that propose a hierarchy of needs, a holarchy of morals, a holarchy of psycho-social development, a holarchy of ego, and a holarchy of meaning-making. Considering that there are various ways to understand the changes that happen to a person over the course of a lifetime, and considering that different researchers bring their own proclivities to the study of people, it should not be surprising that there are various ways of interpreting what is seen. It should also not be surprising that the same general stages apply to the different perspectives.

Lawrence Kohlberg (reviewed in a chapter above) focused on the “moral” development that happens during a full lifetime of human experience. One might reasonably wonder if there is also a holarchy on a presumed “faith” (religion-spirituality) scale, because morality is often associated with religion at the ‘low’ end of the holarchies reviewed previously, and ethics is often associated with spirituality at the ‘high’ end of the holarchies reviewed previously. As it so happens, an academic researcher has in fact made the connection between moral maturation and faith development. That person was named James Fowler, and he lived from 1940 to 2015. His research revealed stages of faith development similar to stages of moral and cognitive development. Others have followed in his footsteps, and expanded on his work.

The Psychology of Religion

Throughout this *Cosmogony* book, it is argued and evidenced that, in the Natural Sequence schema, “religion” fits best in stage two, the Ordinal Inspiration stage of development, and “spirituality” fits best in stage six, the Cardinal Inspiration stage of development. Before we review Fowler and his work and the work of others, it would be appropriate to review what I mean by the difference between religion of the Ordinal Inspiration type near the lower-earlier end of the Natural Sequence holarchy, and spirituality of the Cardinal Inspiration type near the higher-later end of the Natural Sequence holarchy. As usual, Wikipedia comes to the rescue, this time in its article on the psychology of religion. As usual, in quotations throughout this chapter and other chapters, underlines are my emphasis, words in [brackets] are my clarification, and my explanatory comments are interspersed between paragraphs of quotations.

In the last several decades, especially among clinical psychologists, a preference for the terms “spirituality” and “spiritual” has emerged, along with efforts to distinguish them from “religion” and “religious”. Especially in the United States, “religion” has for many become associated with sectarian [worldly and social] institutions and their obligatory creeds and rituals, thus giving the word a negative cast; “spirituality”, in contrast, is positively constructed as deeply individual and subjective, as a universal capacity to apprehend and accord one’s life with higher realities. In fact, “spirituality” has likewise undergone an evolution in the West, from a time when it was essentially a synonym for religion in its original, subjective meaning. Today, efforts are ongoing to “operationalize” these terms, with little regard for their history in their Western context, and with the apparent realist assumption that underlying them are fixed qualities identifiable using empirical procedures.

The contrast between religion and spirituality as described in this quotation is the same as the contrast between Ordinal and Cardinal in the Natural Sequence schema: Ordinal is more about the negative and lower and the outer social experience, whereas spirituality is more about the positive and the higher and the inner psychological experience. Fowler’s stage model of faith development claims that there is a spectrum of definable steps between the low and the high.

The Wikipedia article continues:

Schnitker and Emmons theorized that the understanding of religion as a search for meaning makes implications in the three psychological areas of motivation [Ordinal Action], cognition [Ordinal Expression] and social [Ordinal Inspiration] relationships. The cognitive aspects relate to God and a sense of purpose, the motivational ones to the need to control, and the religious search for meaning is also woven into social communities.

There it is again; we have seen this over and over; there are three Dimensions in many DevPsy models, and there are negative and positive poles in many DevPsy models; Polarity and Dimensionality are the essentials of the logical and mathematical structure of the Natural Sequence schema.

Our ideas about God are important indicators of how we view the world. According to [Alfred] Adler (1870 – 1937), these ideas have changed over time, as our vision of the world — and our place in it — has changed. Consider this example that Adler offers: the traditional belief that people were placed deliberately on earth as God's ultimate creation is being replaced with the idea that people have evolved by natural selection. This coincides with a view of God not as a real being, but as an abstract representation of nature's forces. In this way, our view of God has changed from one that was concrete and specific to one that is more general...

The spectrum from concrete to abstract, and the spectrum from specific to general, which are mentioned in this quotation and found in the evolution of faith concepts, are also key elements of the Natural Sequence schema. That these advances have happened over the course of human prehistory and history, as well as in the development of individual humans, is discussed in Chapter **Xx in Part X**, "Socio-cultural Evolution".

Adler was not the only one who spoke of the spectrum from religion to spirituality:

In his classic book *The Individual and His Religion* (1950), Gordon Allport (1897 – 1967) illustrates how people may use religion in different ways. He makes a distinction between Mature religion and Immature religion. Mature religious sentiment is how Allport characterized the person whose approach to religion is dynamic, open-minded, and able to maintain links between inconsistencies. In contrast, immature religion is self-serving and generally represents the negative stereotypes that people have about religion. More recently, this distinction has been encapsulated in the terms "intrinsic religion", referring to a genuine, heartfelt devout faith, and "extrinsic religion", referring to a more utilitarian use of religion as a means to an end, such as church attendance to gain social status. These dimensions of religion were measured on the Religious Orientation Scale of Allport and Ross (1967). The third form of religious orientation has been described by Daniel Batson. This refers to treatment of religion as an open-ended search (Batson, Schoenrade & Ventis, 1993). More specifically, it has been seen by Batson as comprising a willingness to view religious doubts positively, acceptance that religious orientation can change and existential complexity, the belief that one's religious beliefs should be shaped from personal crises that one has experienced in one's life. Batson refers to extrinsic, intrinsic, and quests respectively as religion-as-means, religion-as-end, and religion-as-quest, and measures these constructs on the Religious Life Inventory (Batson, Schoenrade & Ventis, 1993).

In the quotation above, the underlined words provide even more terms ("negative versus positive, immature versus mature, extrinsic versus intrinsic, closed versus open") that are used to describe the difference between Ordinality and Cardinality in general in the Natural Sequence schema. The acknowledgment that "crises" play a part in the path of ascending stages of faith development is in keeping with the formulation of many other DevPsy models, and with the Transition Principle of the Natural Sequence schema.

The next fellow who was mentioned in the Wikipedia article, whom we discussed in a previous chapter, was very much into the notion of life crises as transitions between stages of development per the Transition Principle of the Natural Sequence schema, and this included faith development:

Erik Erikson (1902 – 1994) is best known for his theory of psychological development, which has its roots in the psychoanalytic importance of identity in personality. His biographies of Gandhi and Martin Luther reveal Erikson's positive view of religion. He considered religions to be important influences in successful personality development because they are the primary way that cultures promote the virtues associated with each stage of life. Religious rituals facilitate this development. Erikson's theory has not benefited from systematic empirical study, but it remains an influential and well-regarded theory in the psychological study of religion.

Another fellow who was mentioned in the Wikipedia article brings out another aspect of religiosity and spirituality, namely that it is in another Dimension of experience from 3-D rationality and 1-D sensuality:

Rudolf Otto (1869 – 1937) was a German Protestant theologian and scholar of comparative religion. Otto's most famous work, *The Idea of the Holy* (published first in 1917 as *Das Heilige*), defines the concept of the holy as that which is numinous. Otto explained the numinous as a "non-rational, non-sensory experience or feeling whose primary and immediate object is outside the self". It is a mystery (Latin: *mysterium tremendum*) that is both

fascinating (*fascinans*) and terrifying at the same time; A mystery that causes trembling and fascination, attempting to explain that inexpressible and perhaps supernatural emotional reaction of wonder drawing us to seemingly ordinary and/or religious experiences of grace. This sense of emotional wonder appears evident at the root of all religious experiences. Through this emotional wonder, we suspend our rational mind for non-rational possibilities. *The Idea of the Holy* also set out a paradigm for the study of religion that focuses on the need to realize the religious as a non-reducible, original category in its own right. This paradigm was under much attack between approximately 1950 and 1990 but has made a strong comeback since then.

[>https://en.wikipedia.org/wiki/Psychology_of_religion< — retrieved 02 March 2021]

Obviously, in Natural Sequence schema terms, “sensory” experience is of the 1-D Ordinal Action Dimension, “rational” experience is of the 3-D Ordinal Expression Dimension, and “supernatural emotional wonder and fascination” experience is of the 2-D Inspiration Dimension.

If we put all of the above quotations together, we see that the spectrum of religious experience and faith development clearly instantiates three Principles of the Natural Sequence schema: Holarchy, Transition, and Dimensionality.

To my way of thinking, the fact that significant portions of the population have turned away from specific religiosity to general spirituality is an indication of an advancement along Fowler’s “faith” holarchy.

So let’s take a look at the academic research on that realm of life experience.

Biography of Fowler

As usual, Wikipedia is my source of information for this chapter. As usual, underlines in the following quotation from Wikipedia are my emphasis. As usual, words and phrases in [brackets] are my clarifying interjections. As usual, the flow of the lengthy quotation is interrupted by my clarifying comments where appropriate.

James William Fowler III (1940 – 2015) was an American theologian who was Professor of Theology and Human Development at Emory University [in Atlanta, GA]. He was director of both the Center for Research on Faith and Moral Development, and the Center for Ethics until he retired in 2005. He was a minister in the United Methodist Church.

The Methodist Church is a liberal or progressive denomination, not a fundamentalist denomination, so it is at the higher-later end of the spectrum of faith development. This is in contrast to fundamentalistic religionists, who typically do not perceive that they are on the lower-earlier end of a spectrum of faith development; they tend to believe that they are the best that they can be and the best that there is.

Fowler was born in Reidsville, North Carolina, on October 12, 1940, the son of a Methodist minister. In 1977, Fowler was appointed Associate Professor of Theology and Human Development at the Candler School of Theology at Emory University. He was later named Charles Howard Candler Professor of Theology and Human Development. He died on October 16, 2015.

He is best known for his book *Stages of Faith*, published in 1981, in which he sought to develop the idea of a developmental process in “human faith”.

These stages of faith development were along the lines of Jean Piaget’s theory of cognitive development and Lawrence Kohlberg’s stages of moral development. [>https://en.wikipedia.org/wiki/James_W._Fowler< — retrieved 22 February 2021]

Piaget and Kohlberg are discussed in previous chapters. Here again we see that various developmental psychologists are aware of, and/or build upon, and/or expand upon, the work of their predecessors and contemporaries. The general trend has been for successor models to become more accurate, and to approach the fullness of the Natural Sequence schema. A table in the last chapter of this Part provides a suggested correlation of these different models, and with the Natural Sequence schema.

Fowler’s Stages

The Wikipedia article referenced above provided the following names and brief descriptions of the stages. A fuller description of each stage, and their correlation with the Natural Sequence schema, is provided further on.

Stage 0 — “Primal or Undifferentiated” faith (birth to 2 years), is characterized by an early learning of the safety of their environment (i.e. warm, safe and secure versus hurt, neglect and abuse). If consistent nurture is

experienced, one will develop a sense of trust and safety about the universe and the divine. Conversely, negative experiences will cause one to develop distrust about the universe and the divine. Transition to the next stage begins with integration of thought and language which facilitates the use of symbols in speech and play.

Stage 1 — “Intuitive–Projective” faith (ages of three to seven), is characterized by the psyche’s unprotected exposure to the Unconscious, and marked by a relative fluidity of thought patterns. Religion is learned mainly through experiences, stories, images, and the people that one comes in contact with.

Stage 2 — “Mythic–Literal” faith (mostly in school children), is characterized by persons who have a strong belief in the justice and reciprocity of the universe, and their deities are almost always anthropomorphic. During this time metaphors and symbolic language are often misunderstood and are taken literally.

Stage 3 — “Synthetic–Conventional” faith (arising in adolescence; aged 12 to adulthood), is characterized by conformity to authority and the religious development of a personal identity. Any conflicts with one’s beliefs are ignored at this stage due to the fear of threat from inconsistencies.

Stage 4 — “Individuative–Reflective” faith (usually mid-twenties to late thirties), is a stage of angst and struggle. The individual takes personal responsibility for his or her beliefs and feelings. As one is able to reflect on one’s own beliefs, there is an openness to a new complexity of faith, but this also increases the awareness of conflicts in one’s belief.

Stage 5 — “Conjunctive” faith (mid-life crisis), acknowledges paradox and transcendence relating reality behind the symbols of inherited systems. The individual resolves conflicts from previous stages by a complex understanding of a multidimensional, interdependent “truth” that cannot be explained by any particular statement.

Stage 6 — “Universalizing” faith, or what some might call “enlightenment”. The individual would treat any person with compassion as he or she views people as from a universal community, and should be treated with universal principles of love and justice. [https://en.wikipedia.org/wiki/James_W._Fowler — retrieved 22 February 2021]

Personally, in retrospect, it appears that I followed these stages rather closely.

Another relevant quotation from another previously-linked Wikipedia article says this:

The book-length study contains a framework and ideas which have generated a good deal of response from those interested in religion, so it appears to have face validity. James Fowler proposes six stages of faith development: Intuitive-projective, Symbolic Literal, Synthetic Conventional, Individuating, Paradoxical (conjunctive), Universalising.

Although there is evidence that children up to the age of twelve years do tend to be in the first two of these stages, adults over the age of sixty-one show considerable variation in displays of qualities of Stages 3 and beyond, most adults remaining in Stage 3 (Synthetic Conventional). Fowler’s model has generated some empirical studies, and fuller descriptions of this research (and of these six stages) can be found in Wulff (1991). [https://en.wikipedia.org/wiki/Psychology_of_religion — retrieved 02 March 2021]

This statement about people getting stuck at stages other than the final stage of faith development is similar to statements found in the research reports of other categories of DevPsy. It is as if people rise to a “ceiling” that is inherent in their psyche, and do not normally rise above that inborn limit, whether in faith or in morals or in social or in egoic or in cognitive realms. In other words, some people are born to become religious “fundamentalists” as adults, and they will remain fundamentalists for the rest of their lives because it seems right and comfortable to them. What explains this is the fact that people are born with a personality trait that provides that ceiling beyond which they cannot rise, and that is what is here called “Worldview”.

Returning to the Wikipedia article on Fowler, we find this:

Empirical research

Fowler’s model has inspired a considerable body of empirical research into faith development, although little of such research was ever conducted by Fowler himself. A useful tool here has been Gary Leak’s Faith Development Scale, or FDS, which has been subject to factor analysis by Leak.

[https://en.wikipedia.org/wiki/James_W._Fowler — retrieved 22 February 2021]

Another study on this subject discusses the research that happened in the twenty years after Fowler first published his theory. It can be found at <https://pub.uni-bielefeld.de/download/1778599/2312485>. What it told me is that the subject is rife with controversy, and that one can argue about descriptions and applications,

but that Fowler's basic outline of the holarchy of religion to spirituality has enduring merit, and that there is a legitimate correlation with the research of other developmental psychologists.

Tabulation of Fowler's Stages of Faith Development

The descriptions in the Wikipedia article were too brief for me to make as firm a correlation with the Natural Sequence schema as I would like, so I looked elsewhere for more information. If one does an internet search on this topic, one finds many charts that tabulate the stages, with descriptions that are more lengthy.

The following table is my consolidation of two sources for these descriptions. The descriptions vary a bit from the Wikipedia article, so you may need or want to put them all together and consider them as a whole. The first set of descriptions in the table came from <https://www.institute4learning.com/2020/06/12/the-stages-of-faith-according-to-james-w-fowler/> — retrieved 12 April 2021. The second set of descriptions, after the “//”, came from this website: <https://www.uua.org/re/tapestry/youth/wholeness/workshop2/167602.shtml> — retrieved 12 April 2021.

As usual, the lowest–earliest stage is at the bottom of the table and the highest–latest stage is at the top.

Table V-9a — FAITH DEVELOPMENT per JAMES FOWLER		
STG	NAME and DESCRIPTION	NS ATTRIBUTES
6	UNIVERSALIZING-ENLIGHTENMENT: (Later Adulthood) This stage is only rarely achieved by individuals. A person at this stage is not hemmed in by differences in religious or spiritual beliefs among people in the world, but regards all beings as worthy of compassion and deep understanding. Here, individuals “walk the talk” of the great religious traditions (e.g., “the kingdom of God is within you”). One good example of this stage in the life of an individual is the life of Count Leo Tolstoy, who in his later years emphasized the importance of equality among people, asceticism in one's style of living, and the practice of compassion for all (see, for example, his last novel, <i>Resurrection</i> , which caused him to be excommunicated from the Russian Orthodox Church). // It is a rare person who reaches this stage of faith. James Fowler describes people at this stage as having “a special grace that makes them seem more lucid, more simple, and yet somehow more fully human than the rest of us.” People at this stage can become important religious teachers because they have the ability to relate to anyone at any stage and from any faith. They are able to relate without condescension but at the same time are able to challenge the assumptions that those of other stages might have. People at this stage cherish life but also do not hold on to life too tightly. They put their faith in action, challenging the status quo and working to create justice in the world. Robert Keeley points to people like Gandhi and Mother Teresa as examples of people who have reached this stage.	+ 3-D + CARDINAL EXPRESSION INWARD HOLISM UNIFICATION SENIORITY AND ELDERHOOD
5	CONJUNCTIVE: (Mid-Life Crisis) A person at this stage acknowledges paradoxes and the mysteries attendant on transcendent values. This causes the person to move beyond the conventional religious traditions or beliefs he may have inherited from previous stages of development. A resolution of the conflicts of this stage occurs when the person is able to hold a multi-dimensional perspective that acknowledges “truth” as something that cannot be articulated through any particular statement of faith. // People do not usually get to this stage until their early thirties. This stage is when the struggles and questioning of stage four give way to a more comfortable place. Some answers have been found and the person at this stage is comfortable knowing that all the answers might not be easily found. In this stage, the strong need for individual self-reflection gives way to a sense of the importance of community in faith development. People at this stage are also much more open to other people's faith perspectives. This is not because they are moving away from their faith but because they have a realization that other people's faiths might inform and deepen their own.	= P-D = NEUTRAL ASSIMILATION COMPLEX COLLECTIVISM EXPERIENCE MIDDLE ADULTHOOD

Table V-9a — FAITH DEVELOPMENT per JAMES FOWLER		
STG	NAME and DESCRIPTION	NS ATTRIBUTES
4	INDIVIDUATIVE-REFLECTIVE: (Ages Mid-Twenties to Late Thirties) This stage is often characterized by angst and struggle as the individual takes personal responsibility for her beliefs or feelings. Religious or spiritual beliefs can take on greater complexity and shades of nuance, and there is a greater sense of open-mindedness, which can at the same time open up the individual to potential conflicts as different beliefs or traditions collide. // This stage usually starts in late adolescence (18 to 22 years old). However Robert Keeley points out that “people of many generations experience the kind of dissonance that comes with the real questions of faith that one begins to address at this stage of development.” People in this stage start to question their own assumptions around the faith tradition. Along with questioning their own assumptions about their faith, people at this stage start to question the authority structures of their faith. This is often the time that someone will leave their religious community if the answers to the questions they are asking are not to their liking. Greater maturity is gained by rejecting some parts of their faith while affirming other parts. In the end, the person starts to take greater ownership of their own faith journey.	← CARDINAL PHASE – 3-D – ORDINAL EXPRESSION OUTWARD MATERIALISM SEPARATION EARLY ADULTHOOD
3	SYNTHETIC-CONVENTIONAL: (Ages 12 to [Early] Adult) This stage is characterized by the identification of the adolescent/adult with a religious institution, belief system, or authority, and the growth of a personal religious or spiritual identity. Conflicts that occur when one’s beliefs are challenged are often ignored because they represent too much of a threat to one’s faith-based identity. This stage (and all subsequent stages) correspond to Piaget’s stage of formal operational thinking, thus making it possible for the adolescent or adult to perceive the divine as an abstract or formless manifestation. // Generally starts about the age of 13 and goes until around 18. However, <u>some people stay at this stage for their entire life</u> . Unlike previous stages, people at this stage are able to think abstractly. What were once simple unrelated stories and rituals can now be seen as a more cohesive narrative about values and morals. With abstract thinking comes the ability to see layers of meaning in the stories, rituals and symbols of their faith. At this stage people start to have the ability to see things from someone else’s perspective. This means that they can also imagine what others think about them and their faith. People at this stage claim their faith as their own instead of just being what their family does. However, the faith that is claimed is usually still the faith of their family. Issues of religious authority are important to people at this stage. For younger adolescents, that authority still resides mostly with their parents and important adults. For older adolescents and adults in this stage, authority resides with friends and religious community. For all people in this stage, religious authority resides mostly outside of them personally.	← ORDINAL PHASE
2	MYTHIC-LITERAL: (Ages 7–12) Children at this stage have a belief in justice and fairness in religious matters, a sense of reciprocity in the workings of the universe (e.g. doing good will result in a good result, doing bad will cause a bad thing to happen) and an anthropomorphic image of God (e.g. a man with a long white beard who lives in the clouds). Religious metaphors are often taken literally thus leading to misunderstandings. Thus, passages in the Holy Bible that say: “If, then, you obey the commandments that I enjoin upon you this day, loving the Lord your God and serving Him with all your heart and soul, I will grant the rain for your land in season, the early rain and the late. You shall gather in your new grain and wine and oil — I will also provide grass in the fields for your cattle — and thus you shall eat your fill.” If these promises don’t come to pass in the world, then a person at this stage might feel cheated or disappointed in God. [they have a crisis] This stage aligns with Piaget’s concrete operational stages of cognitive development, where true logical thinking begins to develop in the child’s mind. // Generally ages 6 to 12. Children at this age are able to start to work out the difference between verified facts and things that might be more fantasy or speculation. At this age children’s source of religious authority starts to expand past parents and trusted adults to others in their community like teachers and friends. Like the previous stage, faith is something to be experienced. At this stage it is because children think in concrete and literal ways. Faith becomes the stories told and the rituals practiced. Later in this stage children begin to have the capacity to understand that others might have different beliefs than them.	← CARDINAL PHASE – 2-D – ORDINAL INSPIRATION DOWNWARD TRADITION- ALISM IMMANENCE EARLY CHILDHOOD

Table V-9a — FAITH DEVELOPMENT per JAMES FOWLER		
STG	NAME and DESCRIPTION	NS ATTRIBUTES
1	INTUITIVE-PROJECTIVE: (Ages 3–7) Children at this stage have acquired language and the ability to work with symbols to express thoughts. Children at this stage don't develop formalized religious beliefs, but are instead affected by the psyche's exposure to the Unconscious, and by a relatively fluidity of patterns of thought. Faith at this stage is experiential and develops through encounters with stories, images, the influence of others, a deeper intuitive sense of what is right and wrong, and innocent perceptions of how God causes the universe to function. This stage aligns with Piaget's stage of pre-operational thinking (lacking consistent logical-mental structures). // Generally pre-school aged children. The cognitive development of children of this age is such that they are unable to think abstractly and are generally unable to see the world from anyone else's perspective. As Robert Keeley writes: "These children cannot think like a scientist, consider logical arguments, or think through complex ideas." Faith is not a thought-out set of ideas, but instead a set of impressions that are largely gained from their parents or other significant adults in their lives. In this way children become involved with the rituals of their religious community by experiencing them and learning from those around them.	← ORDINAL PHASE
0	PRIMAL UNDIFFERENTIATED: (Ages Birth – 2) This stage is very much like Erik Erikson's first stage of "trust versus mistrust." Here, the baby acquires experiences from the outer environment that either instill in him a feeling of trust and assurance (from being comforted, living in a secure and stable environment, and experiencing a sense of consistency and care from parents). These personalized experiences, according to Fowler, essentially translate into feelings of trust and assurance in the universe and harmony with the divine. Conversely, experiences of parental or environmental neglect and/or abuse at this stage of development, can result in the formation of feelings of mistrust and fear with respect to the universe and the divine, sowing the seeds for later doubt and existential angst. This stage also compares with Jean Piaget's sensori-motor stage of cognitive development, where thinking takes place in and through the body. // Generally children from birth through about 2 years of age. Have the potential for faith but lack the ability to act on that potential. Through loving care from parents and other adults in their life young children start to build a lived experience of trust, courage, hope and love. At this stage, children experience faith as a connection between themselves and their caregiver.	– 1-D – ORDINAL ACTION BACKWARD PRIMITIVISM RESOLUTION INFANCY

My comments on this table are as follows:

1. STG: The first column shows the numbers that Fowler assigned to the stages. The lower numbers are the more primitive stages, and the higher numbers are the more advanced stages. As usual, the chart is arranged with the more advanced stages placed above the more primitive stages, the metaphor for this practice being geological sedimentary historical stratigraphy, with later levels deposited on top of earlier levels.
2. NAME and DESCRIPTION: These names and descriptions were borrowed verbatim from the two sources noted in the paragraph above the table. Other sources would no doubt give other or perhaps even better descriptions based on their own perceptions and research.
3. NS ATTRIBUTES: The third row shows the names of the four Attributes of the Natural Sequence schema (Dimensionality, Dialectic, Axial, Directionality), plus the names of Worldviews and Zones, plus the names of the Life-Stages.
4. In my view, there are even higher stages of faith development, such as idealism and mysticism, which correlate somewhat with Lower and Higher Cardinal Expression, but my perception is that these stages are not typically discerned and studied and understood by the typical academic researcher. There are hints of those higher stages in other chapters in this Part, because they were noted by transpersonal psychologists.
5. Notice that the top two stages and the bottom stage of faith have correlations with a single stage of the Natural Sequence schema, whereas two pairs of the middle stages of faith are covered by one stage of the Natural Sequence schema. Other DevPsy models also recognize the divide between Ordinal and Cardinal phases of the stages of the Natural Sequence schema.

Compared to the distinctive clarity of the Natural Sequence schema, the descriptions in this table in the second column are ambiguous enough that it makes correlation of Fowler's stages with the Natural Sequence

to be tentative. What is shown is my best guesstimate. What I came up with was a compromise between the characteristics of the Life-Stages and of the Worldviews. Of the third stage it was said that “some people stay at this stage for their entire life”. I suggest that this is because of the “ceiling” that a person’s inherent Worldview imposes on development in certain realms of life, perception of the nature of the deity being one of those realms.

Scoring Fowler against the Natural Sequence Principles

In my view, each DevPsy model has its strengths and weaknesses in terms of accuracy and completeness, judged on the basis of the results of subsequent research by other developmental psychologists, and on its conformity to the Natural Sequence schema. Fowler’s DevPsy model was said to be inspired by the work of Piaget and Erikson, so perhaps one could say that it checks the same boxes of an ideal Natural Sequence schema that they did.

- Fowler’s model embodies the Hierarchy Principle, what with its acknowledgment of stages, with each stage built upon previous stage(s).
- Fowler’s model embodies the Transition Principle, what with its acknowledgment that each stage is significantly different from previous stage(s), and that the transition from one stage to the next is sometimes precipitated by a crisis.
- Fowler’s model embodies the Feedback Principle, what with its acknowledgment that religious ideas originally come from the family and the culture in which the person grew up, and that there are modifications along the way consequent to constant interaction of self and not-self, until the person arrives at the stage that is appropriate for its inborn personality type.
- So far as I know, Fowler’s model is weak or absent in terms of awareness of the Dimensionality Principle because it does not make explicit distinctions between Action, Inspiration, Expression, and Assimilation Dimensions in the descriptions of Orders #1, #2, #3, and #4.
- So far as I know, Fowler said nothing about the Fractality Principle, the notion that there are stages below and above his model, and sub-stages within his Orders.
- Regarding the Me-We Principle, Fowler did not, that I know of, pose a swing from an alternating ego-centric to a socio-centric focus from stage to stage. However, one can detect the gradual change from an ego-centric to a socio-centric focus from the lowest–earliest to the highest–latest stage.
- Other Principles that I did not find in the brief description of Fowler’s model are the Dialectic Principle and the Plateau Principle.

Concluding Comments on Fowler’s Stages of Faith Development

There is nothing quite like a numbered list (or a table) for getting my thoughts in order, and for presenting them clearly to others.

1. Fowler’s model is focused on the Inspiration Dimension rather than on the Action, Expression, or Assimilation Dimensions.
2. Fowler used other developmental psychologies to inform his research so that he could correlate with them; researchers subsequent to Fowler followed the same principle of comparing and contrasting with other researchers and their models.
3. Note that Fowler’s faith development model is not the same thing as what I refer to as “Enlightenment”, which is the product of spiritual practices or spontaneous transcendent breakthroughs, such as discussed in [Chapter Part Six](#), “Stages of Enlightenment”. The consensus arrived at there is that Enlightenment is yet another instantiation of the Natural Sequence schema.





Chapter V-10

① CLARE GRAVES — EMERGENT CYCLICAL THEORY

Next up in the series of chapters on theories of human psycho-social development is the work of Clare Graves. He was a contemporary of many other early researchers in the field of developmental psychology (DevPsy), mostly during the third quarter of the Twentieth Century. Each of these researchers contributed to the field from different perceptions and perspectives, but, sometimes unbeknownst to themselves and others, they basically discerned the same pattern, the Natural Sequence pattern, as I aspire to demonstrate to the reader's satisfaction.

This chapter is the first of a series that 'shifts gears', one might say, from DevPsy models that most resemble the Life-Stages of the Natural Sequence schema to DevPsy models that most resemble the Worldviews of the Natural Sequence schema. As part of this same shift in emphasis, there is more awareness of the similarity of categories of individual maturity (Worldviews) with categories of socio-cultural (Culture) maturity.

Introduction and History

The following introductory information about Clare Graves and his work was extracted from Wikipedia, as is my custom. Underlined words and phrases are my emphasis; they alert the reader that I will comment on them with comments interspersed between quoted paragraphs. Words or phrases in [brackets] within the quotes are also my explanatory comments.

Clare W. Graves (December 21, 1914 – January 3, 1986) was a professor of psychology and originator of the emergent cyclical theory [ECT] of adult human development, aspects of which were later popularized as Spiral Dynamics [SD].

The next chapter in this book is about Spiral Dynamics, one of the successors to the ECT; other successors to the ECT are examined in two chapters following after the next chapter.

Graves graduated from Union College [Schenectady] in New York in 1940 and received his master's degree and PhD in psychology in 1943 and 1945, respectively, from Western Reserve University in Cleveland, Ohio. He taught at Western Reserve for three years before returning to Union College as an Associate Professor in 1948. He was promoted to full Professor in 1956, and retired in 1978.

In the early mid-twentieth century, Graves decided to conduct experiments that he hoped would reconcile the various approaches to human nature and questions about psychological maturity, as he saw elements of truth and error in all [DevPsy] theories known at the time. Rather than construct a hypothesis about how the conflicting systems could be resolved, Graves posed several open-ended questions and looked to see what patterns would emerge from his data. While not typical at the time, these approaches would later become known as grounded theory and inductive thematic analysis.

Just as with research in the so-called "hard" sciences such as physics and chemistry, in the "soft" sciences, such as psychology and sociology, theories and empirical data work together to approach the truth. Graves made progress with his systematic research that was so good that others appreciated the authenticity of his methods, and subsequently extended his work, as we see in subsequent chapters. In my view, the Natural Sequence provides "a hypothesis about how the conflicting (DevPsy) systems could be resolved"; it is offered by me to the reader as a candidate for the theoretical structural framework that explains the empirical data that Graves's methodical research revealed. I underlined the phrase "psychological maturity" because Graves's work is more about Worldviews than it is about Life-Stages, the latter being the focus of most DevPsy models discussed in previous chapters.

Based on data collected over the next several decades, Graves observed that the emergence [Holarchy Principle] within humans of new bio-psycho-social systems in response to the interplay [Feedback Principle] of external conditions with neurology follows a hierarchy in several dimensions [Dimensionality Principle], though without guarantees as to time lines or even direction: both progression and regression are possibilities in his model. Furthermore, each level in the hierarchy alternates as the human is either trying to make the environment adapt to the self, or the human is adapting the self to the existential conditions. He called these “express self” and “deny self” systems, and the swing between them is the cyclic aspect of his theory [Me-We Principle]. Graves saw this process of stable plateaus [Plateau Principle] interspersed with change intervals [Transition Principle] as never ending, up to the limits of the brain of Homo sapiens, something he viewed as far greater than we have yet imagined [Fractality Principle].

So far as I know, the ECT is the **first DevPsy model to recognize and incorporate all of the Principles** of the Natural Sequence schema, and they are all mentioned in the quotation above; others followed Graves’s lead. The Holarchy Principle of emerging stages is the first principle mentioned in the quotation above. The Dimensionality Principle (Action, Inspiration, Expression, Assimilation) is the second one mentioned in the quotation above. According to the Fractality Principle, there is progression during a stage, then an apparent regression during the Transition phase, and/or at the beginning of the next stage. The alternation between “express self” (abbreviated to Me) and the “deny self” (abbreviated to We) in the ECT is the ME-We Principle. The ECT recognized that there is a repeated switch of emphasis between the psychology of the individual and the sociology of groups up the holarchy of psychological maturity. Like Maslow, Graves was willing to extend his theory into the realm of “transpersonal psychology”, which is beyond what some developmental psychologists can “imagine”; I regard this as a dim recognition of the Fractality Principle, which proposes that there are stages lower–earlier and stages higher–later than the DevPsy models cover.

Graves’s emergent cyclical theory has been influential in psychology, philosophy, spirituality, education, economics, geopolitical conflict resolution, cultural analysis, and management theory.

An internet search on ECT, SD, and related systems will reveal the depth and breadth of their influence in the world, and I suspect it can only increase because it has discovered and developed a general theory of great practical utility in so many realms.

While Graves’s work is most broadly known through consultants working with the Spiral Dynamics (SD) or Spiral Dynamics Integral (SDi) adaptations, or through SDi’s influence on the Integral movement, these adaptations were not created and popularized until a decade after his death. During his lifetime, Graves worked within academia, with his theories occasionally finding broader audiences such as through the magazine *The Futurist*.

SD, by Beck and Cowan, is the first derivative of the ECT, and SDi (Spiral Dynamics Integral) is the second derivative, when Ken Wilber added his Integral Theory ideas to the mix. Beck and Wilber are discussed in subsequent chapters. In the table below, the descriptions of the stages of the ECT were extracted from an article in *The Futurist* magazine.

Graves was reportedly distressed by the poor reception given to Abraham Maslow at an American Psychological Association seminar in the mid 1950s and determined not to publish his full theory until he was confident he could defend it.

Other sources (such as this: >http://www.clarewgraves.com/research_content/CG_others/3_Maslow.html<) reveal that Maslow and Graves not only knew each other but were friends, and that Graves intentionally built on Maslow’s work. This chapter follows the chapter on Maslow just as Graves’s work followed Maslow’s work in thought and in chronology.

In his own words, here is Graves’s introduction to his model, extracted verbatim from this (and other) websites: [>http://www.clarewgraves.com/articles_content/1974_Futurist/1974_Futurist.html<]:

For many people the prospect of the future is dimmed by what they see as a moral breakdown of our society at both the public and private level. My research, over more than 20 years as a psychologist interested in human values, indicates that something is indeed happening to human values, but it is not so much a collapse in the fiber of man as a sign of human health and intelligence. My research indicates that man is learning that values and ways of living which were good for him at one period in his development are no longer good because of the changed condition of his existence. He is recognizing that the old values are no longer appropriate, but he has not yet understood the new.

Note that this *Futurist* article was published in 1974. Some readers with a more up-to-date socio-cultural sensibility might prefer to substitute the word “humankind” in place of “man” in the quoted paragraphs, above and below.

The error which most people make when they think about human values is that they assume the nature of man is fixed and there is a single set of human values by which he should live. Such an assumption does not fit with my research. My data indicates that man’s nature is an open, constantly evolving system, a system which proceeds by quantum jumps [Transition Principle] from one steady state system [Plateau Principle] to the next through a hierarchy [Holarchy Principle] of ordered systems.

Briefly, what I am proposing is that the psychology of the mature human being is an unfolding, emergent [Holarchy Principle], oscillating, spiraling [Me-We Principle] process marked by progressive subordination of older, lower-order behavior systems to newer, higher-order systems as man’s existential problems change [Holarchy Principle]. These systems alternate between focus upon the external world, and attempts to change it, and focus upon the inner world, and attempts to come to peace with it, with the means to each end changing in each alternatively prognostic system. Thus, man tends, normally, to change his psychology as the conditions of his existence change [Feedback Principle]. Each successive state, or level of existence, is a state through which people pass on the way to other states of equilibrium [Plateau Principle]. When a person is centralized in one state of existence, he has a total psychology [Assimilation Dimension] which is particular to that state. His feelings [Inspiration Dimension], motivations [Action Dimension], ethics and values [Inspiration Dimension], biochemistry, degree of neurological activation [Physiology Dimension], learning systems [Assimilation Dimension], belief systems, conception of mental health, ideas as to what mental illness is and how it should be treated [Expression Dimension], preferences for and conceptions of management [Action Dimension], education [Assimilation Dimension], economic and political theory and practice [Action Dimension], etc., are all appropriate to that state.

Perhaps if Graves had been aware of the Dimensional structure of the Natural Sequence schema, he would have arranged his list of dimensions more methodically. The proper order of Dimensions is: 0-D Physiology → 1-D Action → 2-D Inspiration → 3-D Expression → P-D Assimilation → 3-D Expression → 2-D Inspiration → 1-D Action. As we will see below, he was unaware of the last three of these stages, the Cardinal Dimensions. However, we will see in subsequent chapters that some subsequent researchers, those of the transpersonal psychology persuasion, were not unaware of the Cardinal stages.

The *Futurist* article continues:

In some cases, a person may not be genetically or constitutionally equipped to change in the normal upward direction when the conditions of his existence change. Instead, he may stabilize and live out his life at any one or a combination of levels in the hierarchy. Again, he may show the behavior of a level in a predominantly positive or negative manner, or he may, under certain circumstances, regress to a behavior system lower in the hierarchy. Thus, an adult lives in a potentially open system of needs, values and aspirations, but he often settles into what appears to be a closed system.

The quotation above seems to be an empirical observation of one of the tenets of the Natural Sequence schema, that people are born with a personality trait that provides a “ceiling”, above which they cannot rise in their ascent through the Life-Stages to their innate Worldview during a lifetime. In the Natural Sequence schema, this “combination of levels” is Worldview and Zone, each of which has a Positive and a Negative Pole. The so-called “regression” that Graves noticed might refer to moving up and down in Maslow’s Hierarchy of Needs due to adversities, or it might be referring to the swings between Cardinal and Ordinal phases that happen at a Transition between major stages of ascent through the Life-Stages.

The *Futurist* article continues:

Human existence can be likened to a symphony with six themes. In a symphony, the composer normally begins by stating his themes in the simplest possible manner. In human existence, our species begins by stating in the simplest way those themes which will preoccupy us through thousands of variations. At this point in history, the societal effective leading edge of man in the technologically-advanced nations is currently finishing the initial statement of the sixth theme of existence [“Tier One”: see below] and is beginning again with the first theme in an entirely new and more sophisticated variation [“Tier Two”; see below]. That is, man has reached the point of finishing the first and most primitive ladder of existence: the one concerned with the emergence of the individual of the species *Homo sapiens* and his subsistence on this planet. The first six levels of existence, A-N through F-S, have accordingly been called “Subsistence levels.” (‘A’ stands for the neurological system in the brain upon which

the psychological system is based; 'N' for the set of existential problems that the 'A' neurological system is able to cope with. Thus, in the 'A-N' state, one calls on the 'A' system to solve the 'N' problems of existence.)

What Graves referred to as "subsistence levels" Maslow referred to as "deficiency needs"; if you wish, you may refresh your memory by rereading the chapter on Maslow. As we will see below, Graves was unaware that there is a "Tier Three"; in subsequent chapters we will see that others are aware of a third Tier. The six so-called "Subsistence" levels correlate with the three Ordinal Stages of the Natural Sequence schema times the Ordinal and Cardinal phases in each stage. We have seen this division of Natural Sequence stages into half-stage phases in some of the previous chapters, and we will see it in subsequent chapters.

The *Futurist* article continues:

These six Subsistence levels comprise the initial statement of man's themes in its very simplest form. The six Subsistence levels of man's existence have as their overall goal the establishment of individual survival and dignity. Once having become reasonably secure, both physically and psychologically, in his existence, the individual becomes suddenly free to experience the wonder and interdependence of all life. But he must notice at the same time that the struggle for man's emergent individuality has imperiled the very survival of that life. Thus, just as early man at the most primitive level of subsistence (A-N), had to use what power he could command to stabilize his individual life functions, so G-T man, the individual who has reached the first level of Being [of two levels in Tier Two] must use what knowledge he can command to stabilize the essential functions of interdependent life. Similarly, B-O or tribal man gathered together in communities to insure his individual, physical survival, and our G-T man of the future must form communities of knowledge to insure the survival of all viable life upon this Earth. We see therefore that the six themes constantly repeat, even though man progresses from the simple statement of individual subsistence to the variation of the interdependence of life. This stately succession of themes and movements is the general pattern of the levels of existence.

In this discussion of man's present and future, the first three Subsistence levels must still concern us because many people, from aborigines to newly emergent nations, are still living at these levels of existence.

[>http://www.clarewgraves.com/articles_content/1974_Futurist/1974_Futurist.html<]

Notice that Graves's emphasis with his ECT is on the psycho-social development of humankind over the course of the last many tens of thousands of years — what I refer to as the "Culture" time track. Notice that most other DevPsy researchers, discussed so far in this Part, emphasize other time scales, such as that of a single human lifetime — what I refer to as the "Life-Stage" time track — while others, such as Maslow with his Hierarchy of Needs, emphasizes the short-term focus of a person on satisfying their specific requirements and inclinations of the moment. Notice that my emphasis is on pointing out that all of these researchers have discovered the same archetypal pattern, the Natural Sequence schema, instantiated at various time scales, even though they may not have recognized that the little segment that they have focused on is in fact an instantiation of a much broader pattern.

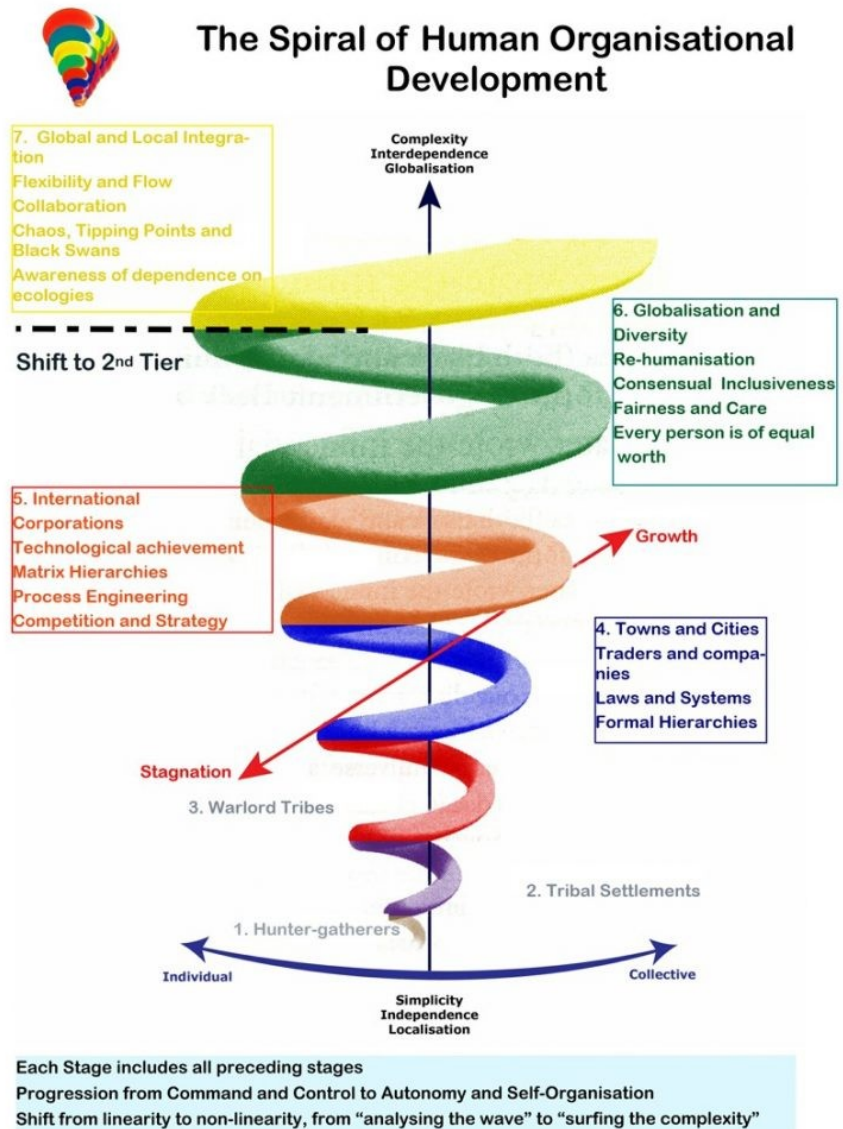
Even though there are eight stages to the ECT, just as there are to Maslow's Hierarchy of Needs, a close examination of the ECT reveals that the correspondences to the Natural Sequence schema are not the same, even though the characteristics of the stages are in the same order. How can this possibly be? We will begin to sort out the answer to that question in the next section of this chapter, then flesh out the explanation in the next section after that.

Eight Stages of the ECT

The graphic image at right is the best single introduction to the ECT that I could find in a collection of many images assembled by Google. This diagram emphasizes the socio-cultural evolution that humans ascended over the course of human history, but it can also be related to the Natural Sequence instantiations of Life-Stages and Worldview/Zone instantiations. Practically all of the features are present in this diagram that allow one to correlate the ECT stages with the Natural Sequence schema.

The following numbered descriptions of the graphic will guide you in the understanding of the correlations.

1. The image is named “Human Organizational Development”, and many business managers who want to improve their employees have used the ECT for that purpose, but there are many other uses.
2. The image has colors, from beige at the bottom of the spiral, then violet above that, then red, blue, orange, green, and yellow at the top. Most other images that I found on the internet show a turquoise stage above the yellow stage. The color scheme was not a part of Graves’s formulation; it was added by Beck and Cowan, and it has a rationale in their formulation of Spiral Dynamics, but it is irrelevant to the Natural Sequence schema. (The Natural Sequence has a different color scheme, in order to be consistent with the rainbow spectrum of the chakra system.)
3. At the bottom of the image are the words: “Simplicity Independence Localization” with an arrow leading upward through the center of the spiral to the words “Complexity Interdependence Globalization”. This, and the increasing size of the loops of the spiral, indicate an enlargement of the worldview from bottom to top, where the “higher” stages include the “lower” stages of the spiral, as it says in one of the notes at the bottom. This correlates with the spectrum of Worldviews from lowest–earliest Worldview to highest–latest Worldview.
4. The diagonal “← Stagnation Growth →” arrow is another way of indicating that development is upward and regression is downward on the spiral.
5. The image is divided into left and right halves, with the left half called “← Individual” and the right half labeled “Collective →”. On other variations of this graphic, these ideas are shortened to “Me” and “We” respectively. This swing of the spiral from left to right correlates with the Ordinal triad and the



© Jon Freeman / Spiral Futures SD Intro Video : <http://www.spiralfutures.com/downloads.html>

Cardinal triad of Zones of each Worldview. This correlation divides each Worldview of the Natural Sequence schema into two levels of the ECT schema.

6. Near the top left of the graphic image are the words “Shift to 2nd Tier” with a horizontal line above the words. The “yellow” stage is in 2nd Tier, and so is Turquoise above yellow. The reason for this change from 1st Tier to 2nd Tier is that, in his research, Graves noticed that there was a qualitative difference between the character of people above and below that horizontal line. In Natural Sequence terms, this is the difference between the Ordinal triad of Worldviews and the singular Neutral Worldview. (Stages above Turquoise have been identified by subsequent researchers; they are labeled 3rd Tier, and they correlate with the Cardinal triad of Worldviews; refer to following chapters.)
7. Seven stages are numbered and identified with some keywords. Note that these keywords describe the nature of the enlargement of the worldview from bottom to top, both in terms of time (e.g. “hunter-gatherer”) and space (e.g. “Global”). The table below, derived from Graves’s work, expands the descriptions of the stages considerably, and correlations with the stages of the Natural Sequence are shown. The characteristics of the stages compared to the characteristics of the Attributes of the Worldviews will presumably clinch the correlation in the minds of readers.

Tabulating the ECT Descriptions

The following table contains the complete descriptions of the eight levels of the ECT copied verbatim from one of Graves’s own documents, published in a magazine. Because it is freely available on the internet, I assume there are no copyright concerns. It can be downloaded from here: <http://spiral.dynamicsintegral.nl/wp-content/uploads/2013/09/Graves-Clare-Human-Nature-Prepares-for-a-Momentous-Leap.pdf> and other places. As usual with developmental tables, the stages are organized from the bottom up.

Table V–10a — EMERGENT CYCLICAL THEORY per CLARE GRAVES			
CODE COLOR	NAME and DESCRIPTION		NAT. SEQ. ATTRIBUTES
(H-U) TURQUOISE	EXPERIENTIALISTIC EXISTENCE (SECOND BEING LEVEL): At the second being level, the experientialistic level (H-U), man will be driven by the winds of knowledge, and human, not godly, faith. The knowledge and competence acquired at the G-T level will bring him to the level of understanding, the H-U level. If every man leaps to this great beyond, there will be no bowing to suffering, no vassalage, no peonage. Man will move forth on the crests of his broadened humanness rather than vacillate and swirl in the turbulence of his animalistic needs. His problems, now that he has put the world back together, will be those of bringing stabilization to life once again. He will need to learn how to live so that the balance of nature is not again upset, so that individual man will not again set off on another self-aggrandizing binge. His values will be set not by the accumulated wisdom of the elders, as in the B-O system, but by the accumulated knowledge of the knowers. But here again, as always, this accumulating knowledge will create new problems and precipitate man to continue up just another step in his existential staircase.	W E	CARDINAL PHASE COLLECTIVISM = P-D = NEUTRAL ASSIMILATION COMPLEX COMBINATION
(G-T) YELLOW	COGNITIVE EXISTENCE (FIRST BEING LEVEL): Once we are able to grasp the meaning of passing from the level of ‘being one with others’ to the cognitive level (G-T) of knowing and having to do so that ‘all can be and can continue to be,’ it is possible to see the enormous differences between man and other animals. Here we step over the line which separates those needs that man has in common with other animals and those needs which are distinctly human. Man, at the threshold of the seventh level, where so many political and cultural dissenters stand today, is at the threshold of being human. He is truly becoming a human being. He is no longer just another of nature’s species. And we, in our times, in our ethical and general behavior, are just approaching this threshold, the line between animalism and humanism.	M E	ORDINAL PHASE COLLECTIVISM = P-D = NEUTRAL ASSIMILATION COMPLEX COMBINATION

Table V-10a — EMERGENT CYCLICAL THEORY per CLARE GRAVES

CODE COLOR	NAME and DESCRIPTION		NAT. SEQ. ATTRIBUTES
(F-S) GREEN	PERSONALISTIC EXISTENCE (SIXTH SUBSISTENCE LEVEL): At the personalistic level (F-S), man becomes centrally concerned with peace with his inner self and in the relation of his self to the inner self of others. He becomes concerned with belonging, with being accepted, with knowing the inner side of self and other selves so harmony can come to be, so people as individuals can be at peace with themselves and thus with the world. And when he achieves this, he finds he must become concerned with more than self or other selves, because while he was focusing on the inner self to the exclusion of the external world, his outer world has gone to pot. So now he turns outward to life and to the whole, the total universe. As he does so he begins to see the problems of restoring the balance of life which has been torn asunder by his individualistically oriented, self-seeking climb up the first ladder of existence. As man moves from the sixth or personalistic level, the level of being with self and other men, the seventh level, the cognitive level of existence, a chasm of unbelievable depth of meaning is crossed. The gap between the sixth level (the F-S level) and the seventh (the G-T level) is the gap between getting and giving, taking and contributing, destroying and constructing. It is the gap between deficiency or deficit motivation and growth or abundance motivation. It is the gap between similarity to animals and dissimilarity to animals, because only man is possessed of a future orientation.	W E	CARDINAL PHASE MATERIALISM – 3-D – ORDINAL EXPRESSION OUTWARD ANALYSIS
(E-R) ORANGE	MATERIALISTIC EXISTENCE (FIFTH SUBSISTENCE LEVEL): At the materialistic level (E-R), man strives to conquer the world by learning its secrets, rather than through raw, naked force as he did at the C-P level. He tarries long enough here to develop and utilize the objectivistic, positivistic, operationalistic, scientific method so as to provide the material ends for a satisfactory human existence in the here and now. But once assured of his own material satisfaction he finds he has created problems S, a new spiritual void in his being. He finds himself master of the objective physical world but a prime neophyte in the subjectivistic, humanistic world. He has achieved the satisfaction of a good life through his relative mastery of the physical universe, but it has been achieved at a price, the price of not being liked by other men for his callous use of knowledge for himself. He has become envied and even respected, but he is not liked. He has achieved his personal status and material existence at the expense of being rejected even by his use of neurological sub-system 'F,' and begins man's move to his sixth form of existence.	M E	ORDINAL PHASE MATERIALISM – 3-D – ORDINAL EXPRESSION OUTWARD ANALYSIS
(D-Q) BLUE	SAINTLY EXISTENCE (FOURTH SUBSISTENCE LEVEL): At the saintly level (D-Q), man develops a way of life based on 'Thou shalt suffer the pangs of existence in this life to prove thyself worthy of later life.' This saintly form of existence comes from seeing that living in this world is not made for ultimate pleasure, a perception based on the previous endless struggle with unbridled lusts and a threatening universe. Here man perceives that certain rules are prescribed for each class of men and that these rules describe the proper way each class is to behave. The rules are the price man must pay for his more lasting life, for the peace which he seeks, the price of no ultimate pleasure while living. The measure of this worthiness is how much he has lived by the established rules. But, after security is achieved through these absolutistic rules, the time comes when some men question the price. When this happens, the saintly way of life is doomed to decay, since some men are bound to ask why they cannot have some pleasure in this life. Man then struggles on through another period of transition to another level, now slipping, now falling in the quest for his goal. When man casts aside the inhuman aspect of his saintly existence, he is again charged with excess energy because his security problems are solved; but this very solution has created the problems 'R,' how to build a life that will offer pleasure here and now, which eventually he meets through the neurological means of system 'E.'	W E	CARDINAL PHASE TRADITION- ALISM – 2-D – ORDINAL INSPIRATION DOWNWARD INVOLUTION

Table V-10a — EMERGENT CYCLICAL THEORY per CLARE GRAVES

CODE COLOR	NAME and DESCRIPTION		NAT. SEQ. ATTRIBUTES
(C-P) RED	<p>EGOCENTRIC EXISTENCE (THIRD SUBSISTENCE LEVEL): At the egocentric level (C-P), raw, rugged, self-assertive individualism comes to the fore. This level might be termed 'Machiavellian,' for within it is all the author of <i>The Prince</i> considered the essence of being human. History suggests to us that the few who were able to gain their freedom from survival problems surged almost uncontrollably forward into a new way of being, and also dragged after them the tribal members unable to free themselves of the burden of stagnating tribalistic existence. History also suggests that the few became the authoritarians while the many became those who submitted. The many accepted the 'might-is-right' of the few because such acceptance assured their survival. This was so in the past and it is still so today. This Promethean (C-P) point of view is based on the prerogatives of the 'haves' and the duties of the 'have-nots.' Ultimately, when this way of life, <u>based historically on the agricultural revolution</u>, is established, life is seen as a continuous process with survival dependent on a controlled relationship. Fealty and loyalty, service and <i>noblesse oblige</i> become cornerstones of this way of life. Assured of their survival, through fief and vassalage, the 'haves' base life on the 'right' way to behave as their might dictates. A system develops in which each individual acts out in detail, in the interest of his own survival, how life is to be lived, but only a small number ever achieve any modicum of power and the remainder are left to submit. Both the authoritarian and the submissive develop standards which they feel will insure them against threat, but these are very raw standards. The submissive person chooses to get away with what he can within the lifestyle which is possible for him. The authoritarian chooses to do as he pleases. He spawns, as his <i>raison d'être</i>, the rights of assertive individualism. These rights become, in time, the absolute rights of kings, the unassailable prerogatives of management, the inalienable rights of those who have achieved positions of power, and even the rights of the lowly hustler to all he can hustle. This is a world of the aggressive expression of man's lusts openly and unabashedly by the 'haves,' and more covertly and deviously by the 'have nots.' Now man moves to the lasting security level of need and learns by avoidant learning. As he moves to the D-Q level he develops a way of life based on the conviction that there must be a reason for it all, a reason why the 'have' shall possess so much in life yet be faced with death, and a reason why the 'have not' is forced to endure a miserable existence. This search leads to the belief that the 'have' and 'have not' condition is a part of a directed design, a design of the forces guiding man and his destiny. Thus, the saintly way of life, based on one of the world's great religions or great philosophies, comes to be. Here man creates what he believes is a way for lasting peace in this life or everlasting life, a way which, it seems to him, will remove the pain of both the 'have' and the 'have not.' Here he seeks salvation.</p>	M E	<p>ORDINAL PHASE TRADITION- ALISM – 2-D – ORDINAL INSPIRATION DOWNWARD INVOLUTION</p>
(B-O) PURPLE	<p>TRIBALISTIC EXISTENCE (SECOND SUBSISTENCE LEVEL): At the second subsistence level, the B-O autistic state of thinking, man's need is for stability. He seeks to continue a way of life that he does not understand but strongly defends. This level of man has just struggled forth from striving to exist and now has his first established way of life. This way of life is essentially without awareness, thought, or purpose, for it is based on Pavlovian classical conditioning principles. Therefore, B-O man believes his tribalistic way is inherent in the nature of things. As a result he holds tenaciously to it, and strives desperately to propitiate the world for its continuance. At this level a seasonal, or naturally based concept of time prevails and space is perceived in an atomistic fashion. Causality is not yet perceived because man perceives that force at work to be inherent. Here a form of existence based on myth and tradition arises, and being is a mystical phenomenon full of spirits, magic and superstition. Here the task of existence is simply to continue what it seems has enabled 'my tribe to be.' But here, more by chance than by design, some men achieve relative control of their spirit world through their non-explainable, elder-administered, tradition-based way of life a way of life which continues relatively unchanged until disturbed from within or without. When the established tribal way of life assures the continuance of the tribe with minimal energy expenditure by solving problems N by neurological means A, it creates the first of the general conditions necessary for movement to a new and different steady state of being. It produces excess energy in the system which puts the system in a state of readiness for change. But unless another factor, such as dissonance or challenge, comes into the field, the change does not move in the direction of some other state of being. Instead, it moves toward maximum entropy and its own demise, since it becomes overloaded with its accretion of more and more tradition, more and more ritual. If, however, when the state of readiness is achieved, dissonance enters, then this steady state of being is precipitated toward a different kind of change. This dissonance arises usually in youth, or in certain minds which are not troubled by memories of the past and are capable of newer and more lasting insights into the nature of man's being. Or it can come to the same capable minds when outsiders disturb the tribe's way of life. When, at the B-O level, readiness for change occurs, it triggers man's insight into his existence as an individual being separate and distinct from other beings, and from his tribal compatriots as well. As he struggles, he perceives that others — other men, other animals, and even the spirits in his physical world — fight him back. So his need for survival comes to the fore. With this change in consciousness, man becomes aware that he is aligned against predatory animals, a threatening physical universe, and other men who fight back for their established way of existence, or against him for the new way of existence he is striving to develop. Now he is not one-with-all, for he is alone in his struggle for his survival against the draconic forces of the universe. So he sets out in heroic fashion to build a way of being which will foster his individual survival.</p>	W E	<p>CARDINAL PHASE PRIMITIVISM – 1-D – ORDINAL ACTION BACKWARD TERMINATION</p>

Table V-10a — EMERGENT CYCLICAL THEORY per CLARE GRAVES

CODE COLOR	NAME and DESCRIPTION		NAT. SEQ. ATTRIBUTES
(A-N) BEIGE	AUTOMATIC EXISTENCE (FIRST SUBSISTENCE LEVEL): Man at the first subsistence level (A-N), the automatic state of physiological existence, seeks only the immediate satisfaction of his basic physiological needs. He has only an imperative need-based concept of time and space and no concept of cause or effect. His awareness excludes self and is limited to the presence of physiologically determined tension when it is present, and the relief of such tension when it takes place. He lives a purely physiological existence. Man the species, or man the individual, does not have to rise above this level to continue the survival of the species. He can continue the survival of the species. He can continue the survival of the species through the purely physiological aspect of the process of procreation. He can live what is for him, at the A-N level, a productive lifetime, productive in the sense that his built-in response mechanisms are able to reduce the tensions of the imperative physiological needs and a reproductive lifetime. But this level of existence seldom is seen in the modern world except in pathological cases. As soon as man, in his food-gathering wanderings, accrues a set of Pavlovian conditioned reflexes, which provide for the satisfaction of his imperative needs, and thus enters his 'Garden of Eden,' he slides almost imperceptibly out of this first stage into the second existential state, and established form of human existence, the tribalistic way of life.	M E	ORDINAL PHASE PRIMITIVISM – 1-D – ORDINAL ACTION BACKWARD TERMINATION

My comments on this table are as follows:

- **COLOR:** the first column of the table shows the colors that the first derivative of researchers, the Beck and Cowan derivative, assigned to the stages. Graves himself had a different scheme, which the reader will notice as two capital letters in parentheses separated by a hyphen, such as “(A-N)”. This is irrelevant to the Natural Sequence, and it was obsoleted by the color scheme implemented by Graves’s successors, so there is no use explaining it. Both of these shorthand identification schemes are irrelevant to the Natural Sequence, but if the reader pursues Spiral Dynamics, it comes in handy to understand them.
- **NAME and DESCRIPTION:** The second column shows the text of the descriptions extracted verbatim from the referenced *Futurist* magazine article. Some of the names of the stages appear in models formulated by other researchers in developmental psychology and sociology, as documented in other chapters of this *Cosmogony* book. There is a summary comparison table of various models in the Conclusion chapter to this Part.
- **Me versus We:** The third column shows the alternating swing between focus on self versus focus on the group one identifies with in the spectrum of stages. These correlate with the Ordinal and Cardinal Zones of the Worldviews listed in the fourth column. Refer to [Chapter Xx in Part X, “Worldviews”](#), for more information.
- **WORLDVIEWS ATTRIBUTES:** The fourth column shows the names of the Worldviews, and their Attributes. From top to bottom they are: Dimensionality, Dialectic, Axial, Directionality, and Process. These are explained in [Chapter Xx in Part X, “Attributes of the Natural Sequence”](#).
- The bottom six stages are referred to as “subsistence” stages and the top two stages are referred to a “being” stages. Subsequent researchers referred to these as 1st Tier and 2nd Tier. This is equivalent to the Attributes of the Ordinal stages of the Natural Sequence and the Attributes of the Neutral stage. Subsequent researchers and theorizers added stages above the top stage.

In the margin of the magazine article quoted in the table, there was this comment:

Readers should know that Dr. Graves was not entirely satisfied with this piece, though it is by far the most popular of the articles and quite readable as an introduction to the theory. Helixes one and two are reversed in later papers so that problems of existence come first as A, B, C, etc., rather than N, O, P, etc., as in this writing. Graves was also not happy with some of the depictions of GT and HU characteristics.

Subsequent researchers had their reservations also, so they refined the descriptions of the stages, but the basic features remained, as we will see in the following two chapters.

The reader might want to compare the ECT with Maslow's Hierarchy of Needs discussed in a previous chapter, where the stages refer to the focus of a person's concerns at some given time. The reader might also want to compare the ECT with Loevinger's Stages of Ego Development in a previous chapter. In Loevinger, the stages refer to the development of the "ego" over the course of a lifetime. That is functionally equivalent to the concept of Life-Stages in the Natural Sequence schema. In Graves's ECT, the stages refer to the socio-cultural development of humankind over the course of human prehistory and history. In terms of the Natural Sequence Worldviews, the stages are said to be inborn personality traits. Because of these different instantiations of the Natural Sequence, at different time scales and in different environments, it is essential to make these distinctions so as not to get confused by variations in descriptions.

Scoring Graves against the Natural Sequence Principles

In my view, each DevPsy model has its strengths and weaknesses in terms of accuracy and completeness, judged on the basis of the results of subsequent research by other developmental psychologists, and on its conformity to the Natural Sequence schema. Graves's DevPsy model checks all of the boxes of the ideal Natural Sequence instantiation, which includes:

The Hierarchy Principle, the Transition Principle, the Dialectic Principle, the Dimensionality Principle, the Feedback Principle, the ME-WE Principle, and the Fractality Principle.

Three subsequent chapters document that his work was extended by three DevPsy researchers.

Concluding Comments on Graves's Emergent Cyclical Theory

There is nothing quite like a numbered list (or a table) for getting my thoughts in order, and for presenting them clearly to others.

1. Graves's ECT is the first DevPsy model to be reviewed in this DevPsy Part of the *Cosmogony* book that ticks all of the boxes of Principles embodied by the Natural Sequence schema: Hierarchy, Transition, Dialectic, Dimensionality, Feedback, Me-We, and Fractality.
2. What I find remarkable is that Graves was able to empirically pick up on the Me-We aspects of psycho-social-cultural development. That is, he noticed that the SD is a 'cycle' in that it swings back and forth between a self-centered focus (I, me, mine) to an other-centered focus (we, our, us). The only other system where I have seen this understanding is the Natural Sequence schema, what with its Ordinal phase and Cardinal phase within each Worldview. Because of the depth and breadth of that SD insight, I believe it merits an exploration and explanation in greater detail than the other septenaries in my book.
3. There are different aspects of developmental psychology, and several of them have been discussed previously, namely Maslow's "Hierarchy of Needs" and Loevinger's "Ego Development". My claim is that, even though they are all instantiations of the Natural Sequence, they are not all the same thing, and they should be disentangled from each other. It is true that the various instantiations all influence how all of the others manifest, and it is true that one might not be able to discern which instantiation is the source of any particular individual behavior, value, or belief, but my assertion is that it is helpful, for theoretical clarity, to disambiguate and differentiate them.
4. Graves discerned, as did others, that there are stages of maturity that cover a lifespan from birth to death, and these stages are shaped by *nurture* in the particular environment of every individual; that is to say, the environment influences how the stages manifest. My perception is that Graves did not adequately appreciate how much *nature* a person is born with; infants are not *tabula rasa* = "blank slates". There has been a longstanding debate among psychologists about how much of an ego is made up of inner *nature* versus how much is made up of outer *nurture*. It depends on what one is talking about, but generally speaking, the consensus has settled on about fifty-fifty nature-nurture: >https://en.wikipedia.org/wiki/Nature_versus_nurture<. Unbeknownst to Graves, Worldview and other inborn personality traits are on the *nature* side of the inner versus outer feedback loop system.
5. One observation made by Graves and other developmental psychologists is that each person has a highest stage that they can achieve, a "ceiling" so to speak, which they cannot exceed no matter the environmental influences. This tells me that stages cannot be entirely about *nurture* subsequent to birth. It also tells me that developmental psychologists should recognize that lifetime *nature* (Worldview) and lifetime *nurture* (stage), should be recognized as two different things that follow the

same pattern, the Natural Sequence. This factor was discussed in a previous chapter, the one about another instantiation of the Natural Sequence schema, namely [Chapter V-4](#), “Maslow’s Hierarchy of Needs”.

6. There are other ambiguities in Graves’s description, which are not found in the pure archetypes named in the Attributes, and that can, of course, be attributed to the fact that humans (and their environments) are a lot more messy than logic, mathematics, and physics. In other words, the Natural Sequence is a tidy schema, attempts to fit humans into a tidy schema are messy, but the attempts by developmental psychologists seem to be converging on the Natural Sequence schema.
7. Graves’s stages are said to cover the socio-cultural development that happened over the course of human prehistory and history in relationship to environment. I believe that, even though this scheme can be correlated with Maslow’s Hierarchy of Needs, the latter is less dependent on the span of a lifetime, and more dependent on immediate circumstances and situations. In other words, it is much more difficult to regress and advance in Graves’s system than it is in Maslow’s system. It is important to make this kind of distinction in the appropriate application of various systems.
8. In my view, each system can be shown to be an instantiation of the Natural Sequence schema, but each system is flavored and colored by the reality of what actually is, as well as by the pre-conceptions and perceptions of the researcher. One of my purposes in proposing the Natural Sequence schema as the deep explanation of each system is to eliminate the bias of the researchers, and thereby disambiguate each system.
9. To me it seems quite amazing that Graves was able to ‘empirically’ discern the same pattern that is ‘revealed’ in the Natural Sequence schema, considering all of the confounding factors. To separate all the noise from the signal over decades of research was astonishing, on the one hand, but on the other hand the truth comes out eventually. What Graves lacked was an overarching meta-theory for the pattern; that is provided by the structure and meaning of the Natural Sequence schema.

Subsequent chapters discuss how the Graves ECT model was clarified and embellished by subsequent researches. These make the correlation of developmental psychology with the Natural Sequence schema even firmer. When we put all of these accounts together, we get a rather complete understanding of the characteristics of each stage of the Natural Sequence schema, even though none of the researchers knew about the Natural Sequence schema.





Chapter V-11

① BECK AND COWAN — SPIRAL DYNAMICS

About a decade before the end of his life, Clare Graves — the subject of the previous chapter — began to work with a couple of other gentlemen, namely Don Beck and Christopher Cowan. They added their own special sauce to Emergent Cyclical Theory, and renamed it Spiral Dynamics. The story is told in Wikipedia:

Spiral Dynamics (SD) is a model of the evolutionary development of individuals, organizations, and societies. It was initially developed by Don Edward Beck and Christopher Cowan based on the emergent cyclical theory of Clare W. Graves, combined with memetics as proposed by Richard Dawkins and further developed by Mihaly Csikszentmihalyi. A later collaboration between Beck and Ken Wilber produced Spiral Dynamics Integral (SDi). Several variations of Spiral Dynamics continue to exist, both independently and incorporated into or drawing on Wilber's Integral theory. In addition to influencing the field of philosophy in the form of both integral theory and metamodernism, Spiral Dynamics is noted for its applications in management theory and business ethics, and as an example of applied memetics. [https://en.wikipedia.org/wiki/Spiral_Dynamics — retrieved 09 February 2022]

Notice that the scope of Spiral Dynamics is rather wide, as it allegedly covers not only the development of individuals during a lifetime, but also organizations and societies. The work of Clare Graves was the subject of the previous chapter in the DevPsy Part of this *Cosmogony* book; the work of Ken Wilber is the subject of the following chapter.

The Wikipedia article continues:

Spiral Dynamics describes how value systems and worldviews emerge [Holarchy Principle] from the interaction of "life conditions" and the mind's capacities [the Feedback Principle]. The emphasis on life conditions as essential to the progression through value systems is unusual among similar theories, and leads to the view that no level is inherently positive or negative, but rather is a response to the local environment. Through these value systems, groups and cultures structure their societies and individuals integrate within them. Each distinct set of values is developed as a response to solving the problems [Dialectic Principle] of the previous system. Changes between states may occur incrementally (first order change) or in a sudden breakthrough (second order change) [Transition Principle]. The value systems develop in a specific order [Holarchy Principle], and the most important question when considering the value system being expressed in a particular behavior is why the behavior occurs.

Development of the theory

University of North Texas (UNT) professor Don Beck sought out Union College psychology professor Clare W. Graves after reading about his work in *The Futurist* [magazine]. They met in person in 1975, and Beck, soon joined by UNT faculty member Chris Cowan, worked closely with Graves until his death in 1986. Beck made over 60 trips to South Africa during the 1980s and 1990s, applying Graves's emergent cyclical theory in various projects. This experience, along with others Beck and Cowan had applying the theory in North America, motivated the development of Spiral Dynamics.

Beck and Cowan first published their extension and adaptation of Graves's emergent cyclical theory in *Spiral Dynamics: Mastering Values, Leadership, and Change (Exploring the New Science of Memetics)* (1996). They introduced a simple color-coding for the eight value systems identified by Graves (and a predicted ninth) which is better known than Graves's letter pair identifiers. Additionally, Beck and Cowan integrated ideas from the field of memetics as created by Dawkins and further developed by Csikszentmihalyi, identifying memetic attractors for each of Graves's levels. These attractors, which they called "VMemes", are said to bind memes into cohesive packages which structure the world views of both individuals and societies.

While Spiral Dynamics began as a single formulation and extension of Graves's work, a series of disagreements and shifting collaborations have produced several distinct approaches. By 2010, these had settled as Christopher Cowan and Natasha Todorovic advocating their trademarked "SPIRAL DYNAMICS®" as fundamentally the same as Graves's emergent cyclical theory, Don Beck advocating Spiral Dynamics Integral (SDi) with a community of practice around various chapters of his Centers for Human Emergence, and Ken Wilber subordinating SDi to his similarly but-not-identically colored Integral AQAL "altitudes", with a greater focus on spirituality.

Spiral Dynamics has influenced management theory, which was the primary focus of the 1996 Spiral Dynamics book. John Mackey and Rajendra Sisodia write that the vision and values of conscious capitalism as they articulate it are consistent with the "2nd tier" VMemes of Spiral Dynamics.

Spiral Dynamics has also been noted as an example of applied memetics. In his chapter "'Meme Wars': A Brief Overview of Memetics and Some Essential Context" in the peer-reviewed book *Memetics and Evolutionary Economics*, Michael P. Schaile includes Spiral Dynamics in the "organizational memetics" section of his list of "enlightening examples of applied memetics." Schaile also notes Said Dawlabani's SDi-based "MEMEnomics" as an alternative to his own "economemetics" in his chapter examining memetics and economics in the same book. Elza Maalouf argues that SDi provides a "memetic" interpretation of non-Western cultures that Western NGOs often lack, focusing attention on the "indigenous content" of the culture's value system.

SDi has also been referenced in the fields of education, urban planning, and cultural analysis.

[>https://en.wikipedia.org/wiki/Spiral_Dynamics — retrieved 01 April 2021]

At this location in the Wikipedia article there was a table, redrawn by myself below, except that I reversed the top-to-bottom sequence in order to conform to the convention shown in other chapters in the DevPsy Part of this *Cosmogony* book.

Table V-11a — VMEMES AS DESCRIBED IN SPIRAL DYNAMICS (1996)						
COLOR	CODE	NAMES	DESCRIPTIONS	NATURAL SEQUENCE		
Coral	I-V	unknown	unknown	HOLISM		
Turquoise	H-U	GlobalView Holistic	Blending and harmonizing a strong collective of individuals Focus on the good of all living entities as integrated systems Expanded use of human brain/mind tools and competencies Self is part of larger, conscious, spiritual whole that also serves self Global networking seen as routine Acts for minimalist living so less actually is more	Cardinal Zones of COLLECTIVISM Worldview, COMPLEX Assimilation Dimension	M	S C I E N C E - D I N F O R M A T I O N
Yellow	G-T	FlexFlow Systemic	Accept the inevitability of nature's flows and forms Focus on functionality, competence, flexibility, and spontaneity Find natural mix of conflicting "truths" and "uncertainties" Discovering personal freedom without harm to others or excesses of self-interest Experience fullness of living on an Earth of such diversity in multiple dimensions Demand integrative and open systems	Ordinal Zones of COLLECTIVISM Worldview, COMPLEX Assimilation Dimension	E	
Second Tier above this row						
Green	F-S	HumanBond Relativistic	Explore the inner beings of self and others Promote a sense of community and unity Share society's resources among all Liberate humans from greed and dogma Reach decisions through consensus Refresh spirituality and bring harmony	Cardinal Zones of MATERIALISM Worldview, OUTWARD Expression Dimension	Y	C O I U T H I Z A

Orange	E-R	StriveDrive Strategic	Strive for autonomy and independence Seek out “the good life” and material abundance Progress through searching out the best solutions Enhance living for many through science and technology Play to win and enjoy competition Learning through tried-and-true experience	Ordinal Zones of MATERIALISM Worldview, OUTWARD Expression Dimension	T I O N
Blue	D-Q	TruthForce Purposeful	Find meaning and purpose in living Sacrifice self to the Way for deferred reward Bring order and stability to all things Control impulsivity and respond to guilt Enforce principles of righteous living Divine plan assigns people to their places	Cardinal Zones of TRADITIONALISM Worldview, DOWNWARD Inspiration Dimension	A G R I C U L T U R A L
Red	C-P	PowerGods Egocentric	In a world of haves and have-nots, it’s good to be a have Avoid shame, defend reputation, be respected Gratify impulses and sense immediately Fight remorselessly and without guilt to break constraints Don’t worry about consequences that may not come	Ordinal Zones of TRADITIONALISM Worldview, DOWNWARD Inspiration Dimension	C H I L D H O O D
Purple	B-O	KinSpirits Clannish	Obey desires of the mystical spirit beings Show allegiance to elders, custom, clan Preserve sacred places, objects, rituals Bond together to endure and find safety Live in an enchanted, magical village Seek harmony with nature’s power	Cardinal Zones of PRIMITIVISM Worldview, BACKWARD Action Dimension	H U N T E R - A G E N C Y
Beige	A-N	SurvivalSense Instinctive	Automatic, autistic, reflexive Centers around satisfaction Driven by deep brain programs, instincts and genetics Little awareness of self as a distinct being (undifferentiated) Lives “off the land” much as other animals Minimal impact on or control over environment	Ordinal Zones of PRIMITIVISM Worldview, BACKWARD Action Dimension	I N F - A G E N C Y
First Tier above this row					

My comments on this table are as follows:

1. **COLOR:** The first column shows the color codes that were assigned to the stages by Beck and Cowan. They alternate between warm colors (Beige, Red, Orange, Yellow, Coral) and cool colors (Purple, Blue, Green, Turquoise). In the next chapter, we will see that Ken Wilber preferred a scheme that went from infrared at the bottom to ultraviolet at the top, in order to more closely follow the conventional colors of the seven major chakras, with some colors in between the six primary and secondary colors so as to accommodate **ten** stages.
2. **CODE:** The second column shows the code designations applied to the stages by Graves. This feature is irrelevant to the Natural Sequence schema, so there is no use commenting on it further except to say that it shows up in graphics below.
3. **NAMES:** The third column shows the two key words that were applied to each stage.
4. **DESCRIPTIONS:** The fourth column shows brief descriptions of each stage, copied from the Wikipedia article on Spiral Dynamics.

5. NS ATTRIBUTES: The fifth column shows some of the Worldview/Zone stages of the Natural Sequence schema that correlate with the stages of Spiral Dynamics. Refer to **Chapter Xx in Part X**, “Worldviews and Zones”. This column was not, of course, in the table in the Wikipedia article. The fifth Worldview, Holism, was speculative for Spiral Dynamics, but actual for the Natural Sequence schema, as well as two even higher Worldviews, Transpersonalism and Messianism. The descriptions of the color-coded stages fit well with the Worldviews/Zones of the Natural Sequence schema, but they also fit well with the Life-Stages of the Natural Sequence shown in the sixth column, and stages of socio-cultural development shown in the seventh column.
6. TIERS: The six lowest–earliest stages are grouped together into the so-called “First Tier” because they have the similarity of not being very reflective about their lives: they are what they are. Notice that these six stages correlate with the three Ordinal Worldviews. The three highest–latest stages are grouped together into the so-called “Second Tier”; people in these stages are reflective about their lives, as one can see by the descriptions.
7. CORAL/I-V: This the highest–latest stage was speculative at the time of Emergent Cyclical Theory and Spiral Dynamics, but when the transpersonal psychologists such as Ken Wilber got involved with ECT and SD, they proposed names and descriptions for Coral (and Teal, not shown on the Wikipedia table) and these two speculative higher stages were grouped into a so-called “Third Tier”. These are discussed in the next chapter.

One can read more about the historical development from Graves to Wilber at this website:

><http://www.integralworld.net/sd-i.html><.

In addition to that website, numerous other websites discuss this widely-known and widely-used theory:

<https://www.pacificintegral.com/articles>

<https://integrallife.com/>

https://en.wikipedia.org/wiki/Don_Edward_Beck

<http://www.memenomics.com/wp-content/uploads/2017/11/WIE-SD-EXplained-2002-article-.pdf>

<http://www.memenomics.com/wp-content/uploads/2020/03/The-Futurist-Graves-1974.pdf>

<http://integralleadershippreview.com/16742-06-29-toward-a-technology-infrastructure-for-the-second-tier/>

An internet search on ‘spiral dynamics’ will reveal many more.

Spiral Dynamics Graphic Images

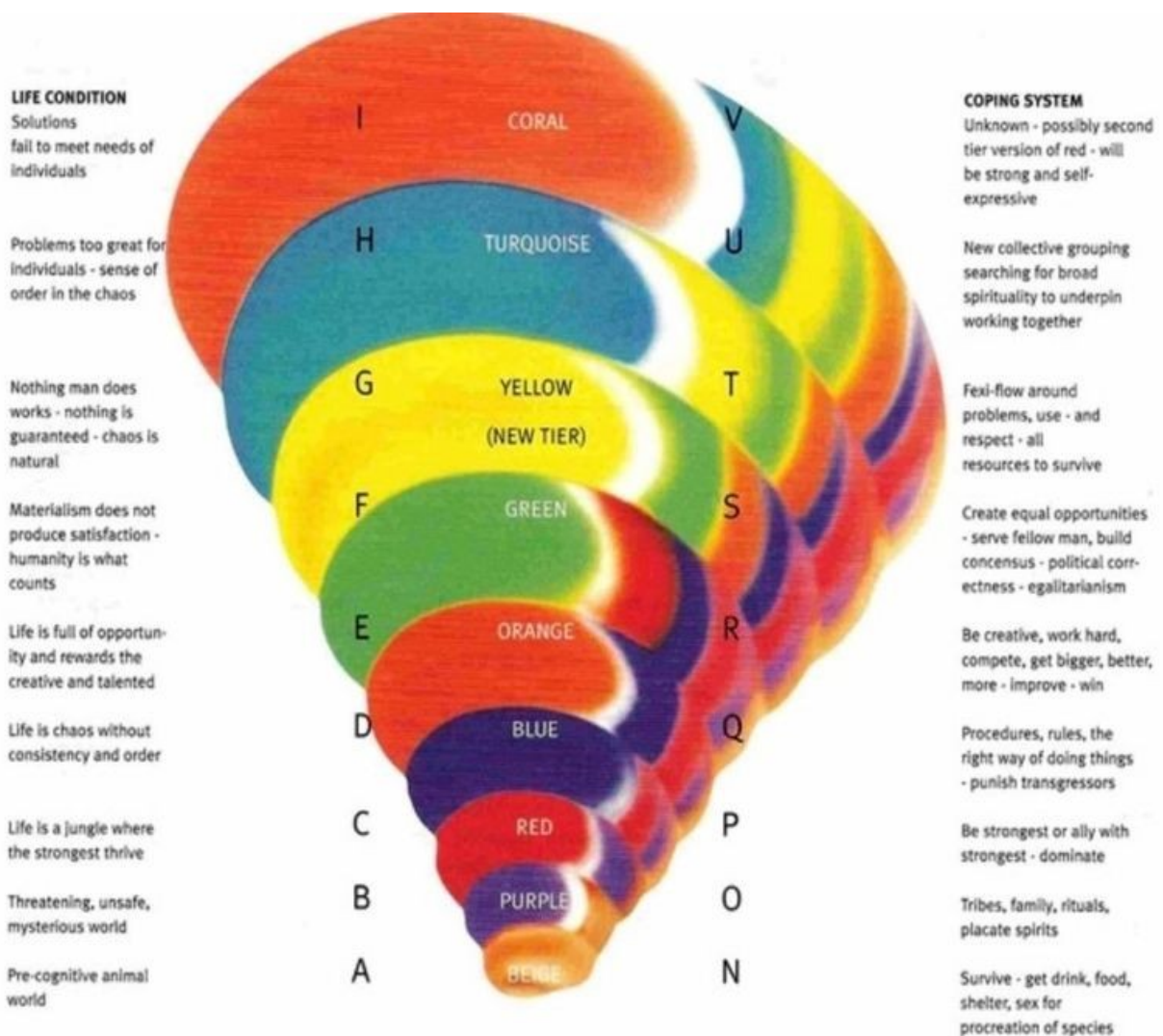
Google Images and ><https://spiraldynamics.net/>< show many, many graphic representations of the model. Here is one from Don Beck’s website, and I assume it reflects his latest thinking:

Master Code of Human Nature

The 9 fundamental ways of thought, action, culture and organisation (Graves, Beck & Cowan. Beecroft summary.)



Obviously, this graphic, and the one on the next page, provide more names and descriptions of the stages of Spiral Dynamics than **Table Xa** does. It shows the Hierarchy Principle, meaning that each higher stage subsumes the gestalt of the stage or stages below it. Refer to the Summary Conclusions at the end of the previous chapter on Emergent Cyclical Theory for an accounting of the other Natural Sequence Principles embodied in Spiral Dynamics.



This is another graphic from <https://spiraldynamics.net>. What it is meant to show is what I refer to as the Holarchy Principle, with each “higher-later” stage (on the left side) cumulatively built upon the lower-earlier stages (on the right side).

I have been unable to find on the internet again the graphic shown on the next page.

THE BIO-PSYCHO-SOCIAL MAP OF THE HUMAN EXPERIENCE

The value-systems/Spiral Dynamics framework on the eight stages of development

Second Tier "Being" valueMEMES

8	TURQUOISE Eighth Level System: Holistic vMEME – starting 30 years ago Basic theme: <i>Experience the wholeness of existence through mind and spirit</i> <ul style="list-style-type: none"> • The world is a single, dynamic organism with its own collective mind • Self is both distinct and a blended part of a larger, compassionate whole • Everything connects to everything else in ecological alignments • Energy and information permeate the Earth's total environment • Holistic, intuitive thinking and cooperative actions are to be expected
7	YELLOW Seventh Level System: Integrative vMEME – starting 50 years ago Basic theme: <i>Live fully and responsibly as what you are and learn to become</i> <ul style="list-style-type: none"> • Life is a kaleidoscope of natural hierarchies, systems, and forms • The magnificence of existence is valued over material possessions • Flexibility, spontaneity, and functionality have the highest priority • Differences can be integrated into interdependent, natural flows • Understands that chaos and change are natural

"When man is finally able to see himself and the world around him with clear cognition, he finds a picture far more pleasant. Visible in unmistakable clarity and devastating detail is man's failure to be what he might be and his misuse of his world. This revelation causes him to leap out in search of a way of life and a system of values, which will enable him to be more than he has been. His values now are of a different order from those at previous levels: They arise not from selfish interest but from the recognition of the magnificence of existence and the desire that it shall continue to be."

Dr. Clare Graves

First Tier "Subsistence" valueMEMES

6	GREEN Sixth Level System: Communitarian/Egalitarian vMEME – starting 150 years ago Basic theme: <i>Seek peace within the inner self and explore, with others, the caring dimensions of community</i> <ul style="list-style-type: none"> • The human spirit must be freed from greed, dogma, and divisiveness • Feelings, sensitivity, and caring supersede cold rationality • Spreads the Earth's resources and opportunities equally among all • Reaches decisions through reconciliation and consensus processes • Refreshes spirituality, brings harmony, and enriches human development
5	ORANGE Fifth Level System: Achievist/Strategic vMEME – starting 300 years ago Basic theme: <i>Act in your own self-interest by playing the game to win</i> <ul style="list-style-type: none"> • Change and advancement are inherent within the scheme of things • Progresses by learning nature's secrets and seeking out best solutions • Manipulates Earth's resources to create and spread the abundant good life • Optimistic, risk-taking, and self-reliant people deserve success • Societies prosper through strategy, technology, and competitiveness
4	BLUE Fourth Level System: Purposeful/Authoritarian vMEME – starting 5,000 years ago Basic theme: <i>Life has meaning, direction, and purpose with predetermined outcomes</i> <ul style="list-style-type: none"> • One sacrifices self to the transcendent Cause, Truth, or righteous Pathway • The Order enforces a code of conduct based on eternal, absolute principles • Righteous living produces stability now and guarantees future reward • Impulsivity is controlled through guilt; everybody has their proper place • Laws, regulations, and discipline build character and moral fiber
3	RED Third Level System: Impulsive/Egocentric vMEME – starting 10,000 years ago Basic theme: <i>Be what you are and do what you want, regardless</i> <ul style="list-style-type: none"> • The world is a jungle full of threats and predators • Breaks free from any domination or constraint to please self as self desires • Stands tall, expects attention, demands respect, and calls the shots • Enjoys self to the fullest right now without guilt or remorse • Conquers, out-foxes, and dominates other aggressive characters
2	PURPLE Second Level System: Magical/Animistic vMEME – starting 50,000 years ago Basic theme: <i>Keep the spirits happy and the tribe's nest warm and safe</i> <ul style="list-style-type: none"> • Obeys the desires of the spirit being and mystical signs • Shows allegiance to chief, elders, ancestors, and the clan • Individual subsumed in group • Preserves sacred objects, places, events, and memories • Observes rites of passage, seasonal cycles, and tribal customs
1	BEIGE First Level System: Instinctive/Survivalistic vMEME – starting 100,000 years ago Basic theme: <i>Do what you must just to stay alive</i> <ul style="list-style-type: none"> • Uses instincts and habits just to survive • Distinct self is barely awakened or sustained • Food, water, warmth, sex, and safety have priority • Forms into survival bands to perpetuate life • Lives "off the land" much as other animals

The graphic on the previous page says somewhat about the correlation of the features of the Spiral Dynamics model with socio-cultural evolution. Comments on the graphic above are as follows:

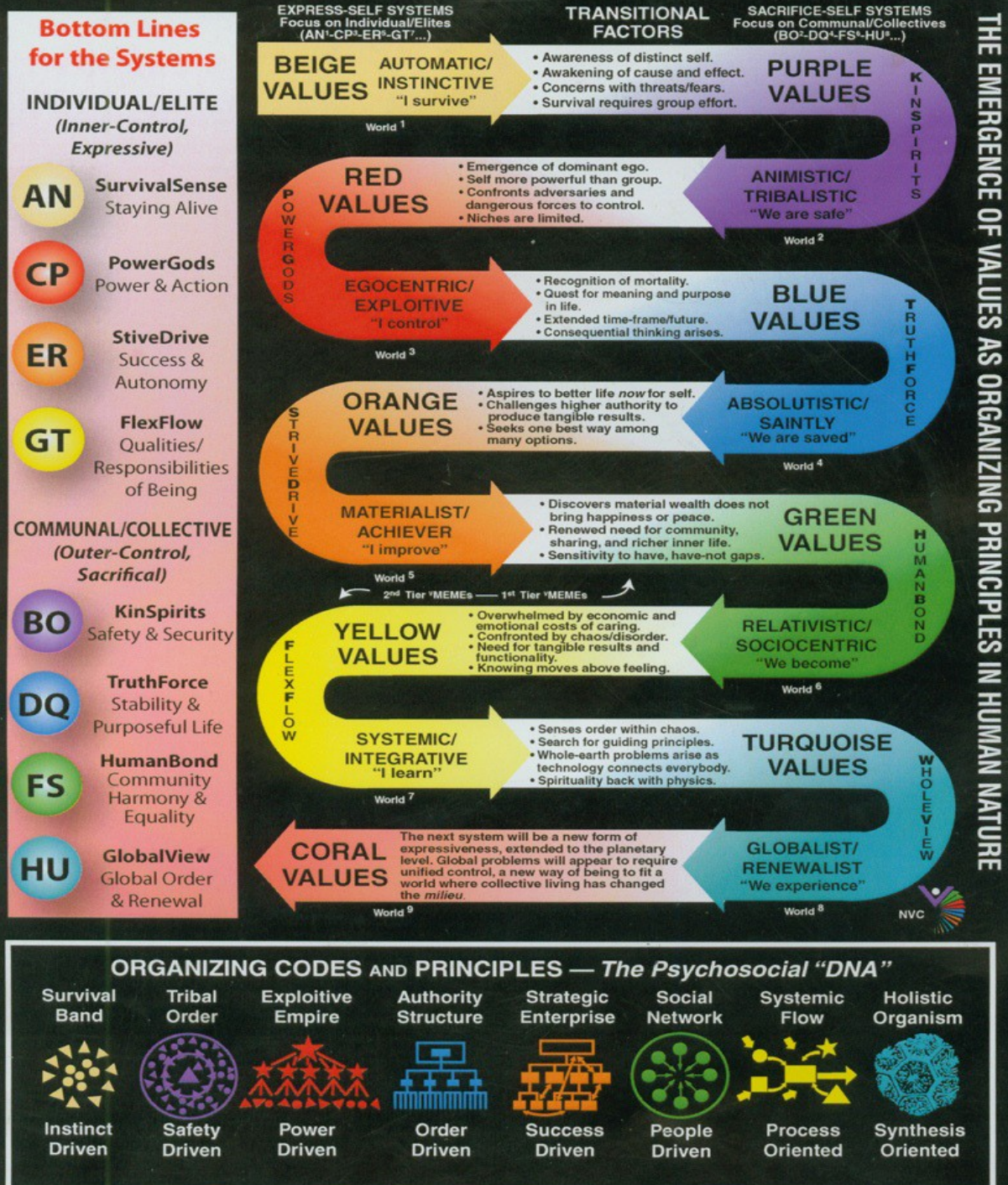
1. The standard assigned SD colors are named in this graphic, and the shades are shown, as can be seen in the PDF of this manuscript, but not the printed version.
2. This image does not show the swing back and forth between ego-centric and socio-centric stages of development up the spiral. I regard this as a loss of valuable information, because the phenomenon correlates with Ordinality and Cardinality respectively in the Natural Sequence schema.
3. Stages 1 and 2 correlate with the Ordinal and Cardinal phases of the Primitivism Worldview respectively. Stages 3 and 4 correlate with the Ordinal and Cardinal phases of the Traditionalism Worldview respectively. Stages 5 and 6 correlate with the Ordinal and Cardinal phases of the Materialism Worldview respectively. This completes the so-called “First Tier”, aka “Subsistence valueMEME” group, which correlates with the three Ordinal Worldviews.
4. Stages 7 and 8 correlate with the Ordinal and Cardinal phases of the Collectivism Worldview, the Neutral Assimilation Worldview. Graves discerned that there was a qualitative difference between First Tier and Second Tier people, a difference reflected in the difference between Ordinal and Neutral Worldviews. This graphic does not show the Third Tier, as some of the other graphics reproduced here do show. The Third Tier is also qualitatively different from the other two Tiers, and is equivalent to the Cardinal Worldviews. Third Tier people are rare enough in the human population that it has not been studied as well as the much more common First and Second Tier population.
5. As for the socio-cultural evolution markers, the dates given here are disputable. Socio-cultural development over the course of human history is discussed at length in [Chapter Xx in Part X](#), “Socio-cultural Evolution”. My preference is hinted at in [Table Xa](#).
6. In subsequent chapters, we will see that there is a bell-curve distribution of these stages in the current human population of the planet. In other words, there are few people at the low and high ends of the spectrum, and there are many people in the hump in the middle of the spectrum.
7. The term “valueMEMES” is meant to convey the notion that cultures are built around a value system holarchy that develops over the course of socio-cultural evolution during human history, in a predictable pattern. Socio-cultural ‘memes’ are somewhat the equivalent of biological ‘genes’ in that they are passed on from generation to generation.
8. This particular graphic has nothing to say about Life-Stages, the Natural Sequence name for the stages of development that happen over the course of a single full human lifetime, and that most of the chapters in this Part are focused on. Rather, this graphic is focused on the stages that correspond to Worldview and Culture in the Natural Sequence schema.

One of the best graphics that I found on the internet was copied on the next page.

SPIRAL DYNAMICS INTEGRAL

DON BECK, Ph.D.

DIFFERENT CULTURES, DIFFERENT FUTURES



Regarding the graphic image above, I call your attention to a number of items.

1. Progression or development or evolution as shown on this chart is the reverse of **Table Xa** and the two graphics shown previously. That is to say, successively “higher” values are shown from top to bottom.
2. It takes a full turn of the spiral — two SD Stages — to equal one Worldview. The left side of this graphic corresponds to the Ordinal Zones of the Worldviews (they are focused on Me), and the right side corresponds to the Cardinal Zones of the Worldviews (they are focused on We).
3. In the SD schema, the spiral swings left and right, and that has social implications: the warm colors (Beige, Red, Orange, Yellow) are “Individual/Elite” in nature; the cool colors (Purple, Blue, Green, Turquoise) are “Communal/Collective” in nature — to use the terminology shown on this graphic.
4. The SD community understands that there is a ‘First Tier’ of six stages (the Natural Sequence equivalent being the three Ordinal Worldviews with Early and Late Zones), and that there is a single ‘Second Tier’ member (the Natural Sequence equivalent being the Collectivism Worldview with Early and Late Zones), and that there is a ‘Third Tier’ (the Natural Sequence equivalent being the Cardinal Worldviews). They have only one Stage in the Third Tier, Coral, and it is not well understood by them. The next two chapters discuss stages in the Third Tier.

Scoring Spiral Dynamics against the Natural Sequence Schema

In my view, each DevPsy model has its strengths and weaknesses in terms of accuracy and completeness, judged on the basis of the results of subsequent research by other developmental psychologists, and on its conformity to the Natural Sequence schema. The same as with Clare Graves and his Emergent Cyclical Theory upon which it is based, Spiral Dynamics ticks all of the boxes of Natural Sequence Principles; refer to the previous chapter for details.

Concluding Comments on Beck & Cowan’s Spiral Dynamics

One of the best ways for me to get my thoughts together on any given subject is to tabulate them or list them; hence this section of this chapter.

1. So far as I can tell, one thing that the SD community has not picked up on is that the Me-We cycle in each of the First Tier turns of the spiral, is repeated in the entire spiral. That is, the Third Tier is the mirror image of the First Tier, with the Second Tier being the pivot Stages. This ‘mirror middle’ zone is understood in the Natural Sequence schema.
2. It does not say so elsewhere in this chapter, but there is the tendency of people who are in Tier 2 — Yellow (Flex-Flow) and Turquoise (Global-View), aka Collectivism Worldview — to deny the value of hierarchies: they value egalitarianism, equality, fairness, and cooperation more highly than they value the hierarchies that result from a competitive environment. The Coral Stage, aka the Me phase of the Holism Worldview, is mostly past that perception. It is ‘integral’ in that it understands and acknowledges the place of both competitiveness and cooperation in the meta-scheme of things. Evolution has proceeded as a combination of both *competition* and *cooperation*; game theory, as explained in Laszlo Mero’s book, *Moral Calculations*, says that the winningest strategy overall is to have both at work in the game, with cooperation having a slight edge over competition.





Chapter V-12

① KEN WILBER — INTEGRAL THEORY

Next up in the series of chapters on theories of human psycho-social development is the work of Ken Wilber. He is a late contemporary of many researchers in the field of developmental psychology (DevPsy). He has been active mostly during the fourth quarter of the 20th Century and the first quarter of the 21st Century. He has studied out and developed an alleged grand unified theory of human knowledge, which he refers to as “Integral Theory”. He is only a DevPsy researcher in the sense that, as part of his general theory, he has studied the work of academic DevPsy researchers, many of whom are featured in previous chapters of this *Cosmogony* book. Thus, he has come up with a synthesis of them all, and added his own ‘special sauce to the mix’, one might say — insights from many developmental stage theories. My work also has a grand unified integrated synthesis of understanding as its goal, and Wilber’s work has contributed to my goal.

A brief introduction to him and his integral theory in general are in order, before we review his grand synthesis of the subcategory of developmental psychology. ><https://integralworld.net/readingroom.html>< has the most information about the Wilberian lineage of DevPsy compared to any other internet resource that I have found.

Introduction to Ken Wilber and Integral Theory

As usual, one may turn to Wikipedia for an introduction to the life and work of Ken Wilber. As usual, I underline words and phrases in quoted material for emphasis; as usual I provide explanatory and clarifying words and phrases in [brackets] in the quoted material; as usual, I provide commentary between paragraphs of quoted material:

Kenneth Earl Wilber II (born January 31, 1949) is an American philosopher and writer on transpersonal psychology and his own integral theory, a systematic philosophy which suggests the synthesis of all human knowledge and experience. [>https://en.wikipedia.org/wiki/Ken_Wilber< — retrieved 21 April 2021]

Thereafter in the Wikipedia article was a short biography of his life so far, including a list of his numerous publications, beginning with *The Spectrum of Consciousness*, first published in 1977, to his latest work at the time of this writing, *Integral Politics*, an eBook published in 2018.

Thereafter in the Wikipedia article was a short introduction to Wilber’s so-called “Integral Theory”:

All Quadrants All Levels (AQAL, pron. “ah-qwul”), is the basic framework of integral theory. It models human knowledge and experience with a four-quadrant grid, along the axes of “interior-exterior” and “individual-collective”. According to Wilber, it is a comprehensive approach to reality, a metatheory that attempts to explain how academic disciplines and every form of knowledge and experience fit together coherently.

AQAL is based on four fundamental concepts and a rest-category: four quadrants, several levels and lines of development, several states of consciousness, and “types”, topics which do not fit into these four concepts. “Levels” are the stages of development, from pre-personal through personal to transpersonal. “Lines” of development are various domains which may progress unevenly through different stages. “States” are states of consciousness; according to Wilber persons may have a temporal [temporary] experience of a higher developmental stage. “Types” is a rest-category, for phenomena which do not fit in the other four concepts. In order for an account of the Kosmos to be complete, Wilber believes that it must include each of these five categories. For Wilber, only such an account can be accurately called “integral”. In the essay, *Excerpt C: The Ways We Are in This Together*, Wilber describes AQAL as “one suggested architecture of the Kosmos”.

As we see in the above quotation, Wilber's understanding of "levels" of development is only one component of his general theory about the structure and nature of the so-called "Kosmos" in general. My books cover some of the same territory. Wilber makes a distinction between "stages" and "states" and "lines", and so does the Natural Sequence schema: there are several developmental holarchies, which Wilber calls lines and which I prefer to call Dimensions, each of which models a different realm of experience. The meaning of "stages" is that people can go up and down in one or another of the Dimensions without going up and down in one or the other of another Dimension. Refer to <http://www.integralworld.net/brouwer2.html> for more discussion of that.

The Wikipedia article on Wilber continues thus:

The model's apex is formless awareness, "the simple feeling of being", which is equated with a range of "ultimates" from a variety of eastern traditions. This formless awareness transcends the phenomenal world, which is ultimately only an appearance of some transcendental reality. According to Wilber, the AQAL categories — quadrants, lines, levels, states, and types — describe the relative truth of the two truths doctrine of Buddhism. According to Wilber, none of them are true in an absolute sense. Only formless awareness, "the simple feeling of being", exists absolutely.

The distinction between absolute and relative, and between transcendent and immanent, and between formless and form, and between truth and illusion, is covered in detail in my book *The Tao of Cosmology*.

So now let's take a look at Wilber's understanding of the "stages of development, from pre-personal through personal to transpersonal". We will see that he built upon the work of several DevPsy researchers discussed in previous chapters. By now, it should come as no surprise to you that it is relatively easy to correlate his stages with the Natural Sequence schema.

Introduction to Integral Theory Levels

The Wikipedia article on Wilber and his work continues with this:

Mysticism and the great chain of being

One of Wilber's main interests is in mapping what he calls the "neo-perennial philosophy", an integration of some of the views of mysticism typified by Aldous Huxley's [book] *The Perennial Philosophy* with an account of cosmic evolution akin to that of the Indian mystic Sri Aurobindo. He rejects most of the tenets of Perennialism and the associated anti-evolutionary view of history as a regression from past ages or yugas. Instead, he embraces a more traditionally Western notion of the great chain of being. As in the work of Jean Gebser, this great chain (or "nest") is ever-present while relatively unfolding throughout this material manifestation, although to Wilber "... the 'Great Nest' is actually just a vast morphogenetic field of potentials ..." In agreement with Mahayana Buddhism, and Advaita Vedanta, he believes that reality is ultimately a nondual union of emptiness and form, with form being innately subject to development over time. [https://en.wikipedia.org/wiki/Ken_Wilber — retrieved 21 April 2021]

The subjects of the so-called "perennial philosophy" and the so-called "Great Chain/Nest of Being" appear in several places in my *Cosmogony* book. Furthermore, there are chapters on both Gebser and Aurobindo in this *Cosmogony* book. There are chapters on Buddhism and Vedanta in my book *The Synthesis*. The Great Chain/Nest of Being appears as the Fractalicity Principle in the Natural Sequence schema. Thus, there is a considerable overlap of territories covered by Integral Theory and my books.

Now we turn to another Wikipedia article, the one that discusses Wilber's own DevPsy model:

Ken Wilber's "Integral Theory" started as early as the 1970s, with the publication of *The Spectrum of Consciousness*, that attempted to synthesize eastern religious traditions with western structural stage theory, models of psychology development that describe human development as following a set course of stages of development.

Even though Wilber is not a developmental psychologist in the academic research sense, as are so many others reviewed in this Part, he has incorporated the work of many DevPsy researchers into his own grand unified theory. As such, Wilber's work is very appropriate for review in this DevPsy Part of the *Cosmogony* book.

Wilber's ideas have grown more and more inclusive over the years, incorporating ontology, epistemology, and methodology. Wilber, drawing on both Aurobindo's and Gebser's theories, as well as on the writings of many other authors, created a theory which he calls AQAL, "All Quadrants All Levels".

Refer to **Chapter Xx in Part X, “Aurobindo”**, and refer to **Chapter Xx in Part X, “Jean Gebser”**, for more information about their work. In his book *Integral Psychology* Wilber discusses and correlates the work of all of the DevPsy researchers discussed in my *Cosmogony* book, and others besides.

Thereafter in the Wikipedia article followed paragraphs on how the work of Wilber borrowed from the ideas of Sri Aurobindo, Jean Gebser, Georg Feuerstein, Clare Graves, and Don Beck. Of these, only Feuerstein does not have a chapter in my *Cosmogony* book. For a few years, Wilber and Beck collaborated in a mashup of Integral Theory and Spiral Dynamics that they called “Spiral Dynamics Integral” (SDi). There is one quotation that is relevant to the correlation of Wilber’s version of the Graves/Beck model and its correlation with the Natural Sequence schema:

In his 2006 book *Integral Spirituality*, Wilber created the AQAL “altitudes”, the first eight of which parallel Spiral Dynamics, as a more comprehensive, integrated system. The altitudes use a color system based on rainbow correlations with chakras, replacing the spiraling alternation of warm and cool colors that is a fundamental property in SDi with a linear progression. In place of the six-levels-per-tier structure of SDi, Wilber truncated the 2nd tier after only two levels, and added a 3rd tier of four levels derived from the work of Sri Aurobindo and other spiritual traditions. Wilber further elaborated on this expanded and recolored system in 2017’s *The Religion of Tomorrow*.

Wilber’s revision to Spiral Dynamics in terms of the so-called “tiers” fits nicely with the Natural Sequence schema, where the first six levels, the “1st Tier”, correlate with the Ordinal and Cardinal phases of the triad of Ordinal Worldviews, where the two levels of the “2nd Tier” correlate with the Ordinal and Cardinal phases of the Neutral Assimilation Worldview, and the levels in the “3rd Tier” correlate with the Cardinal Worldviews.

Tabulation of Wilber’s Stages

Now let’s move right on to the correlation of Wilber’s model with the Natural Sequence schema. In the table below, the descriptions of each stage were extracted from <https://integrallife.com/ten-stages-consciousness/> on 21 March 2021. As usual, the most primitive stage is at the bottom of the table, and the most advanced is at the top. As usual, I provide some comments after the table. The date of the article on the website, from which these descriptions were taken, is 19 March 2017, and the author’s name is Robb Smith. Wilber has revised the descriptions in his stage schema about five times over the course of this forty-year writing career, and the descriptions were said to be the latest version. Smith said: “I’ve outlined ... all ten stages of consciousness, or shapes of mind, that have evolved to date (including data drawn from population-level studies of adults in western Europe and the United States).”

Table V-12a —STAGES of CONSCIOUSNESS per KEN WILBER		
STAGE # COLOR	DESCRIPTION	NATURAL SEQUENCE
10 INDIGO	UNITIVE (Adult Population: ~0%) Differentiation from the prior stage occurs as the Alchemist finally dissolves the tiring dialectic of self–no self: the Unitive dissolves the separate self as an ongoing locus of consciousness. There is (scant) research that suggests that in the case of a select few adults today they have reached a 10th shape of mind that situates itself as a unity with being. Though words inevitably will fail to convey what Unitive consciousness feels like from within, and very little research is available to depict the topography of the shape of mind from without, some comments can be made. First, from my work I have absolutely no doubt that this shape of mind will be emerging ever more prominently over the coming few decades; I know personally several people who I believe are entering this shape of mind now. Because the Unitive emerges as the solution to the central conflict of the Alchemist, the Unitive has largely dissolved a separate sense of self as apart from reality, and instead operates as being a transcendent cosmic unfolding: not a subject viewing evolution as witness, but as evolution witnessing itself. The felt-state of the Unitive, therefore, is love. When one is nothing, one is everything; and when one is everything, loving is one’s identity. Not as a noun, but as a verb. The Unitive shape of mind is the act of loving the unfolding nature of being as itself, with no substantive differentiation amongst beings. And yet with no loss of one’s ability to be a <u>unique</u> expression of that love in the world. The Unitive is a unique self.	CARDINAL ZONES OF CARDINAL EXPRESSION SYNTHESIS PROCESS HOLISM WORLDVIEW UNIFICATION ZONE SENIORITY LIFE-STAGE

Table V-12a —STAGES of CONSCIOUSNESS per KEN WILBER

STAGE # COLOR	DESCRIPTION	NATURAL SEQUENCE
9 TUR- QUOISE INTE- GRAL	<p>ALCHEMIST — Construct-Aware (Adult Population: <1%) Differentiation from the prior stage occurs when the Strategist becomes increasingly exhausted by the complexity of their mind and the limitation of being a self that pursues ever-grander goals while constructing realities through mental activity in order to propagate those goals and that self. The Alchemist emerges from a deep knowing that all experience is an ongoing process of mental construction, and the self is maintained only through a contradictory process of <u>storytelling</u>. A small fraction of adults in the western world evolve to Alchemist consciousness, a shape of mind whose defining characteristic is the ability to see through constructions placed on a mysterious reality — from language to economic systems, from emotional patterning to political discourse — and to do so in nearly real-time (meaning that the Alchemist doesn't overly-identify with the shifting, phenomenal nature of experience). For the Alchemist this creates what feels like a paradoxical and irresolvable tension of living authentically amidst a world of ever-reflecting surfaces: even though the Alchemist can see through all of them it still requires constant surrender to the tension of being anybody at all in a world that desperately demands "somebodies" (demanding that everyone play their roles and adopt various guises to satisfy wants and social expectations). Indeed, this becomes a surrender into a near-constant state of presence as the only realm where the illusive play of opposites is resolved without artifice. As leaders, Alchemists can wield the extraordinary innate power this represents if they are motivated to do so, though they are just as likely to smile politely at the incentives that social systems (corporations, government, unions etc.) have learned to use to motivate earlier shapes of mind. And just as well, as Alchemists might embark on positively-subversive transformation projects that may not nourish how earlier shapes of mind judge goodness and utility; they cognitively inhabit a time-scale (decades, centuries or more), sense of being and breadth of consideration that is foreign to a majority of the adult population. (One prominent developmentalist has told me he has never seen this shape of mind in anyone before their late 30s, and most far later than that.)</p>	<p>ORDINAL ZONES OF CARDINAL EXPRESSION</p> <p>SYNTHESIS PROCESS</p> <p>HOLISM WORLDVIEW</p> <p>UNIFICATION ZONE</p> <p>SENIORITY LIFE-STAGE</p>
<p>People in the two stages above this row are in the so-called "3rd Tier".</p> <p>People in the two stages below this row are in the so-called "2nd Tier".</p>		
8 TEAL HOLISTIC	<p>STRATEGIST — Self-Actualizing (Adult Population: 4%) Differentiation from the prior stage occurs when the fragmentation of the Relativist viewpoint creates enough cognitive tension to force a move to <u>deeper discernment</u>, often situated in natural hierarchies of order, power, social regulation, and <u>complex systems</u>. These are the critical distinctions in which Strategist consciousness emerges. Strategists are able to not only cognize the complexity of the world's competing systems in the manner of the Relativist, they begin to <u>synthesize</u> how these systems <u>interoperate</u>, allowing them to reestablish a definitive sense of direction, strategy and capability in the face of overwhelming complexity. The Strategist's grasp of systems is far more complex than the Achiever, for whom the inner life was just emerging, and who hasn't yet wrestled with the enormous complexity of competing perspectives, values, and idealisms that the Relativist works through (often for a decade or more). But this also causes the central dilemma for the Strategist: animated by a newfound ability to integrate complexity, Strategists sometimes wear themselves out through sheer overreach: seeing what can be done and must be done, and then deciding that they must do it. Strategists, though still relatively rare, make highly-effective, often visionary corporate leaders: they have integrated at least some of the <u>interior fluency</u> of the Relativist (emotional intelligence, spiritual sensitivity, and communal coordination) with the hard-hitting efficacy of the Achiever and Expert. They can develop a compelling vision, can rally people behind it and can proceed to implementation. The Strategist's response to scarcity and threat is paradigmatically different than previous shapes of mind: rather than contract into a threatened-self or a set of lofty but judgmental ideals, the Strategist understands that scarcity and decay is a natural aspect of reality, but can be influenced by creating new systems of abundance. Paraphrasing Bucky Fuller: don't try to change a system, create a new one that makes the old one obsolete. Eventually, however, the Strategist runs into its limiting problem: they begin to suspect that the scope of their vision and the complexity of their mind are themselves at the core of a more fundamental limitation of their own self-identity,</p>	<p>CARDINAL ZONES OF NEUTRAL ASSIMILATION</p> <p>COMBINATION PROCESS</p> <p>COLLECTIVISM WORLDVIEW</p> <p>EXPERIENCE ZONE</p> <p>LATE MIDDLE-AGE LIFE-STAGE</p>

Table V-12a —STAGES of CONSCIOUSNESS per KEN WILBER

STAGE # COLOR	DESCRIPTION	NATURAL SEQUENCE
	a being-in-the-world who can only redeem its potential by finding the simplicity on the other side of all that complexity. As they approach Alchemist they understand finally that to be a nobody after being somebody is the only sustainable unwinding of the world-knot they see, and though true for everyone eventually, it becomes urgent for themselves.	
7 GREEN PLURAL- ISTIC	<p>RELATIVIST — Self-Questioning (Adult Population: 10%): Differentiation from the prior stage occurs as an adult begins to encounter the contradictions of a world that has vastly different perspectives than their own on what constitutes an ideal: values, methods, perspectives, cultures, backgrounds all differ greatly and present the Achiever with an incommensurable degree of <u>complexity</u> at their current shape of mind. Relativist consciousness emerges to provide an important breakthrough to seeing truth as situated in <u>context</u> and thereby bounded by the <u>system</u> from which it is generated. In this regard Relativists begin to suspect that the best reply to the complexity that they are beginning to see in the world is to privilege each individual's viewpoint on it. Truth, beauty, and goodness tend to become <u>subjective</u> for the Relativist, a values-sensitivity that philosophically presaged and still underpins the <u>equal rights, environmental, and gender movements</u>. Cognitively, the Relativist shape of mind begins to see that the world is composed of innumerable <u>interacting complex systems</u> and that "finding a right way through" often has to give way to a more muted, relativistic "anything goes as long as no one gets hurt." Relativist values have permeated contemporary culture as aspirational values — even though only 10% of the leading edge of the population is Relativist, it nevertheless animates downward an ethos: from the authenticity of craft brewing and the maker movement to the conscious lifestyle of the yoga and mindfulness movements the heritage of Relativist consciousness is passed down to Diplomats, Experts, and Achievers who constitute a significant part of those movements. Relativists often evolve away from the Achiever's bias for autonomy and freedom and towards a new bias for community interaction, group process and emotional sanctity. Paradoxically, it is their loyalty to the precious subject that often prevents them from being able to maintain stable, unified <u>communities</u>, despite this being the most communally-inclined shape of mind to evolve since Diplomat. They soon discover that sanctifying every subject's viewpoint is a recipe for massive communal fragmentation. As Ken Wilber has pointed out, the postmodern-pluralism that has undermined the truth has promoted either no truth (nihilism) or my truth (narcissism), neither of which are capable of holding a society together. It is this stage of consciousness, at least in the cultural realm, that the nationalist backlash is arising against. Nevertheless, because the Relativist is rediscovering their inner life for what feels like the first time after leaving the highly exterior-orientation of the Achiever, it is a shape of mind that often feels like a euphoric liberation of magical possibility. Heavily populating the self-development, coaching and empowerment movements of the modern west, it is the mind through which a "re-enchantment of the world" occurs. The Relativist's values call for addressing perceived scarcity in the world and threats to life by trying ever harder to reconcile differences and foster movements of liberation (which sometimes go on to a domineering militancy themselves). In the end, Relativists get caught in a contradiction: they accept that anything goes except those people for whom anything doesn't go.</p>	<p>ORDINAL ZONES OF NEUTRAL ASSIMILATION</p> <p>COMBINATION PROCESS</p> <p>COLLECTIVISM WORLDVIEW</p> <p>EXPERIENCE ZONE</p> <p>EARLY MIDDLE-AGE LIFE- STAGE</p>
<p>People in the two stages above this row are in the so-called "2nd Tier".</p> <p>People in the six stages below this row are in the so-called "1st Tier".</p>		
6 ORANGE RATIONAL	<p>ACHIEVER — Self-Determining (Adult Population: 25%): Differentiation from the prior stage occurs as an adult begins to encounter the fuller complexity of a world that is perfectible: life requires taking full responsibility for choices; the world is more nuanced than the Expert believes; mindsets and the thoughts that frame choices become important; in short: thinking about thinking becomes a critical skill for navigating the emerging world of the Achiever. Achiever consciousness places <u>rationality</u>, universal ideals and earnest conviction at the forefront of a life well-lived. The Achiever believes that society can be perfected through ongoing progress, <u>technology</u>, and rationality. The Achiever is the shape of mind that all <u>modern</u> social systems (e.g., education etc.) are designed to develop adults</p>	<p>CARDINAL ZONES OF ORDINAL EXPRESSION</p> <p>ANALYSIS PROCESS</p> <p>MATERIALISM WORLDVIEW</p> <p>SEPARATION</p>

Table V-12a —STAGES of CONSCIOUSNESS per KEN WILBER

STAGE # COLOR	DESCRIPTION	NATURAL SEQUENCE
	to become. Achievers believe deeply in the notion of <u>autonomy</u> and <u>freedom</u> and are very goal-driven, even while they can begin to see the impacts their actions have on the broader world. Achiever values are found everywhere, from the curation of TED to the pages of Fast Company and Inc. magazines. Cognitively, the achiever sees a powerful world-system at work that through optimization and further discovery can be progressively enhanced, believing in the notion of ideals and system perfectibility. Achievers begin to run into the deeper contradictions inherent in reality and remain fearful of losing control. But they cannot yet see the constructed nature of reality, meaning-formation and intersubjective contexts (i.e., they are not yet aware of their own “epistemic situatedness” in terms of their values, their language, their social contracts etc.), which drives those who continue growing into Relativist consciousness [the next higher stage]. Achievers are not just the goal of our educational system, they are also the primary goal of leadership development programs — they are effective, focused and goal-driven. Nevertheless, they struggle with the complexity required of senior leaders in large, global organizations today, which require more advanced shapes of mind.	ZONE LATE YOUTH LIFE-STAGE
5 UMBER MYTHIC- RATION- AL	EXPERT — Skill-Centric (Adult Population: 38%): Differentiation from the prior stage occurs as the emerging adult moves beyond group-centric mind and instead begins to establish their <u>independence</u> . They want to be their own person and pursue their own values. Whereas the Diplomat’s self-identity is embedded in the groups with which it identified and therefore individual differences weren’t seen — they literally had no meaning because they barely registered — the Expert differentiates from this group identity and emerges into its photo negative: an independence yielded precisely by as much individual <u>difference</u> and <u>distinction</u> as they can find. Hence, expert consciousness attempts to perfect itself and its world through mastery of knowledge, expertise, and continuous improvement. It is on a hunt for as much distinction from everyone else as it can achieve. This is true even when, ironically, it does join groups of experts that both animate this distinction from everyone else while also being a part of a group of the like-minded. This yearning combines with the Expert’s perception of the world as a system, with rules and open to full optimization, to give rise to movements such as quantified self, Big Data and the underpinnings of Silicon Valley’s dominant techno-meritocratic epistemology. As the most prevalent shape of mind in business leadership, Experts spend inordinate amounts of time on <u>exterior</u> realities and the “one right way” to accomplish their aims: water-tight analysis of data, <u>quantified</u> argumentation, etc. Yet this also can present a bias against collaboration and deep, empathic listening (i.e., EQ is typically valued less at this shape of mind than certain others because they perceive a right way to do things that is largely blind to inner forces). Experts typically display a high level of self-certainty, <u>cognitive</u> assuredness and rapid judgment formation. Generally they are not interested in inner mental or emotional work as the complexity of perspective required to do so — seeing one’s own interior as an object to be worked upon — is still largely out of reach for the Expert. The Expert’s values call for addressing perceived scarcity in the world and threats to life by winning and maintaining self-certainty, which it does by not allowing itself to become overly open-minded to contradictory views. Many companies live at the Expert stage, building brands and products that convey the expertise, certainty and “one best way” to achieve goals in a complex world. Like every stage, the Expert stage can produce terrible outcomes if not checked and balanced: as Wall Street’s analyst corps is trained to this stage in the early-part of their careers, and the value system of Wall Street itself often serves the money-at-all-costs values of the Opportunist stage, it sometimes creates the toxic mix of greed and apparent certainty that produces social disasters such as the CDO meltdown and ensuing Great Recession of 2008.	ORDINAL ZONES OF ORDINAL EXPRESSION ANALYSIS PROCESS MATERIALISM WORLDVIEW SEPARATION ZONE EARLY YOUTH LIFE-STAGE
4 AMBER MYTHIC	DIPLOMAT — Group-Centric (Adult Population: 12%): Differentiation from the prior stage occurs as the child (approaching adolescence) learns that “might makes right” doesn’t work very well in a <u>social</u> world where there are other people with their own interests and agency. Their embeddedness in a self-only world gradually gives way to a desire to be part of a self-social world. This stage is often called Conformist consciousness because adherence to “the	CARDINAL ZONES OF ORDINAL INSPIRATION INVOLUTION PROCESS

Table V-12a —STAGES of CONSCIOUSNESS per KEN WILBER

STAGE # COLOR	DESCRIPTION	NATURAL SEQUENCE
	<p>tribe's" expected <u>values</u> and behavior is the defining <u>value system</u>. Flush with the novel euphoria of belonging (to something bigger than the narrow confines of the previous self-only world), the Diplomat's goal is to avoid overt conflict and promote order and stability within the <u>in-group</u>. This is a shape of mind with limited nuance because the range of cognitive differentiation is still narrowly confined to the self-interests of the prior stage and the group-interests of the current stage (with which they are completely identified). Diplomats represent a not insignificant portion of the adult population and are quite skillful in service and the <u>helping</u> industries. As leaders they struggle to communicate candidly and with the discernments necessary for a group to navigate the real complexity of the surrounding world (which sits several stages higher than this one). The dominant value system of the Diplomat is to address the perceived scarcity of the world and threats to life through social visibility, working very hard to effect an approved, popular public appearance and social persona. Because a Diplomat's self-identity is isomorphic to group norms and expectations — that is, it doesn't represent a compromise to <u>conform</u>, their very self is already conformed — it is safe to say that many social media celebrities, political and religious personalities come from this stage of development.</p>	<p>TRADITIONALISM WORLDVIEW IMMANENCE ZONE LATE CHILDHOOD LIFE-STAGE</p>
3 RED MAGIC- MYTHIC	<p>OPPORTUNIST — Self-Centric (Adult Population: 9%): Differentiation from the prior stage occurs as the child becomes not totally dependent on another for all aspects of their life maintenance. This is the first stage where the child is a whole self, in itself. In adults, Opportunists represent "warrior consciousness" where might makes right and power is its own reward. Because it is the first stage of an actual self, as such, it understands the world as a power struggle between itself and all else outside it. This creates black and white distinctions in a world animated by <u>magic</u>, full of danger, and <u>dark forces</u>. Opportunists address the perceived scarcity of the world and threats to life through power, projecting power and displays of fearsomeness.</p>	<p>ORDINAL ZONES OF ORDINAL INSPIRATION TRADITIONALISM WORLDVIEW EARLY CHILDHOOD LIFE- STAGE</p>
2 MA- GENTA MAGIC	<p>IMPULSIVE (Adult Population: <1%): Differentiation from the prior stage occurs as rudimentary forms of language arise and interaction with the primary caregiver gets needs met. Impulse-driven consciousness marked by cognitive simplicity characteristic of children from 2 – 4 years old. Impulsive adults are their needs and are easily overwhelmed, confused and emotionally disturbed. They are still not fully differentiated as selves and experience the anxiety arising from their constant state of helplessness. As adults they need institutional or caregiver support.</p>	<p>CARDINAL ZONES OF ORDINAL ACTION PRIMITIVISM WORLDVIEW TODDLERHOOD</p>
1 CRIM- SON ARCHAIC	<p>SYMBIOTIC (Adult Population: ~0%): Differentiation from the environment occurs when an infant discovers that an undifferentiated self/environment has consequences, for example biting finger hurts, biting toy does not. This marks a differentiation from the surrounding environment and the first beginnings of a self-environment boundary. Stage one is an infantile consciousness that remains almost completely fused with all biological impulses and their environment. In adults this requires institutionalization.</p>	<p>ORDINAL ZONES OF ORDINAL ACTION PRIMITIVISM WORLDVIEW INFANCY</p>
People in the six stages above this row are in the so-called "1st Tier".		

My comments on this table are as follows:

- **STAGE #/COLOR:** The first column shows the number assigned to each stage and the color assigned to each stage in Wilber's model. This color scheme does not match the scheme of Spiral Dynamics, which alternated between cool colors on one side of the spiral and warm colors on the other. Wilber's scheme follows the colors of the rainbow, as has become customary for the chakras over the last century. One may find an explanation for this at ><http://www.integralworld.net/visser101.html><. Refer also to Chapter **Xx in Part X, "Chakras"**.
- **DESCRIPTION:** These are not the words of Wilber himself, but those of Robb Smith. The descriptions provide clues that Wilber has not forgotten the alternation between ego-centric and socio-centric phases as one ascends the stages, a schema introduced by Graves and continued in Spiral Dynamics.

Recall that this is the Me-We Principle of the Natural Sequence schema. This Principle is most obvious in the description of Stage 3 as “Self-centric” and Stage 4 as “Group-centric”.

- **NATURAL SEQUENCE:** The third column shows the Natural Sequence correlates of Wilber’s stages in terms of the Processes, Worldviews, Zones, and Life-Stages. Recall that in the Natural Sequence schema each of the seven Worldviews has the seven Zones within it, with three lower–earlier Ordinal Zones and three higher–later Cardinal Zones. This is consistent with the work of other transpersonal psychologists, who are more aware of the higher stages of human development than the humanistic psychologists, who focused more in the Life-Stages. In the early stages, it is almost impossible to distinguish Life-Stages from Worldviews — hence their mention in the table — but in adulthood, it is much easier to distinguish the two instantiations of the Natural Sequence schema.
- Note that people, as they advance upward through the Life-Stages, tend to get stuck below a “ceiling”, and that ceiling is determined by their Worldview. One thing about the interplay of Life-Stage and Worldview that should be emphasized is this: the lower–earlier the Worldview, the sooner in the Life-Stage story arc that one reaches the ceiling provided by the Worldview; the higher–later the Worldview, the later in the Life-Stage story arc that one reaches the ceiling provided by the Worldview. This means that people with a very high–late Worldview do not manifest that until very late in the Life-Stage story arc. This means that there might be many more of them than have been discerned via testing.
- In his writings, Wilber postulated stages beyond #10, so-called “transpersonal” stages, that are not shown in the table above. The Natural Sequence schema retains at least two of them, the Transpersonalism Worldview and the Messianism Worldview. In this blog post at <http://www.integralworld.net/visser105.html>, Matt Visser lists those as four stages, named Indigo: Para-mind; Violet: Meta-Mind; Ultraviolet: Overmind; White: Supermind. This scheme is an adaptation of Aurobindo’s model, which is discussed in [Chapter Xx in Part X, “Aurobindo”](#). In the first column, alternative names that Wilber gave to the stages are shown, extracted from the visser105 blog.
- The fact that percentages of the “adult population” are mentioned, and that the percentages follow a “bell curve” distribution, means that Wilber’s model is more about innate lifespan Worldviews than it is about developmental Life-Stages, even though Life-Stages (Infant, Childhood, Youth) are mentioned in the description of the lowest stages. The reason for this is probably that one does not typically fully achieve one’s innate Worldview until one has passed the corresponding Life-Stage, and during the story arc of a full lifetime one’s Life-Stage usually exceeds one’s Worldview at the end of the lifetime. This means that the description of each stage drifts from entirely about Life-Stage at the bottom of the table to entirely about Worldview at the top of the table
- In some DevPsy models reviewed in this Part, there is acknowledgment of a Stage Zero, the Physiology Stage, which is the necessary foundation of all of the psychological stages above it. The color “infrared” could be assigned to this stage.

Scoring Wilber against the Natural Sequence Principles

In my view, each DevPsy model has its strengths and weaknesses in terms of accuracy and completeness, judged on the basis of the results of subsequent research by other developmental psychologists, and on its conformity to the Natural Sequence schema. Wilber’s DevPsy model checks all of the boxes of the ideal Natural Sequence schema.

- First is the Hierarchy principle, the observation that development happens in stages, with each stage built on a harvest of the experiences had in previous stages, each stage being qualitatively different from previous stages. This seems to be a necessary feature of all DevPsy stage models that I know about.
- In the descriptions in the table, there is mention that each stage is initiated by the emergence of the realization that the present stage is not working anymore, so there is an internal cognitive dissonance, meaning that some form of transformation is required; this is the Transition Principle.
- Third is the Dialectic Principle, the observation that development is driven by the resolution of so-called “positive” and “negative” experiences. Much of Wilber’s writing on DevPsy, and other realms, discusses “shadow work”, which is just psychological ‘problem solving’ by another name.

- Fourth is the Dimensionality Principle, the observation that development takes places in various realms of life, which Wilber refers to as “lines”, but which I prefer to refer to as Dimensions. Different DevPsy researchers have tended to investigate different lines, but some prefer to bundle them into a single factor called “ego”, but which Wilber called “consciousness”.
- Fifth is the Feedback Principle, the observation that development takes place via the interaction of an internal self identity and external not-self identity. In the descriptions in the table, there are numerous references to the comparison and contrast that the person makes with their environment in their journey through life.
- Sixth is the Me-We Principle, the observation that development takes place in phases alternating between ego-centrism and socio-centrism. This is a principle that first appeared in the work of Clare Grave, was carried forward by Spiral Dynamics, and also adopted by Wilber.
- Seventh is the Fractality Principle, the observation that a similar pattern of the stages of development happen in all time scales from the shortest time span to the longest. Wilber is very much aware of this principle, otherwise known as the “Great Chain/Nest of Being”. This Principle connects the entirety of the Cosmos — from beginning to end, from top to bottom, from inside to outside — in a grand unified system.

Concluding Comments on Wilber’s Stages of Human Consciousness

One of the best ways for me to get my thoughts together on any given subject is to tabulate them or list them; hence this section of this chapter.

1. A Wikipedia article on Wilber himself, and another on his work, provide a decent review thereof, far more than I provide in this brief chapter. This chapter really mostly serves to introduce the stage component of Wilber’s Integral Model, and then correlate it with the Natural Sequence schema.
2. Several websites are dedicated to Wilber’s work; point your favorite internet search engine to his name and see what you find. The most extensive that I know of, with more than 2000 essays, is this one: integralworld.net/readingroom.html#FV. Wilber has been influential among transpersonal psychologists, some favorable and some not so favorable; read about them on integralworld.net.
3. With even a cursory comparison of Wilber’s own versions of his stage theory, put forward over the last four decades, we find that he contradicts himself a little bit here and there. This reflects the historical path that the entire field of DevPsy has taken over the decades: how many stages are there?; where shall we put the dividing lines between stages?; what are the characteristics of those stages? My suggestion is that if these researchers had the definitive theoretical framework of the Natural Sequence schema to guide them, there would be less of this ambiguity to contend with.

The next chapter presents the DevPsy model of John Battista, who acknowledges that he borrowed some ideas from the early work of Ken Wilber, but then went in his own direction. The next chapter after that presents yet another DevPsy model, that of Suzanne Cook-Greuter, who acknowledges that she also took the work of Ken Wilber into account, and added to it with her own empirical research and systematic theorizing. These three are of the transpersonal psychology persuasion, meaning that they regard the human psyche as not merely a physical phenomenon.





Chapter V–13

② JOHN BATTISTA — INFORMATION THEORY OF CONSCIOUSNESS

The person discussed in this chapter based his model somewhat on the seminal work of Ken Wilber, who was reviewed in the previous chapter, so that is why I placed this person and his model here.

John Battista is a *transpersonal* psychologist, meaning that he believed in a transcendent aspect of the human psyche. This puts him in the same group as some other developmental psychology (DevPsy) model-makers reviewed here in Part V of the *Cosmogony* book, namely Assagioli, Maslow, Graves, Beck, Wilber, and Cook-Greuter. Battista was an M.D. psychiatrist; he was not an academic researcher, as many others reviewed herein were. Rather, he was focused on the psychotherapeutic treatment of his patients and clients. As such, he is a good resource for insights on the positive and negative, aka healthy and unhealthy, poles of each stage of development, and these can be understood as the Transition and the Dialectic Principles of the Natural Sequence schema.

Regarding source material for this man and his model, after serendipitously seeing a reference to his model somewhere, I searched the internet and found a journal article published in 2012 and a chapter in an anthology book published in 2009. Those two sources are reviewed in the following two sections of this chapter.

A Journal Article

The journal article upon which this section is based can be downloaded from the following website: ><http://www.transpersonaljournal.com/pdf/vol3-issue2/Battista%20John.pdf><, which I did on 23 May 2022. From that paper, we discover the credentials of this particular DevPsy model-maker, and we see that they compare favorably with the other esteemed model-makers reviewed in this Part of the *Cosmogony* book:

John R. Battista, M.D., has assumed the practice of M. Scott Peck, M.D. 25 years ago and continues to practice psychiatry and psychotherapy in New Milford, Connecticut. He is also consult at Wellspring, a residential treatment center for young adults. He works at Staywell, a Federally Qualified Health Clinic, which serves the poor population of Waterbury, Connecticut. He is a member of the Specialized Research Faculty of the Institute of Transpersonal Psychology in Palo Alto, California where he supervises the research of doctoral candidates. He was formerly an Assistant Professor in the Psychiatry Department of the University of California, Davis where he taught personality theory, developmental psychopathology and existential–humanistic psychotherapy in addition to being the Director of Residency Training. For a good number of years he also taught at the Temenos Institute in Westport, Connecticut, a Jungian–Transpersonal–Humanistic training institute for psychotherapists. He has published twenty five articles and edited three books, including the *Textbook of Transpersonal Psychology and Psychiatry*.

The abstract of the paper, published in the Journal of Transpersonal Research in 2012, states that:

The author's information theory of consciousness is utilized to present a comprehensive transpersonal view of human development, psychopathology and psychotherapy in which the different forms of psychopathology are understood in relation to different developmental tasks requiring different types of psychotherapy. This view is compared to [Ken] Wilber's transpersonal view of human development, psychopathology, and psychotherapy.

Ken Wilber's so-called "Integral Theory" model is reviewed in Chapter V-12, the previous chapter.

The journal article continues by explaining where Battista and Wilber overlap and do not overlap. Notice that the model proposes what amounts to Positive and Negative Poles in the Natural Sequence schema; notice that the model proposes what amounts to space-like 'levels' and time-like 'stages' in the nature of

consciousness, such that some are lower–earlier and some are higher–later, as in the Natural Sequence schema.

Introduction

Transpersonal psychiatry and psychology are often conceptualized as branches of psychiatry and psychology concerned with transpersonal [space-like] states of consciousness. However, transpersonal psychiatry and psychology are not limited to the study of transpersonal states. They are encompassing approaches to psychiatry and psychology which are informed by transpersonal states and integrate them into a general psychological theory of normal, healthy and disturbed human development and experience. The encompassing nature of a transpersonal perspective is evident in Wilber’s spectrum psychology, which provides an excellent example of a transpersonal approach to human development, psychopathology and psychotherapy. In [his book] *The Spectrum of Consciousness* Wilber (1977) contends that consciousness is best understood as a spectrum of types or forms of awareness. In [his book] *The Atman Project*, Wilber (1980) shows how these forms of consciousness are ordered structures of human development that evolve through pre-personal [Ordinal], personal [Neutral] and transpersonal [Cardinal] stages. In [his book] *Transformations of Consciousness*, Wilber (1986) argues that the disruption of these [time-like] developmental stages result in identifiable psychopathologies. Finally, Wilber (1986) contends that particular types of psychotherapy are particularly appropriate for particular developmental psychopathologies. This paper provides another example of a transpersonal approach to psychology and psychiatry by extending the author’s information theory of consciousness (Battista, 1978) into a somewhat different model of development, psychopathology and psychotherapy, which is compared to Wilber’s.

This tells us that Battista developed his model in comparison and contrast with Wilber’s early model, but apparently went in a direction somewhat different from Wilber’s. (Wilber himself, in his later work, departed from his own early model, and that is the model that is reviewed in the previous chapter.) As we will see below, Battista’s “states of consciousness” could be compared to Maslow’s Hierarchy of Needs that is reviewed in Chapter V-4, because it is possible to go up and down in states/needs, whereas when one matures in terms of a developmental spectrum and achieves a higher–later stage, it is rare to regress.

The journal article continues:

The Development of Human Consciousness

The first step in developing a transpersonal theory of psychopathology and psychotherapy is to extend a general theory of consciousness into a theory of the development of consciousness. A previously published theory (Battista, 1978) of human consciousness involves six forms: [1] perception, [2] emotion, [3] subjective awareness, [4] ego awareness, [5] self-awareness, and [6] transpersonal consciousness. This section attempts to show how these forms of consciousness are manifestations of increasingly encompassing [Holarchy Principle] structures that can be understood in terms of the development of the self. Six different self structures [Plateau Principle] are identified, and transitions [Transition Principle] from one to the next are discussed in terms of six orders of ego functions which resolve uncertainty associated with six developmental tasks. Table 1 shows the relationship among the six self-structures, six levels of consciousness, six developmental tasks, and six orders of ego functions (information processing functions) in comparison to Wilber’s stages of development.

From this preliminary description we see that this model embodies some of the Principles of the Natural Sequence schema. More Principles are found in subsequent descriptions, and these are noted where appropriate.

Battista’s Table 1 was redrawn by myself and inserted below, Table V-13a.

Rank	Developmental Task	Operation (Information Processing Function)	Resulting Level of Consciousness	Resulting Self-Structure	Wilber Equivalent Structure of Consciousness	Process/Aspect System matrix equivalent Centers
6	Separation of transpersonal self from authentic self	disidentification	transpersonal	transpersonal	transpersonal (realized)	Transition from Concept to Sympathy Center
5	Separation of authentic self from identified self	discrimination, acceptance and integration	self-awareness	existential	vision-logic	Transition from Impulse to Concept Center
4	Separation of identity from subjective sense of self	internalization	Ego awareness	ego-identified	Rule-role mind	Transition from Intellect to Impulse Center
3	Separation of person from others	interpersonal	Subjective (representational)	subjective	rep-mind	Transition from Emotion to Intellect Center
2	Separation of external and internal	motor	emotional	emotional	phantasmic-emotional	Transition from Motion to Emotion Center
1	Separation of consciousness from unconsciousness	nervous system development	perceptual	perceptual	sensori-physical	Transition from Physiology to Motion Center

My comments on this table are as follows:

- In this table, it makes more sense to coordinate Battista’s model with the metamorphoses of the Natural Sequence schema than it is to coordinate Battista’s model with the plateaus, aka Life-Stages, of the Natural Sequence schema.
- In order to conform to the convention established with other tables in other chapters in this Part, I redrew it with the most primitive Transition shown in the bottom row and the most mature Transition shown in the top row, which is the opposite of the source table.
- For your convenience in following the descriptions and explanations that follow, I added the first column, Rank. This column was not shown in the original table, but these are, in fact, the rank numbers given by Battista, and named “first developmental step”, “second developmental step”, and so on.
- The next five columns to the right of the first column are a redrawing of the source table. The right-most column was not in the source table; it shows my proposed correlation of components of the Natural Sequence schema with components of Battista’s model in the same row.
- The second and third columns, labeled “Task” and “Operation”, describe the equivalent to what I refer to as the “metamorphoses” that initiate the “plateaus”. The fourth, fifth, and sixth columns describe the “resulting” plateaus that follow the metamorphoses described in the second and third columns. The notion with Battista’s model, the same as with other models reviewed in other chapters, is that the metamorphoses are transitions that involve a change in type or kind of being/doing from one plateau to the next plateau in the developmental sequence.
- The right-most column shows the correlation of the Natural Sequence schema with the three columns to its left. Of the various components of the Natural Sequence schema, I chose to show the Centers in the right-most column because it seemed to be the most relevant overall to Battista’s model of “structures of consciousness”. Some of these correlations will be more obvious to the casual reader than other correlations. As one who understands the qualities and characteristics of the Centers as aspects of the Natural Sequence schema, the correlations are obvious to me and they fit well enough.

- The following quotations from the journal article explain the above Table V-13a in detail, and this makes the table more understandable, and makes my correlations more obvious. Beyond that, the text below is better understood as referring to the next table in this section, Table V-13b.
- As we will see in the next section, which is a review of a book chapter written by Battista and which includes Table V-13c, the correlation of Battista and the Natural Sequence schema is not exactly as this table shows, because Table V-13c shows *eight* stages in the development of consciousness, rather than *six*. Thus, Tables V-13a above and V-13b below are reductions of Table V-13c.

Battista's model proposes that the first step toward consciousness is the transition from an unconscious, automatic, instinctive substrate to a primitive sensory feedback loop between a body and its environment.

The **first developmental step** takes place in utero with the development of the nervous system. The peripheral nervous system has the capacity to transduce the physical environment into patterns of nervous system impulses transmitted to the central nervous system. The decoding of this sensory information by the central nervous system generates **perceptions** of the physical environment. Sensory information is the object of consciousness and perception is the subject of consciousness. This is the perceptual order of consciousness which comprises the first self-structure, the "perceptual-self."

That is a description of the Feedback Principle of the Natural Sequence schema: the mutual development of agent (subject) and arena (object) via interaction with each other. At this step in the story arc of the development of consciousness, it is the environment that is acting on the primitive passive self. However, note that as a conscious agent develops, it becomes decreasingly passive and increasingly active in its interaction with the arena. This so-called "first" developmental step (Transition) happens during gestation and early infancy (see below) and has to do with the transition from physiology to bodily movement. This is consistent with several developmental models reviewed in previous chapters, where it is noted that physiology is a necessary precursor to psychology. Some DevPsy models label physiology as the "zeroth" plateau between the two metamorphoses of conception and birth, and that is my preference, and in Natural Sequence terms this is the Physiology Center. However, that is not the way that Battista defines his ranking system, focused as it is on the metamorphoses that transition from one plateau to the next in the evolution of consciousness.

Battista's model passes from the Physiology Center through the Motion Center on the way to the Emotion Center, to use the Natural Sequence terms, which makes the **second developmental step** take place during early infancy:

The newborn infant is unable to regulate her own physiology. The resulting perceptual uncertainty is associated with distress (negative affect). The infant expresses this distress through instincts such as [Motion Center] crying, rooting, and reaching out (Bowlby, 1982). These lead caretakers to respond to the infant's needs, ideally resulting in emotional satisfaction and secure attachment (Karen, 1994). In addition, the infant perceives changes in the external environment (Stern, 1985) and is instinctually programmed to operate on [Feedback Principle] the resulting perceptual uncertainty through motor actions [Motion Center] (Karen, 1994). These motor operations allow the infant to organize percepts into physical objects. By between two and seven months, the infant can make a distinction between her physical body in an external world of objects and the emotions [Emotion Center] of an internal world that exist in relation to attachment figures (Stern, 1985). With this distinction of internal and external, the infant has achieved a **second order** of consciousness, emotional consciousness, which defines a second self-structure, the "emotional self." With this achievement perceptions become the objects of consciousness organized into a physical world and emotion becomes the subject of consciousness, existing in relation to attachment figures.

One thing that I like about Battista's model is that it describes clear developmental transitions that are also described in the Natural Sequence schema, namely that there is development from the Physiology Center to the Motion Center to the Emotion Center, in that order. We can also see in the above description that the direction of passive to active development serves the agent's (internal subjective world) purpose of reducing uncertainty by gaining knowledge via feedback so as to increase control over the arena (external objective world).

In the Natural Sequence schema, the Infancy Life-Stage is said to span from birth to about age two, and is said to be divided into two phases, the Ordinal Me phase (learning to move the body) and the Cardinal We phase (learning to move the body in the environment). The reconciliation of the Natural Sequence schema with Battista's model is that Battista appears to be numbering his "steps" to the Transition between phases

rather than between Life-Stages. His ascription of age ranges to this and his other step numbers fits this proposed reconciliation.

In the next quoted paragraph, we find a description of Battista's "third developmental step", which is the transition from the Emotion Center to the Intellect Center, to use Natural Sequence schema terms. Battista elsewhere says this step happens at about age two, which in the Natural Sequence schema is the Transition between the Infancy Life-Stage (Motion Center development) and the Childhood (Emotion Center development) Life-Stage:

The infant's organization of percepts into a physical world with attachment figures allows the infant to begin to interpersonally operate on her emotional [Emotional Center] attachments to form a subjective sense of self separate from emotion. This process is analogous to the preceding stage when the construction of sensations into perceptions allowed the infant to resolve perceptual uncertainty through action and attachment to form physical objects and experience emotion. Operating on emotional uncertainty with attachment figures takes place through interpersonal, dyadic games such as peek-a-boo and the modulation of interpersonal cues to elicit attention (Bowlby, 1982). These interpersonal operations, which resolve emotional uncertainty by allowing the child to influence and regulate her attachment figures, result in the emergence of a new order of consciousness, subjective awareness, which characterizes a **third self-structure**, the subjective-self [Intellect Center]. The child now experiences emotions objectively, as part of her intersubjectively conscious self (Bowlby, 1982). The attainment of this new self-structure is marked by the child's capacity to recognize herself in a mirror as "me," something that normally occurs about age two.

The point to be emphasized here is that whatever stage one is currently in is "subjective", and with the successful transition to each higher-later stage, the previous stage ceases being "subjective" and becomes "objective" from the point of view of the higher-later stage. In other words, each stage is "meta" to the previous stage; each stage transcends and includes the previous stage(s). This is just another way to describe the Hierarchy Principle of the Natural Sequence schema.

In the next quoted paragraph, we find a description of Battista's "fourth developmental step", which is the transition from the Intellect Center to the Impulse Center, to use Natural Sequence schema terms. Battista says this step happens at about age five, which in the Natural Sequence schema is the minor Transition between the Ordinal Me phase and the Cardinal We phase of the Childhood Life-Stage, the time when the child's Motion, Emotion, and Intellect Centers are typically mature enough that the child can enter the formal educational system.

It is not until age five or so, when language and cognitive [Intellect Center] skills have developed enough for concrete operations to replace primary process operations, that the child begins a transition to a new self-structure — a transition that will normally not be completed until at least the time of puberty and early adolescence. This **fourth developmental period** is concerned with resolving uncertainty that develops from the child's being able to hold her subjective sense of self as an object. This objectification of the subjective sense of self is facilitated by people in the environment labeling her as a person with attributes — pretty, smart, athletic. Similarly, self descriptions also result from the internalization of emotions and feelings present in the environment, even if they are not verbalized. Rules and expectations about how one should behave and feel are also internalized. The child also internalizes strategies for coping with the world by observing the adults in her world. In all these cases, internalization is the information processing mechanism which the child utilizes to resolve uncertainty associated with objectifying her formerly subjective sense of self. Through internalization a child develops an identity; a concept of who she is that distinguishes her from others. In making this distinction between her identity and her conscious being, a fourth order of consciousness is attained, ego or conceptual consciousness. Attainment of this new order of consciousness and its associated self-structure, the ego-identified self, is marked by the child's ability to articulate her self attributes. In this self-structure one's being has become the object of consciousness while one's identity has emerged as the subject of consciousness, who one is.

Obviously, this description of the "fourth step" is the same as the "third" step in some other models, including the Natural Sequence schema, because of their exclusion of the zeroth Life-Stage, the development of the Physiology Center. It is also apparent that Battista's model describes an initiation of a stage as happening much earlier than other models, including the Natural Sequence schema. Perhaps the reconciliation of the two models is to say that the 'seed' of a Natural Sequence schema Life-Stage is 'planted' in the middle of the previous Life-Stage. Or perhaps the explanation is that in Table V-13b Battista says the fourth step happens in "Adolescence through at least early adulthood", which is consistent with the Natural Sequence schema.

In the next quoted paragraph, we find a description of Battista's "fifth developmental step", which, according to the descriptions, I correlate with the transition from the Impulse Center to the Concept Center, using Natural Sequence schema terms. Battista places the beginning of this transition in adolescence, whereas the Natural Sequence schema places it at about age fifty. Curiously, in Table V-13b Battista indicates that the stage happens in "mid-late adulthood", which is consistent with the Natural Sequence schema.

The development of formal operational thinking marks the beginning of the fifth developmental stage, one that will last many years. In the preceding stage the child is capable of taking her being as an object, but only through the use of concrete operations. Her identified-self is the result of being told how she is or experiencing herself in actual situations. However, with the development of operational thinking, the adolescent develops the capacity to imagine how she would like herself to be, and imagine how she might behave and feel in a variety of circumstances. Imagining how she would like her self and the world to be results in the formation of ideal self images with values and beliefs. This new developmental capacity allows a young adult to begin to distinguish how she would like to be from how she is. Such a conceptual differentiation of her identified self also allows her to differentiate how she acts from how she feels, and how she thinks of herself from how she is.

The underlined words referring to the imagination and conceptualization and idealization are appropriate for the Concept Center and the Seniority Life-Stage in the Natural Sequence schema.

The following paragraph also apparently pertains to the "fifth" step, but it locates it in adulthood

These differentiations allow the emerging adult to begin to understand that identity is not unalterable, but something that can be chosen, developed, changed and transformed. Through these processes a personal, existential self is distinguished from a social, internalized self, and an ideal self is distinguished from a real self. Development in adulthood entails acting on the identity and beliefs we internalized and identified with in childhood. We begin to take responsibility for who we are. As a result it becomes possible for the person to speak of her own psychology; what her nature is, how she got to be the way she is, and what she would like to do about it. Possibility and uncertainty about identity are resolved through discriminating self-awareness which allows the construction of an existential self. With the acceptance of one's self and affirmation of one's values and beliefs, an authentic self can be constructed. With this construction a new level of consciousness, self-awareness, and a new self-structure, the existential-self, have been attained. Identity is now the object of consciousness while the sense of being one's own true self, is what one is subject to.

In the next quoted paragraph, we find a description of Battista's "sixth developmental step", which is the transition from the Concept Center to the Sympathy Center, to use Natural Sequence schema terms:

The sixth stage of development involves operating on the existential-self and the discriminating, constructive nature of self-awareness characteristic of the preceding stage. For most people this is initiated by calling into question the purpose, meaning, or significance of the life, person, and work one has been constructing. Sometimes it is initiated by the realization that one is embodied and will die, a realization facilitated by the development of a physical illness or encounter with death. Sometimes it is initiated by the spontaneous experience of transpersonal states or a "higher power". In any case, the constructive nature of discriminating self-awareness must be transcended. Many techniques for this purpose have been delineated in the contemplative traditions. In some techniques the person deconstructs self-awareness by witnessing it. In other techniques, self-awareness is transcended by concentrating on an object, sound, or image until all distinctions fall away. Techniques, such as koan, emphasize contemplation on questions and concepts that require the person to pass beyond constructive, rational consciousness to enlightenment. Similarly, devotion, prayer and service can lead beyond self-awareness to the transcendence of subject-object distinction. In all these approaches, disidentification with the existential-self who thinks, acts, discriminates, labels, evaluates, and constructs takes place. Through disidentification a new order of consciousness, transpersonal, and a new self-structure, the realized-self, comes into being. Here there is no subject or object of consciousness, only pure awareness.

The description of the sixth stage is broad enough that it seems to encompass the three transitions subsequent to the Fourth Life-Stage (Middle Age), thus including the three Cardinal Life-Stages, namely Seniority, Elderhood, and Dying. It is not uncommon for DevPsy model-makers to conflate these Stages into one Stage, if they recognize them at all. Perhaps a better way to correlate Battista with the Natural Sequence schema in his last "task" is to understand that Battista, with this "theory of consciousness" passes from a notion of Life-Stages to a notion of Enlightenment, about which I have somewhat to say in the next Part, Part VI, "Paths to Enlightenment".

This model of development is summarized in Table2. [My Table V-13b]

Table V-13b — The DEVELOPMENT of the SELF per JOHN BATTISTA						
Development of Self	First Task	Second Task	Third Task	Fourth Task	Fifth Task	Sixth Task
Developmental Task	Development of perception	Separation of inner and outer	Development of sense of self	Development of identity	Development of authentic self	Development of a realized self
Period in which takes place	In utero	First year	Second year	2 – 12 years old	Adolescence and adulthood	maturity
Operations utilized	Central Nervous System development	Motor operations on <u>perceptions</u>	Interpersonal communication	internalization	Discrimination, acceptance, and integration	disidentification
Objects of conscious experience	Sensory input	<u>Perceptual</u> world	<u>Emotional</u> attachments, emotions	Personal self, impulses	<u>Identity</u> , beliefs, roles	Personality, constructive consciousness
Context of conscious experience	womb	Physical world and caretakers	<u>Emotional</u> attachments	Family, school, and community	Relations with society and significant others	Universe and self
Consciousness subject to	Mother's physiology	Empathy of parents	Responsiveness of parents	Reinforcers and values of society	Own capacities	grace
Uncertainty resolved	physical	<u>perceptual</u>	<u>emotional</u>	personal	personality	existential
Distinction made	Consciousness, unconsciousness	Inner and outer	Self and other, person and thing	Person and <u>identity</u>	<u>Identity</u> and self	Self and no-self (realized self)
Conscious capacity that emerges	<u>perception</u>	Recognizing objects, emotion	Sense of self	Reflective self-awareness	Self-expression, self acceptance	Compassion, service, and selflessness
Self-structure that emerges	<u>perceptual</u>	<u>emotional</u>	subjective	<u>identified</u>	existential	transpersonal
Marker attainment	Responsiveness to input	Attachment (separation anxiety)	Recognize self in mirror	Can describe self attributes	authenticity	enlightenment
What is integrated		<u>Perceptions</u> into physical world	<u>Emotions</u> into person	Qualities into identity	Needs, values, and beliefs into <i>dasein</i>	Self into universal
Period in which self-structure operates	Later in utero through two years	Seven months through two years old	Two years through eleven years old	Adolescence through at least early adulthood	Mid-late adulthood	Rest of life
Result	Existence formed	Objects formed	Persons formed	<u>Identity</u> formed	Personality realized	Self realized
NS Life-Stage	Gestation	Infancy	Childhood	Youth	Middle-age	Old Age
Transition of Centers	Physiology Center to Motion Center	Motion Center to Emotion Center	Emotion Center to Intellect Center	Intellect Center to Impulse Center	Impulse Center to Concept Center	Concept to Sympathy to Excitation Center

My comments on this table are as follows:

- The ranks were shown in the first vertical column in Table V-13a but are shown in the first horizontal row in this Table V-13b.
- This information in Table V-13b is much more thorough than in Table V-13a.
- Only the last two rows in this table were my addition to the table. They show the correlation of Battista's model with the Natural Sequence schema Life-Stages model and the corresponding Center. The last two rows are awkward because the evolutionary Life-Stage row is about the plateau and the revolutionary Transition row is about the transition of one Center to the next that happens at the end of a Life-Stage plateau and the beginning of the next Life-Stage plateau. This is reflected higher up in the Table: notice the shifting placement of the word "perception", sometimes in the First Task column and sometimes in the Second Task column; likewise with "emotion" sometimes in the Second Task column and sometimes in the Third Task column; likewise with "identity" sometimes in the Fourth Task column and sometimes in the Fifth Task column. My suggestion is that Battista's table is awkward; it would be less awkward if the metamorphoses and the plateaus each had their own columns. I perceive this as a common ambiguity in DevPsy models.
- The sequence and the descriptions of Battista's stages of the development of consciousness in the journal article are consistent with the Natural Sequence schema. However, according to the text, the time frames in which the steps are placed are not consistent with the Natural Sequence schema. However, the time frames in which the steps are placed in Table V-13b are much more consistent with the Natural Sequence schema. Naturally, I prefer the table to the text. Or it might be that I misunderstood the text because of a possible ambiguity, which is what I perceive in Battista's presentation: a lack of distinction between a revolutionary Transition and an evolutionary plateau.

After that table, there followed a description of the specific ways that the process of the development of consciousness can go wrong, aka "psychopathology". Those descriptions provided me with hints for what to name the Negative Poles. As you read the quotations that follow, recall that the numbering of Battista's "tasks" is advanced one step ahead of the numbering of the Natural Sequence schema Life-Stages.

The Psychopathology of the Self

This section addresses the signs and symptoms of difficulties in the developmental process discussed in the previous section. Levels of psychopathology are delineated that relate to the six developmental tasks. Ego functions which indicate these levels of psychopathology are identified and empirical studies in support of this approach are referred to.

The **first** developmental task involves the construction of consciousness through *in utero* nervous system development. Difficulties with central nervous system development underlie many of the symptom pathologies of DSM-IV. However, this psychopathology frequently does not become manifest until later developmental periods. For this reason, psychopathology is understood in terms of later developmental tasks rather than *in utero* CNS development. Thus, the model of psychopathology utilized here is developmentally bio-psycho-social rather than biological.

For what I regard as the zeroth Life-Stage, Gestation, I propose the name for the Negative Pole to be –Birth-defect. In terms of the development of consciousness discussed in this chapter, this name is to be applied to brain malfunction rather than to body malfunction.

The **second** developmental task involves the separation of inner and outer through motor operations on percepts and the regulation of emotion by attachment. Success with this task results in the establishment of a stable and coherent outer world that entails intact reality testing. Difficulty with this level of development is indicated by an inability to differentiate inner from outer. Ego functions which describe an inability to differentiate inner and outer, such as hallucinations, delusions, projection, and ideas of reference are markers of a problem with this level of the development of the self. This is the "very severe or psychotic level" of psycho-pathology.

In the Natural Sequence schema, the first Life-Stage has to do primarily with the development of the Motion Center, where the behavioral process can go awry. Hence my name for the Negative Pole is –Clumsiness.

The **third** developmental task involves the separation of conscious being from emotion, and subjective self from other, through interpersonal operations on the emotional attachments formed in the preceding developmental stage. These interpersonal operations result in the ability to regulate emotion in relation to others. Failure to accomplish this developmental task is indicated by the failure to develop a coherent personal self, the inability to separate self and other, the inability to utilize another to regulate affect, the regulation of affect through pathological means (non-intrapsychic, non-interpersonal), or the continued reliance on immature attachments.

The failure to develop a coherent personal self is indicated by dissociation, fragmentation, and splitting. The inability to utilize another to regulate affects is indicated by rage attacks, grandiosity, devaluation, or schizoid withdrawal. The inability to differentiate one's self from another is indicated by projective identification and projection. The control of emotion through pathological means is indicated by substance abuse, sexual perversions, sexual or physical abuse, rocking, head-banging, and self mutilation. The continued existence of immature attachments is indicated by idealization, abandonment depression and extreme dependency. All of these behaviors and ego functions are indicative of a "severe or borderline" level of psychopathology.

In the Natural Sequence schema, the second Life-Stage has to do primarily with the development of the Emotion Center, where the socialization process can go awry. Hence my name for the Negative Pole is – Codependency.

The **fourth** developmental task involves the separation of identity from being through the internalization of attitudes and functions. These internalizations ideally result in the establishment of a positive, accurate, socially adaptive identity and the capacity to intrapsychically control emotions and impulses. Failure to successfully complete this developmental task results in a negative self image, or socially maladaptive means of relating to society. Socially maladaptive means of relating to society are manifest as a failure to modulate one's needs or impulses in relation to others, a tendency to blame others for conflicts, and a tendency to deny one's own role in generating conflict. Ego functions and behaviors which indicate this failure of adaptation are impulsivity, acting out, denial, lying, cheating, lack of concern for others, and displacement of responsibility. These behaviors and ego functions are indicative of a "moderate or characterological" level of psychopathology.

In the Natural Sequence schema, the third Life-Stage has to do primarily with the development of the Intellect Center, where the individuation process can go awry. Hence my name for the Negative Pole is – Irresponsibility.

The **fifth** task in the development of the self involves the differentiation of identity from self, and the reconciliation of ideal self images, real self images, and internalized beliefs into an authentic, existential self. A failure in this process is indicated by maintenance of an impersonal, non-intimate social self, or an inauthentic self-structure characterized by inaccurate self images or confusion about how to be in the world. An impersonal social self is indicated by the use of intellectualization, emotional distance, denial, or disavowal as a means of coping. Confusion is indicated by use of ambivalence, passive-aggressive behavior, reaction formation and doing-undoing as means of coping. These behaviors and ego functions refer to a "mild or neurotic" level of psychopathology. Successful resolution of this developmental stage is manifest by acceptance, humor, sublimation, and integration — ego functions characteristic of healthy adult functioning.

In the Natural Sequence schema, the fourth Life-Stage has to do primarily with the development of the Impulse Center, where the authentication process can go awry. Hence my name for the Negative Pole is – Falseness.

The **sixth** task in the development of the self involves stilling the constructive nature of self-awareness and allowing the emergence of a realized self. Such a realized self is characterized by transpersonal states of consciousness, resolution of polarity, compassion, and altruism. Difficulties with this transition may result from the misuse of spiritual concepts to serve the defensive functions of earlier developmental stages or may emerge from the establishment of a new "spiritual" identity as a means of avoiding the difficulty of renouncing one's attachment to an ego identity. The misuse of spiritual concepts to serve defensive functions results in pseudo-spiritual or inauthentic spirituality characterized by inaccurate self-attributions of spiritual development to serve narcissistic and defensive functions (Battista, 1996a). Alternately, identification with the spiritual and difficulty disidentifying with one's identity results in inflation of the ego rather than its transcendence. The difficulties and problems of earlier ego identity formation become amplified in inflation. Inflation can appear psychotic-like and needs to be distinguished from psychotic states (Lukoff and Turner, 1996). Inflation can serve the process of spiritual development by presenting developmental problems to awareness to be worked through. (Lukoff, 1996; Scotton and Hiatt, 1996; Grof and Grof, 1989).

In the Natural Sequence schema, the fifth Life-Stage has to do primarily with the development of the Concept Center, where the philosophization process can go awry. Hence my name for the Negative Pole is – Self-indulgence.

This developmental model of psychopathology defines a continuum of health and illness beginning with psychosis and progressing through borderline and characterological levels into neurotic, healthy and transpersonal psychological structures (Battista, 1981). This continuum defines a hierarchy of ego functions which

is consistent with empirical findings (Battista, 1982). A factor analysis of global assessment scale ratings, as a measure of psychological health/disturbance, utilizing the levels of psychopathology defined above through an ego function inventory, was able to account for the variance in the global assessment scale ratings of a clinical population at the .001 level, providing good empirical support for this developmental continuum of ego functions (Battista, 1982 and Battista, unpublished).

As noted above, I had some issues with the time-frames that Battista gave to the plateaus. The next section of this chapter is more to my liking because it is less ambiguous in terms of its correlation with the Natural Sequence schema.

A Chapter in a Book

The following quotations were extracted from a chapter in a book that Battista and two other men wrote and edited in an anthology, *Textbook of Transpersonal Psychiatry and Psychology*, which was published in 1996 and 2009, and which is available from your favorite bookseller.

The publisher's blurb says this:

This important new book brings together the work of top scholars and clinicians at leading universities and medical centers on the benefits and risks of transpersonal therapy. After comparing a variety of multicultural approaches — Zen Buddhism, existential phenomenology, and Christian mysticism, among many others — the book offers a wealth of information on specific disorders and the application of transpersonal psychology techniques such as visualization, breathwork, and “past lives” regression. With solid scholarship, wide scope, and accessible style, *Textbook of Transpersonal Psychiatry and Psychology* will become the standard work for students, researchers, clinicians, and lay readers interested in extending psychiatry and psychology into sciences that describe the functioning of the human mind, thereby building bridges between those disciplines and spirituality.

Whereas the journal article reviewed in the previous section proposed *six* “tasks” in the development of the self, the book chapter proposes *eight* “levels” of consciousness. The way to reconcile the two expositions is to note that the last two levels were added to the first six tasks.

Relevant portions of the relevant chapter of the book are quoted below, with my comments interspersed.

CHAPTER 9

Consciousness, Information Theory, and Transpersonal Psychiatry

John R. Battista

Transpersonal psychiatry faces two challenges: first, the integration of knowledge about transpersonal states of consciousness into a general theory of consciousness that can address biological, psychological, and phenomenological data; second, the development of a general theory of consciousness into a psychological theory that can integrate transpersonal concepts of development, psychopathology, and psychotherapy. This chapter discusses an information theory approach to these goals.

AN INFORMATION THEORY OF CONSCIOUSNESS

Information theory allows holistic models such as Ken Wilber's to be developed into testable scientific theories. Similar information theories of consciousness were independently developed by E. Roy John and me in the 1970s. These theories hypothesize that consciousness is information and that different forms of consciousness refer to different, more encompassing, levels of information. Events of a particular level are conscious when they surpass a threshold amount of information for that level. If they do not surpass that level, the events are unconscious, or out of awareness.

There we see another way to describe the Holarchy Principle of the Natural Sequence schema. Briefly and basically, this is the notion that development proceeds in stages, with each stage incorporating the previous stage(s) and transcending them.

The concept of information is widely misunderstood. Information is often thought of as an entity that is carried by a signal and exists independent of some information-processing structure. Instead, information theory [when properly understood] defines information as knowledge, which can be measured in terms of the amount of uncertainty reduction that a particular signal or stimulus provides to a receiver. It is a change [increase] in the level of organization (negentropy [aka syntropy]) of one system as the result of interaction with another system....

There we see another way to describe the Feedback Principle of the Natural Sequence schema. Briefly and basically, this is the notion that development proceeds when an internal system (agent) and an external system (arena) interact with each other. It does not say so there, but the notion of “system” implies that there

is a permeable “membrane” separating the agent from the arena, and that membrane allows “signals” to pass both ways — think of a bacterium in a pond or a cell in a body. It does not say so there, but entropy is a property of inanimate systems and negentropy/syntropy is a property of animate systems. The agent discussed there is “alive”, but the arena need not be, in order for the agent to “learn”, aka grow in levels of “consciousness”, by processing “information” passing through the membrane. It does say so there that “information” is defined as “uncertainty–reduction”, that happens via the interaction of a living agent with the arena. Uncertainty–reduction is necessary for the continued survival of a living agent. It does not say so there, but the arena also adapts to the agent, and this is the mutuality inherent in the Feedback Principle; think of the animate ecosystem that developed on, and shaped, our formerly inanimate planet. Unlike the inanimate Cosmos that increases in entropy (disorder) and therefore does not accumulate “information”, the animate Cosmos increases in syntropy (order). The notion of “order” implies the increase of syntropic organization in space-like levels and time-like stages.

With the inclusion of spiritual or transcendent levels of consciousness, this theory recapitulates the Great Chain of Being articulated in the perennial philosophy and discussed by Wilber. The postulate is that there is one undivided, conscious universe grounded in physical, sensory, informational interaction and organized into [1] perceptual, [2] emotional, [3] subjective, [4] self-aware, [5] transpersonal, and [6] transcendent structures of consciousness. In this way, the universe is revealed as one undivided whole, separated into immanent and transcendent informational planes of awareness.

There we see that *six* levels of consciousness (defined as types of information processing) were mentioned, but in the descriptions that followed in the book chapter, *eight* levels were noted. I have transcribed the verbatim descriptions of those eight levels into the following Table V-13c. The first column shows the numbers ascribed to the levels. The second column is the verbatim description of the eight levels. The third column shows correspondences with Natural Sequence schema equivalents: Septenarian Attributes, Centers, Life-Stages, and Worldviews. The underlined words in the second column are my emphasis, to make it more obvious how the levels correlate with the Natural Sequence schema. The following table differs from the previous tables in that it is focused on the plateaus of the levels rather than on the metamorphoses between the levels.

Table V-13c — LEVELS of CONSCIOUSNESS per JOHN BATTISTA		
LVL	DESCRIPTION	NAT. SEQ.
8	TRANSCENDENT: This theory of consciousness can be expanded to include an eighth level of information that involves the <u>universe as a whole</u> . Such an eighth order of consciousness, transcendent or transcendental consciousness, would involve the capacity to experience pure consciousness as an object of awareness, rather than as consciousness itself. Some might call the eighth order of consciousness God or Brahman: a dynamic, transcendent reality. Because the transcendence of pure awareness cannot be objectively apprehended by embodied consciousness, it cannot be proved that this realm exists by objective means, although many individuals have come to believe in the reality of the transcendent plane as a result of miraculous or unexplainable phenomena. If such a transcendent form of consciousness does exist, the capacity of transcendent consciousness to influence all other forms of consciousness is a reasonable supposition, considering the general capacity of higher information-processing structures to regulate lower information-processing structures.	Cardinal Action Excitation Center Messianism Worldview
7	REALIZED/TRANSPERSONAL: The seventh level of information refers to information or consciousness about self-awareness. Awareness of the ongoing process of being aware results in the capacity to suspend labeling, constructing, and interpreting of ego consciousness with reference to a self that experiences these things. This process allows self-awareness to be replaced by <u>pure awareness</u> , or awareness without object-unitive consciousness. EEG data on <u>unitive</u> states of consciousness reveal a synchronization of the brain during such states consistent with the brain acting as a <u>coherent</u> whole. Claude Domash suggested that the brain in such a <u>synchronized</u> state could be likened to a superfluid and respond as a <u>totality</u> to any incoming stimulus; therefore, the brain in this order of consciousness could function as a sense receptor of quantum-mechanical input. The quantum-mechanical <u>interconnectedness</u> of the universe central to the ontological interpretation of quantum mechanics could explain the ability of individuals in a unitive state to obtain knowledge through <u>extrasensory</u> perception.	Cardinal Inspiration Sympathy Center Transpersonalism Worldview

Table V-13c — LEVELS of CONSCIOUSNESS per JOHN BATTISTA

LVL	DESCRIPTION	NAT. SEQ.
6	<p>EXISTENTIAL/SELF-AWARE: At the next, sixth level of awareness, self-awareness, the categories of cognition can be operated on in the <u>imagination</u>; that is, they can be removed from concrete situation. This task can be done objectively through a process we describe as <u>abstract thinking</u>. Alternatively, it can be done subjectively in a <u>holistic</u>, nondiscriminating manner, which we refer to as <u>intuition</u>. Abstract thinking and intuition are thus hypothesized to consist of complementary forms of a sixth level of information that involves analytic and <u>holographic</u> modes of information processing in the brain... Abstract thinking and intuition are <u>integrated</u> into a sense of self-awareness that is independent of the immediate physical or social situation. Self-awareness constitutes a sixth level of information that results from processing uncertainty, in which one gains information about the process of reflective awareness, or ego awareness, and notices the way one structures and organizes this information. Self-awareness normally results in the capacity to sense and develop knowledge about one's self. This awareness is commonly conceptualized in contemporary psychiatry as knowledge about one's self or personality. This knowledge is inner sight (<u>insight</u>), into the nature of one's actual self. As such, it should be distinguished from outer awareness, or <u>outsight</u>, into how one appears, one's attributes, and how one would like to appear or thinks one should be, which characterize the previous level, ego structure of consciousness.</p>	<p>Cardinal Expression</p> <p>Concept Center</p> <p>Holism Worldview</p>
5	<p>IDENTIFIED: Reflective awareness, or cognition, a fifth level of information, results from information about subjectivity. Generally, this process involves conceptualizing one's being as an object, as "self" or person in a <u>system</u> of other persons and selves, and evaluating that self in terms of particular qualities, <u>categories</u>, or capacities such as social roles. This self-concept is referred to as <u>ego</u> in common parlance. This level could be termed the level of ego consciousness. <u>Cognition</u> is a learning process that involves verbal conceptualization. Such cognition is concrete in the sense that it is rooted in actual <u>experience</u>. At this level concepts themselves cannot be operated on independently of the concrete situations in which they are embedded.</p>	<p>Neutral Assimilation</p> <p>Impulse Center</p> <p>Collectivism Worldview</p>
4	<p>SUBJECTIVE: Emotional consciousness (information three) involves complex relational actions with objects of perception and creates a new type of uncertainty. The resolution of this uncertainty results in a new order of consciousness in which emotions become the objects, rather than the subjects, of conscious awareness. This new order of consciousness, subjective awareness, constitutes a fourth level of information. In this level of awareness, one's emotional life is experienced as a stable object, as embodied, and exists in relation to other stable entities: other embodied, emotional beings. This is what Daniel Stern called the inter-subjective self. This is the first order of consciousness in which an 'I' can be experienced, and it is indicated developmentally by the capacity to recognize one's self in a mirror, something that normally occurs in the second year of life. It is important to realize, however, that what is being referred to here is an awareness of having emotional consciousness, not an awareness of being aware. It is subject or direct awareness, not reflective, self-aware awareness. Extensive data showing that awareness tends to occur only under conditions of moderate uncertainty are consistent with this basic hypothesis. This non-cognitive, subjective form of information processing is also consistent with our common perceptions of human life. For example, children naturally use play as a means of working through emotional uncertainty without conceptualizing emotions. Dreams and the elaboration of emotions in visual-motor representations, such as painting or dance, also help work through the uncertainty of emotions independently of cognition.</p>	<p>Ordinal Expression</p> <p>Intellect Center</p> <p>Youth Life-Stage</p>
3	<p>EMOTIONAL: <u>Affects</u> refer to a third order of information: information about perceptual uncertainty. <u>Affects</u>, which function as conscious drivers, activate the system behaviorally much as increases in sensory uncertainty activate perception. Affects require the coordination of perception with an action to resolve the perceptual uncertainty associated with them. The source of that resolution might be an external object such as food, another person (such as a mother), or a part of one's body, as in sucking one's thumb. The actions that resolve the uncertainty associated with perceptions represent a third level of information, which we experience as <u>emotion</u>. The resolution of perceptual uncertainty is experienced as a positive <u>affect</u>: satisfaction, gratification, pleasure, or release of tension. <u>Affects</u> therefore signal increases and decreases in perceptual uncertainty, whereas <u>emotions</u> are formed by actions used to resolve these uncertainties.</p>	<p>Ordinal Inspiration</p> <p>Emotion Center</p> <p>Childhood Life-Stage</p>

Table V-13c — LEVELS of CONSCIOUSNESS per JOHN BATTISTA		
LVL	DESCRIPTION	NAT. SEQ.
2	PERCEPTUAL: The central nervous system processes the sequence and pattern of input, generating a new level of information: information two . This new level of information — the meaning of sensory input to the central nervous system — is called perception. The process is <u>interactive</u> rather than passive. The brain monitors sensory input to see if it is within “expected” levels. Physical input leads to consciousness only when input fails to occur within programmed levels: when it is novel. This is the reason that infants are particularly attentive and responsive to alterations in stimulus intensity, movements of stimuli, or edges of stimuli. Most sensory information processing occurs outside of awareness because sensory input conforms to expectations. Perception thus results from processing uncertainty associated with sensory input; it is the meaning of sensory uncertainty to the organism. Perception is information about sensation.	Ordinal Action Motion Center Infancy Life-Stage
1	SENSORY: Physical interactions define a basic level of information by differentiating a particular physical state from all potential states. From this perspective, the physical world is neither object nor subjective but active: It stands out from, or exists, as the result of an interaction among previously existing forms. David Bohm suggested that this physical level of information has a root or basic consciousness that is sensory; that is, the physical world is literally “in-the-form-of” (informed by) a “sensation” (measurement, impact) of the world with which it is connected. Similarly, many biologists and psychologists have written about a basic, cellular, sensory-physical level of consciousness that operates independently of the nervous system. In human beings, representations of the physical world by the sensory nervous system (physical or sensory consciousness, which may be called “information one ”) are transduced into a pattern of nervous impulses that are transmitted to the brain.	Physiology Center

My comments on this table are as follows:

- Per my conventional arrangement, the most primitive stage is shown at the bottom of the table, and higher-later stages are stacked on top of the lower-earlier stage(s). This is per the Hierarchy Principle and the metaphor of geological stratigraphy, where later sedimentary strata are deposited on top of earlier sedimentary strata, hence the relational terms “lower-earlier” and “higher-later”.
- Whereas the two previous tables in this chapter, V-13a and V-13b, were focused on the metamorphoses in the development of consciousness, this table is focused more on the nature and characteristics of the plateaus, the so-called “results” of the metamorphoses.
- Some of the confusion that arises in attempts to correlate the DevPsy models is that the DevPsy models cover different realms, for one thing, and for another thing, they do not always discriminate between the various developmental tracks in the same way that the Natural Sequence schema does, those being the tracks of Needs, Enlightenment, Life-Stages, Zones, Worldviews, and Cultures. All of these tracks are on different time scales, and they all contribute to where an individual is “at” at any given moment. That ambiguity in DevPsy models in general, and Battista’s model in particular, is why I switched the Natural Sequence correlation of Battista’s model from Life-Stages in the lower-earlier levels (1 > 4) to Worldviews in the higher-later levels (5 > 8); by doing that, the Process/Aspect System Attributes and Aspects made more sense with the descriptions of each level. The continued escalation of levels of consciousness is not as obvious in the lived experiences of the Life-Stages beyond Middle Age as it is in the Worldviews beyond Youth.
- In some other DevPsy models, “physiology” is a stage that precedes the stages of psychological development, so it could be numbered as the “zeroth” stage in those models, and I have shown it thus. However, Battista sees physiology — defined by him as the development of a sensory apparatus — as the first stage in the development of “consciousness”, so it makes sense to number it as the first in his model.
- The descriptions given here are, of course, partial; fuller descriptions are available to the reader if they are interested in pursuing it in the documents linked to. What was important to me was to show my correlation of the Levels of Consciousness with the Natural Sequence schema.
- The correlation of Battista’s third stage, “Emotional”, with the Emotion Center of the Natural Sequence schema is obvious. The correlation of Battista’s fifth stage, “Identified”, with the Concept Center of the Natural Sequence schema is also fairly obvious when you consider the underlined words

in the description and compare it with other DevPsy models. What is not so obvious from its description is that Battista's fourth stage, "Subjectivity" should correlate with the Intellect Center of the Natural Sequence schema. However, to me it seemed less violent to Battista's schema as a whole to do that, rather than to correlate the Emotional Center to two of Battista's stages (3-Emotional and 4-Subjectivity), and then push the Intellectual Center correlation up one stage, which would also push Battista's "8-Transcendent", into the next septenary of the Great Chain of Being. Furthermore, the description of the fourth state, the Subjective stage, in the journal article, as reviewed in the previous section, is more easily interpreted as referring to the Intellect Center considering its reference to "verbal and cognitive skills". But my conviction about this is not firm. Here again, as I say about all DevPsy models, I believe that they would have been less ambiguous if the model-makers had known of the theoretical framework provided by the Natural Sequence schema.

Scoring Battista versus Natural Sequence Principles

In my view, each DevPsy model has its strengths and weaknesses in terms of accuracy and completeness, judged on the basis of the results of subsequent research by other developmental psychologists, and on its conformity to the Natural Sequence schema. Battista's DevPsy model does not check all of the boxes of the ideal Natural Sequence schema.

- **HOLARCHY:** This principle is one that all developmental stage models have in common, the notion that higher-later stages emerge out of lower-earlier stages in a typical pattern. Several times I noted this where appropriate in the discussion of Battista's model.
- **TRANSITION:** This principle is another that all developmental stage models have in common, the notion that stages in the holarchy are delimited by an identity crisis. Several times I noted this where appropriate in the discussion of Battista's model.
- **PLATEAU:** Battista did not make as clear a distinction between the revolutionary Transition and the evolutionary plateau of each of his stages as some other DevPsy models do with theirs, including the Life-Stage model.
- **ATTRIBUTION:** Battista makes a comparison of psychological phenomena with physics phenomena, but the idea is not well developed in the writings that I reviewed. The Natural Sequence schema has a definitive notion of how developmental psychology has its foundation, its Attributes, in logic, mathematics, and physics, but — as usual with all DevPsy models reviewed in this Part — Battista does not know how to frame his model in those terms.
- **DIALECTIC:** I do not find in Battista's model much in the way of explicit or even implicit recognition of the role that complementarity (thesis + antithesis = synthesis) has in driving the evolution of consciousness. Rather, he frames the process of the evolution of consciousness in terms of the difference between what he refers to as "objective" versus "subjective" awareness. By this he apparently means that each higher-later stage is subjective with regard to itself, and the lower-earlier stage(s) is/are regarded as objectified.
- **FEEDBACK:** Battista is aware of the interaction between an agent and its arena, and he is aware how this interaction drives the evolution of consciousness. This principle is also one that almost all DevPsy model-makers are aware of.
- **FRACTALICITY:** Battista mentions the Great Chain of Being in the anthology chapter, but he does not elaborate on it, or mention levels of consciousness above or below the eight levels that humans experience, according to Battista's model. My guess is that if I were to find and review everything that he has written, there would be more said about the Great Chain of Being.
- **ME-WE:** Based on what I see in the two documents reviewed in this chapter, I do not see that Battista mentions the alternation of ego-centric and socio-centric phases within each stage. Recall that the Life-Stage model proposes the Me-We Principle as a theoretical feature, and recall that some other DevPsy modelers have discovered it empirically.

Concluding Comments on Battista

Battista's model is reminiscent of Maslow's Hierarchy of Needs discussed in a previous chapter of this Part, in that they both have eight stages, with the bottom stage referring to physiology, and the top stage referring to transcendence.

The correlation of various DevPsy models is not always very tidy, and the correlation of DevPsy models with the Natural Sequence schema of Life-stages is also not tidy. My attempts to do so, even with the help of the theoretical foundation of the Natural Sequence schema, might not have found the best correlations, but I would like to believe that it is a start.

Comparing the age ranges of the Life-Stages with the age ranges in Battista's model, we find that Battista's descriptions place the beginning of a Transition at the midpoint of the previous Life-Stage. That is to say, in terms of Life-Stages and Centers, Battista places the initiation of "emotional" consciousness in the middle of the Infancy Life-Stage aka the development of the Motion Center, the initiation of "subjective" (intellectual) consciousness in the middle of the Childhood Life-Stage aka development of the Emotion Center, the initiation of "identified" (impulse) consciousness in the middle of the Youth Life-Stage aka development of the Intellect Center, and the initiation of "existential" consciousness in the middle of the Middle Age Life-Stage aka development of the Impulse Center. I do not see this as a discrepancy between the two models. For one thing, the metamorphoses in the middle of the Life-Stages (Me > We transitions) can be almost as dramatic as the metamorphoses between Life-Stages (We > Me transitions). For another thing, the later phase of a Life-Stage 'plants the seed' of the early phase of the following Life-Stage.

One concept that I found in Battista's model that I have not seen in others is the notion that consciousness evolves by 'reflecting' on itself repeatedly; each reflection creates a higher-later 'image', an image that is qualitatively different from its priors. In Table V-13a, this repeated 'reflection' process is called "separation": 1) "Separation of consciousness from unconsciousness"; 2) "Separation of external and internal"; 3) "Separation of person from others"; 4) "Separation of identity from subjective sense of self"; 5) "Separation of authentic self from identified self"; 6) "Separation of transpersonal self from authentic self". Recall from the introduction to this *Cosmogony* book that time/space itself is proposed to be generated by the Tao "fragmenting" itself, first 'looking' at itself, so to speak, AS IF it were not itself, so as to create a not-self and a self, and then another 'look' at self/not-self creates another self, and so on *ad infinitum*, *ad eternum*. Thus and thereby, creation is metaphorically like a hall of mirrors that generates an infinite regress of images of the self as if it were not itself, all the way from Tao at the longest/largest time/space scale to the events of our daily lives to the interaction of subatomic particles at the shortest/smallest time/space scale.

Another interesting concept that I see in Battista's model is the notion that one factor in the evolution of consciousness is the inherent drive to turn relative uncertainty into relative certainty, or (to use other words) to turn potential into actual, or (to use yet other words) to turn the indefinite into the definite, or (to use yet other words) to turn the unknown into the known. This fundamental drive for uncertainty-reduction exists for the sake of the perpetuation of the "self" that was created in the primordial self-reflection by Tao. I do not know where Battista got this idea, but it is reminiscent of the work of Karl Friston, who refers to it as the "free energy principle"; google him and that key phrase if you want to learn more. In the really big picture, the ultimate "Self", the Tao, is reflectively turning itself inside out via the fundamental learning process of uncertainty-reduction as it evolves from the spontaneous chaos of the primordial creation event to the somewhat orderly Cosmos that we see in the present day. Another way to frame the primordial "separation" or "fragmentation" event is to use the word "hiding"; the Tao is metaphorically playing "hide and seek" with itself. Thus "Self"-discovery is what "learning" is ultimately all about. Personally, I use the phrase Feedback Principle to frame this process. Battista and Friston frame the Feedback Principle in different ways, but we are all referring to the same process of updating our understanding and elevating our consciousness by assimilating the outer world into the inner world.





Chapter V-14

① SUSANNE COOK-GREUTER — EGO DEVELOPMENT THEORY

Last up in the series of chapters on theories of human psycho-social development is the work of Susanne Cook-Greuter (SCG). She is a late contemporary of many other researchers in the field of developmental psychology (DevPsy). She has been active mostly during the fourth quarter of the 20th Century and the first quarter of the 21st Century. She referred to her model as Ego Development Theory (EDT). She and the other DevPsy researchers contributed to the field from different perceptions and perspectives, but they basically discerned the same pattern, the Natural Sequence pattern, as I hope to demonstrate to the reader's satisfaction. This is the last individual discussed in this Part of the book, and the best in terms of correlation with the Natural Sequence schema. To my way of thinking, this indicates that the academic world, over decades of empirical research, is catching up with, and has now confirmed, the Natural Sequence theoretic framework.

Most of the following discussion is borrowed from a PDF found here: <http://www.cook-greuter.com/Cook-Greuter%209%20levels%20paper%20new%201.1%2714%2097p%5B1%5D.pdf>. It is 97 pages long, and it was published in 2013. She said that it was intended to be a summary for a future book. Henceforth, I will refer to that as Cook-Greuter's "thesis"; it is her lengthiest document that I was able to find on the internet. In addition to that thesis, another excellent introduction to her work is found on the internet at this website: <https://www.sloww.co/ego-development-theory-cook-greuter/>; written by Kyle Kowalski, it is the second lengthiest document that I was able to find on the internet that discusses her work. Yet another introductory document, by Cook-Greuter herself, can be found here: https://integral-review.org/issues/vol_14_no_1_cook-greuter_construct_aware_stage_and_the_fool_archetype.pdf. There are other internet resources galore.

Introduction to Ego Development Theory

In her own words, Cook-Greuter indicates what is better and what is unique about her model, compared to other models, some of which are reviewed in this Part of my book. As usual, in the following quotation extracted from internet sources, I underline words for emphasis, I place clarifying words and phrases in [brackets], and I intersperse my explanatory comments between paragraphs of quoted text.

EDT has come a long way since Jane Loevinger's original (1970) and sparse stage descriptions compared to our current understanding of the full trajectory of development, and the mechanisms, and patterns of vertical growth in the personal realm [Holarchy Principle].

Loevinger and her model of so-called "ego" development were discussed in a previous chapter. There it was explained that the word "ego" refers to a person's "self-concept", and that word was defined there. Thus, that explanation and that description apply to the work of SCG in this chapter. The directionality metaphor of 'vertical' development is typical of most models; it is as if the later stages are stacked upon the earlier stages.

What makes EDT unique and different from other theories in the field of constructivist [structured, systematic] developmental approaches [Holarchy Principle] is its focus on meaning-making. EDT addresses the whole person. It is best understood as a framework that portrays the growth of individuals as moving into ever greater awareness and integration about both the inner and the outer world. Although EDT focuses on the development of individual awareness, it fully recognizes that there is no individual interior development outside a cultural and linguistic surround, nor is individual growth possible without the external context (historical, geographic, infrastructure, etc.) as it supports and constrains what is possible in the interior. [Feedback Principle]

A previous chapter, on the work of Robert Kegan, also focused on meaning-making, and I saw a reference that SCG was his student at Harvard, where she received her PhD in education. It is because the EDT is said to

be holistic in terms of both the individual and the environment that I assign it to the class of developmental models that are focused on the Neutral Assimilation Dimension of human experience, more than the Action, Inspiration, or Expression Dimensions, as some other models are. In the quotation above, with the words “development, growth, greater, integration” we see a description of the Holarchy Principle of the Natural Sequence schema. In the quotation above, with the words “inner, outer, interior, external, surround” we see a description of the Feedback Principle of the Natural Sequence schema.

EDT has been developed and refined over at least 40 years by empirical means unlike almost all other developmental approaches which first propose a theory, then find appropriate means to measure their constructs. EDT is a grounded theory. It was derived solely based on evidence from responses to the sentence completion test which we now call the MAP (Maturity Assessment Profile). [thesis, pp. 3-4]

What I find remarkable and gratifying and validating is that the empirical method that Cook-Greuter employed to discern the stages of ego development is also predicted by a structured, systematized “theory”, namely the Natural Sequence theory. It is not a perfect match, but it fits better than most other developmental models reviewed in this Part. I would suggest that applying both theory and testing is the best way to arrive at the most accurate picture. So far as I know, there is no deeper and broader and higher theory than the Tao’s Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix.

Definition of Ego Development

In her own words, here are SCG’s own definitions of what her work is all about, in addition to and as distinct from the work of other developmental psychologists:

What is Ego?

It is ego’s function to ceaselessly interpret experience and to try to make coherent sense of it. If you prefer the hard sciences, you can think of ego as the central processing unit. If liberal arts are more your style, ego as the story teller names it well.

Ego represents the striving of human beings to understand themselves and the world they live in. It is the tireless organizer, interpreter, and synthesizer of experience. Its task is to turn experience into a coherent narrative about the world. How does it do that? It does so by telling a culturally-influenced story about who we are, why we are here and for what purpose.

Ego underlies the universal drive to explain everything and make us feel safe [Action Dimension], important [Expression Dimension], and to belong [Inspiration Dimension].

The paragraph just above is the first clue that SCG’s EDT is aware of the Dimensionality Principle of the Natural Sequence schema. Further on, we see this stated explicitly.

Ego labors mightily to create and maintain meaning and vigorously defends against dissonant information and its deep, unspeakable sense of helplessness.

The paragraph just above is the first clue that SCG’s EDT is aware of the Dialectic Principle of the Natural Sequence schema, with its Positive and Negative Poles. Further on, we see this stated explicitly.

The more one strives for greater insight and seeks detachment from ego, the more attached one is to whatever one is seeking.

Ego tries to usurp even the loftiest spiritual notions to feel good about itself. Trungpa Rinpoche famously diagnosed this tendency as “spiritual materialism”.

You may refer to >https://en.wikipedia.org/wiki/Ch%C3%B6gyam_Trungpa< for a biography of Trungpa; he was a prominent Buddhist guru. This quotation is a clue that, in her DevPsy model, SCG delved into transpersonal levels, levels that transcend the personal ego. Further on, we see this stated explicitly.

What is Human Development?

Human development in general can be looked at as a progression of different ways of making sense of reality or in a sequence of stages of meaning-making.

Overall, human development as I describe it, moves from the newborn’s unconscious union with mother to a conscious union with everyone and everything.

Here again we have a clue that the EDT includes spiritual and mystical levels of being.

Development from birth to adulthood shows an overall trend of increasing differentiation towards an independent, well-defined, individual self-identity or self-authorship.

There is wide consensus that human beings are born undifferentiated and symbiotically merged with their initial caregivers. Good adjustment in adulthood depends on the successful solution to the problems of these earliest periods in life including developing a separate self-identity as well as adequate psycho-sexual [Action Dimension], intellectual [Expression Dimension], emotional, social, and moral development [Inspiration Dimension].

There is another clue that EDT is aware of the Dimensionality Principle of the Natural Sequence schema.

To summarize, mature integration as a human being entails an increasing capacity to notice ego's workings. At the same time, we can lighten-up and experience the simple and childlike joy of being alive. We can delight in the senses and our inner world — moment-to-moment as well as appreciate the lives and struggles of humanity. [Extracted from the Kowalski compilation of SCG quotations.]

One of the reasons that I made this DevPsy Part of the Cosmogony book so lengthy is my belief that coming to an understanding of DevPsy is one of the most life-affirming and life-enriching endeavors we can undertake. Thereby, we come to understand ourselves and others and our place in the world, which makes for a better life all around. This theme is continued in the next section.

What We Learn from Developmental Psychology

SCG's list of tenets of developmental theory is so good and so applicable to this Part of my book, and to the Natural Sequence as instantiated in the human story, that I chose to quote it here. My explanatory comments are interspersed between quoted paragraphs, and there are some explanatory words in [brackets], and I underline some words for emphasis:

In general, full-range human development theories share most of the following assumptions:

- Development theory describes the unfolding of human potential towards deeper understanding, wisdom, and effectiveness in the world.
- Growth occurs in a logical sequence of stages or expanding worldviews from birth to adulthood [and into old age]. The movement is often likened to an ever-widening spiral.

Some other sources apply the word “worldviews” to the stages, as do I. The allusion to the so-called “spiral” graphic is probably about Spiral Dynamics, reviewed in a previous chapter. SCG compares and contrasts her research and model with that model about as much as with any other model.

- Overall, worldviews evolve from simple to complex, from static to dynamic, and from ego-centric to socio-centric to world-centric.

Broadly speaking, “ego-centric” aptly applies to the Ordinal triad of stages of the Natural Sequence schema, “socio-centric” to the Neutral stage, and “world-centric” to the Cardinal triad of stages.

- Later stages are reached only by journeying through the earlier stages. Once a stage has been traversed, it remains a part of the individual's response repertoire, even when more complex, later stages are adopted as primary lenses to look at experience.

Most of these bullet points are different ways to describe the Holarchy Principle of the Natural Sequence schema. As we proceed, I point out other Principles.

- Each later stage includes and transcends the previous ones. That is, the earlier perspectives remain part of our current experience and knowledge (just as when a child learns to run, it doesn't stop to be able to walk). Each later stage in the sequence is more differentiated, integrated, flexible, and capable of optimally functioning in a rapidly changing and ever more complex world.

On the other hand, if a person gets stuck below a ‘ceiling’ of development that is lower than that of their socio-cultural environment, then that person is at a disadvantage regarding living up to the descriptions in the above bullet point and some of those below.

- People's stage of development influences what they notice and can become aware of, and therefore, what they can describe, articulate, cultivate, influence, and change.

Not only does a person's stage tell you what experiences and phenomena they are focused on, it tells you what they cannot even see to focus on.

- As healthy development unfolds, autonomy, freedom, tolerance for difference and ambiguity, as well as flexibility, self-awareness, and skill in interacting with the environment increase while defenses decrease.

The opposite of the above bullet point can be said about unhealthy development up through the stages:

- Derailment in development, pockets of lack of integration, trauma and psychopathology are seen at all levels. Thus later stages are not [necessarily] more [well-]adjusted or “happier”.

There can be serious challenges at the transition to all stages that limit a person’s satisfaction in life. Furthermore, the older and wiser a person becomes, the more they tend to realize that the problems in the world *cannot* be fixed, especially not by the simplistic and foolish notions in the minds and hearts of those lower–earlier in the stages of maturity. Because people in higher–later stages tend to be empathetic, this realization can make them sad.

- A person who has reached a later stage can understand earlier worldviews, but a person at an earlier stage cannot understand the later ones.

That stage-related limitation on perceptions and understanding is one of the most important things that we can learn from the study of developmental psychology.

- The depth, complexity, and scope of what people notice can expand throughout life. Yet no matter how evolved we become, our knowledge and understanding is always partial and incomplete.

In fact, it has been said that the more you know, the more you understand that there is much more to know. Some people develop epistemic humility as they age; it does not say it here, but others become “know-it-alls”.

- Development occurs through the interplay between person and environment [Feedback Principle], not just by one or the other. It is a potential and can be encouraged and facilitated by appropriate support and challenge, but it cannot be guaranteed.

Some people, especially people on the lower–earlier end of the DevPsy spectrum, are extraordinarily resistant to learning from their mistakes because they blame everything that goes wrong on something or someone other than themselves.

- While vertical development can be invited and the environment optimally structured towards growth, it cannot be forced. People have the right to be who they are at any station in life.

Take that to heart next time you encounter someone who seems unbelievably stupid, ignorant, and/or foolish compared to you.

- The later the stage, the more variability for unique self-expression exists, and the less readily we can determine where a person’s center of gravity lies.

I also have noticed that phenomenon. People become more difficult to stereotype and pigeon-hole as they age, both in terms of their Life-Stage and in terms of their inherent Worldview. It is not that the model becomes ambiguous in the higher–later stages; it is that people become ambiguous because the higher–later stages are inclusive of all the lower–earlier stages. It is also the case that people in higher–later stages are more flexible in terms of being able to imitate lower–earlier stages where and when appropriate, in order to effectively fit in. This is a corollary to the statement above, that the higher–later stages can understand lower–earlier stages but not *vice versa*. Speaking more specifically, this makes it difficult to discern whether a person is in the Cardinal Zones of the Collectivism Worldview or somewhere in the Holism Worldview, because both have perceptions dominated by Cardinality *per se*.

- All stage descriptions are idealizations that no human being fits entirely. [thesis, pp. 2-3]

This is why it is wise to be familiar with many developmental psychology models and personality typologies: they will broaden and deepen your perceptions of other people.

If I were to quote SCG’s entire thesis, I could intersperse an abundance of similar comments to what you see above, but of course that is not appropriate here. I highly recommend that my readers also read her stuff.

The Dimensions of Ego Development Theory

In quotations from SCG above, there were hints of the Dimensionality Principle in the EDT, and I said that there would be an explicit statement about it further on. Well, here we are, further on.

SCG had this to say about dimensionality in the EDT:

EDT describes a psycho-logical (sic) system with three major interrelated components or dimensions of meaning-making. It tries to give answers to a set of essential questions that describe the experience of being a human being as shown in [the] Table ... below.

The operative [Action Dimension] component looks at what adults see as the purpose of life, what needs they act upon, and what ends they are moving towards. The affective [Inspiration Dimension] component deals with

emotions and the experience of being in this world. The cognitive [Expression Dimension] component addresses the question of how a person thinks and reasons about him or herself and the world. It is important to understand that each stage emerges from a synthesis of doing, being and thinking despite the term logic, which may suggest an emphasis on cognition. It seems that cognitive capacity is a prerequisite for continued growth, but it is not sufficient for gaining ego maturity. Many very smart people who score high on intelligence tests, score at the conventional levels of ego development precisely because maturity and wisdom are not the same as complex reasoning applied to solving specific cognitive tasks.

Good to know that pure native intelligence helps to gain wisdom, but that they are not the same thing.

The following is a redrawing of a table found on page 14 of SCG's thesis.

Table V-14a — QUESTIONS about THINKING, BEING, and DOING at EACH STAGE	
DIMENSION	EGO DEVELOPMENT THEORY, A PSYCHO-LOGY OF HUMAN MEANING-MAKING WHICH ADDRESSES THE FOLLOWING ESSENTIAL QUESTIONS:
DOING * coping * needs and ends * purpose	1. <u>Behavioral dimension</u> What are the needs they act upon, and what ends do they try to achieve? What goals do they move towards and what life vision do they carry out. How do they cope and master their lives? What function do others play in an individual's life and how do people interact?
BEING * awareness * experience * affect	2. <u>Emotional dimension</u> How do individuals feel about things? How do they deal with various affects? What is the range and depth of their awareness? How are events experienced and processed? What are the preferred defenses?
THINKING * conceptions * knowledge * interpretation	3. <u>Cognitive dimension</u> How does a person think? How do individuals structure [their] experience, how do they explain things, make sense of their experience? What is the logic behind their perspectives on the self and the world? What is object and what is subject, that is, what can they see and acknowledge and what remains hidden from awareness?

My comments on this table are as follows:

- **DIMENSION:** The first column uses the same word, "Dimension", that I use to refer to the same phenomenon in the Natural Sequence, namely the tripartite realm of our experience. Her "Doing, Being, Thinking" categories correlate with Ordinal Action, Ordinal Inspiration, and Ordinal Expression in the Natural Sequence schema. Other names for a specific Aspect of those Dimensions in the Natural Sequence and Process/Aspect System terminology are Motion Center, Emotion Center, and Intellect Center respectively.
- **EGO DEVELOPMENT THEORY:** If there is any skepticism about what I said about the realms of those three Dimensions of life experience, the descriptions in the second column should remove all doubt.

Tabulation of EDT Stages

In the following table, I am quoting the material at such an extensive length because it provides an excellent corroboration of the Natural Sequence Worldview/Zone schema, which I regard as the pinnacle of theoretical models of the Cosmos. I also regard the EDT as the pinnacle of empirical, formal, academic, DevPsy models.

In her thesis, SCG has a section on the bell-like distribution of the EDT stages. This means that, via empirical testing, she found that there are few people at the lower-earlier end of the spectrum, few people at the higher-later end of the spectrum, and most people were in the middle of the spectrum. This is very similar to the statistical distribution of IQ scores, where the vast majority of people score near the top of the hump, and the bell-shaped curve slopes off to both sides: there are few idiots and there are few geniuses. This same phenomenon is also present with the Worldviews of the Natural Sequence schema. The bell-curve distribution is not the case with Life-Stages: in a stable population, there are about as many children as there are seniors. This leads me to believe that SCG's particular kind of word-completion test is screening for Worldviews rather than some of the other DevPsy tracks reviewed in this Part, which are mostly focused on Life-Stages.

As is my custom in this Part of the book, the most primitive stage is shown at the bottom of the table and the most advanced stage is shown at the top of the table, so you might want to read the table from bottom to top.

Table V-14b — EGO DEVELOPMENT THEORY per SUZANNE COOK-GREUTER	
STG	DESCRIPTION
	<i>[CARDINAL ZONES OF THE HOLISM WORLDVIEW]</i>
6	<p>UNITIVE (cosmic, ego-transcendent or witnessing perspective): To summarize, Unitive adults are more likely to have a balanced, integrated sense of both their belongingness and separateness as individuals because they feel part of the ongoing evolution of the universe in all its aspects and cycles of creation, destruction, and recreation.</p> <p>Awareness & Understanding: At the next level of integration, the Unitive perspective, reality is understood as the undifferentiated phenomenological continuum or chaos, the creative ground, 'das All,' or whatever other terms human beings have created to express this awareness of an underlying unity. Reality is now regularly experienced as the undifferentiated phenomenological continuum or the creative ground of unified consciousness. Every object, word, thought, feeling and sensation, every theory is understood as a human construct: separating out, creating boundaries where there are none. The quest for meaning and connection is an essential aspect of the human condition. Giving names to experience and making distinctions is necessary for human growth, study, interaction and communication, but at the source there is nothing to distinguish. They can take multiple points of view and shift focus effortlessly among many states of awareness. The Truth is immanent in the universe and can be apprehended in this ready, open-process stance, but it cannot be grasped by rational means and by making an effort. Unitive individuals therefore seem to transcend narrow ego-boundaries. They have open boundaries and are attuned to rather than preoccupied with whatever enters awareness.</p> <p>Witnessing: It seems that the Unitive stage presents an entirely new way of perceiving human existence and experience of consciousness. The term witnessing (rather than observing) can be used here to describe the capacity of people at this stage to metabolize experience without the conscious, willed focus and preoccupations of other adult stages. Individuals at this level are now able to witness the whole song and dance of prior ways of understanding and meaning making with compassion and equanimity. They understand the need of the personal ego to ensure a sense of permanence and substantiality while at the same time recognizing the illusion of this desire for permanence. The previous way of viewing reality solely from the self's perspective and through the medium of language is transformed. The new paradigm has a universal or cosmic perspective as an organizing principle and as a steady place from which meaning is derived. It is non-centered in the ego although the ego is available as a perspective when useful. Unlike state experiences that gave people glimpses of mystical or unitive experiences, now these are steadily available in the witnessing stance. Unitive persons have a completely internalized transpersonal or interindividual morality. Inner conflicts and conflicting external demands simply are part of being and need not be resolved or denied, only witnessed.</p> <p>Paradox Integration: The two sides of the Pascalian paradox are integrated: feelings of belongingness and feelings of one's separateness and uniqueness are experienced without undue tension. They are simply changing perceptions of the unending possibilities of being. Consciousness or rational awareness is no longer perceived as a shackle, but as just another phenomenon that assumes foreground or background status depending on one's momentary attention. Persons at the Unitive stage can see a world in a grain of sand, that is, they can perceive the concrete, limited, and temporal aspects of an entity simultaneously with its eternal and symbolic meaning. They feel embedded in nature — birth, growth and death, joy and pain — are seen as natural occurrences – patterns of change in the flux of time.</p> <p>Ongoing Humanity: Unitive individuals experience themselves and others as part of ongoing humanity, embedded in the creative ground, fulfilling the destiny of evolution. At this level of integration, adults can look at themselves and at other beings in terms of the passing of ages, of near and far in geographical, social, cultural, historical, intellectual and developmental dimensions. It is important to realize that from a unitive point of view, later stages are not better than earlier ones because all are necessary parts of interconnected reality and the overall evolutionary process. Unitive perceivers can shift focus without effort and behold the whole simultaneously with its constituting variables. They operate within an expanded time frame which includes all of earth's history and its future as a part of this moment. Life is seen as a form of temporary and sometimes voluntary separation (Bodhisattva vow) from the creative ground to which it will always return and of which it is a unique manifestation. Unitive adults have an integrated sense of a unique identity as participants in the evolution of the Cosmos. They are in tune with their precious 'life's work' as a simultaneous expression of their unique selves and as part of one's shared humanity. They also care about the fundamental dilemma of the human condition. They work for justice, fairness, and benevolence towards all. [Kowalski compilation of SCG quotes]</p> <p>Relation with Others: Because of this unitive ability they can cherish the humanness in the seemingly most undifferentiated beings and feel at one with them. They respect the essence in others and therefore do not need them</p>

Table V-14b — EGO DEVELOPMENT THEORY per SUZANNE COOK-GREUTER

STG	DESCRIPTION
	<p>to be different than they are. Stage 6 individuals feel interconnected with others as all sentient beings struggle to survive and make sense of their existence. Persons at the Unitive stage feel tolerance, compassion and an affiliation with all manifestations of life. The simplest flatworm is in some way as close to the truth as the most sophisticated thinker. Though adults at the Unitive stage are aware of themselves as separate and unique embodiments, they also identify with all other living beings. The separation of self from others is experienced as an illusion, an invention to safeguard the ego's need for permanence and self-importance and to defend against the fear of its death. Unitive individuals seems to have intense, non-demanding relationships with people regardless of their development, age, gender, or any other identifications. Because they see the dignity in all manifestations of life, others feel worthy and whole in their presence. Being down-to-earth (simplicity on the other side of complexity) can be one of the most salient differences between postconventional ego stages and transpersonal ways of meaning making. On the other hand, individuals at this most mature ego stage may be perceived as 'aloof,' as not enough engaged in the goals, pursuits, concerns of common humanity especially from the perspective of individuals at the Self-conscious and Conscientious stages 3/4 and 4. Even early postconventional people may be suspicious of this kind of 'togetherness or groundedness.' What is not evident to these critics is that Unitive adults often act as catalysts in shaping others' lives. In being what they are without excuses, they challenge others' perspectives, and demonstrate a way of being human that is different from the evaluative, conventional ideas about what it means to be an adult. They manifest a deeper security about being than is possible with a rationally generated self-identity.</p> <p>Acceptance & Openness: Unitive thinkers also accept themselves 'as is' in a non-controlling way. No matter how great their achievements may be, they are aware that these are only a drop in the pool of ongoing human endeavors. They are no longer driven by desires to be one way or another, to achieve one state or another. Instead they can let go of the unattainable and rest in the experience of being. They are concerned with global justice, spontaneity, existence & creativity but create no undue tension around goal achievement. Rather than being passive, the non-attached, impersonal stance allows for greater and more direct and powerful action where action is needed. Non-attachment to outcomes is an essential and liberating aspect of witnessing and acting out of non-defensive, spontaneous insight. From moment to moment only the present is real. Radical openness releases individuals to be in tune with goodness, truth and beauty and to relish them wherever they are present which is everywhere. They have visionary experiences, that is, they comprehend things in a holistic, analog way in addition to apprehending them through the filter of the personal ego. Though taking responsibility for meaning making, they don't perceive themselves to be the sole and lone masters of their souls as envisioned by Autonomous individuals and to some degree Construct-aware people. Ways of being are infinite. Clues for the variety of possibilities of being are offered by the study of human history, by our current experience of human diversity and likely with new forms of being human evolving in the future, in nature, and in alternative, non-waking states of consciousness. Life can appear as fulfilling a cosmic purpose and therefore it is essentially simple. Doing or thinking are just modes of existing, but not intrinsically more valuable than feeling, being or non-being. The last is probably the most difficult idea to grasp by most people who have not developed beyond the personal realm. As a Buddhist percept warns: Understanding is the ultimate illusion.</p>
	<p>TRANSCENDENT STAGE(S) (<1% of population): [above] ... the Unitive stage is a catch-all stage for the ego transcendent realm of human development. Further study and using different methods of exploration will likely lead to further differentiations and insights into the nature of unitive understanding. Clearly such subtle distinctions already exist both in Ancient Eastern texts as well as in the eyes of Western observers (Brown and Engler, 1978). It is regrettable that the inherent limitations of the radical empirical method I adopted from Loevinger does not render such information. Terri O'Fallon (2010) has recently attempted to refine and extend the conception of the postautonomous stages by Wilber's AQAL model as a scaffold and reinterpreting the distinction between stages and states of consciousness based on her research and experience. [SCG thesis, p. 74]</p>
5/6	<p>[ORDINAL ZONES OF THE HOLISM WORLDVIEW]</p> <p>CONSTRUCT-AWARE/EGO AWARE/MAGICIAN/ALCHEMIST (fifth person perspective and beyond): The Construct-aware and the Ego-aware Stage 5/6 is the final observed differentiation in the sequence of overall differentiation or separation from a previous worldview on the path to an ever greater integration or union. As a stage of differentiation, the 5th person perspective again questions everything that seemed to hold true and be certain up to this point. Indeed, an all-pervasive uncertainty is one of the characteristics of this stage. It is precisely in the tension between polar opposites that the most active engagement with life is experienced. This includes comparing and integrating multiple systems and paradigms. It also includes realizing our human need for map making and trying to organize experience and knowledge into ever more complex matrices and metatheories. For some adults the search for an integrated, enduring self-identity is superseded by a more immediate, fluid and process-oriented self-view. It seems that the systems view of reality can give way to a more flexible, continuously deconstructing, non-reified notion of self in a rare transformation beyond it. I originally named the 5th person perspective as the Construct-</p>

Table V-14b — EGO DEVELOPMENT THEORY per SUZANNE COOK-GREUTER

STG	DESCRIPTION
	<p>aware stage because becoming aware of the constructed nature of reality it is one of the most salient characteristics of this stage distinguishing it from prior stages. We have found it useful to distinguish between two forms of embodying this stage: A) the Construct-aware and B) the Ego-aware.</p> <p>A) THE CONSTRUCT-AWARE EXPRESSION OF STAGE 5/6: The Construct-aware stage represents folks who are aware that meaning is constructed, invented, generated rather than inherent in things, events and concepts. At the same time, Construct-aware people try with great ingenuity and dedication to create super theories or multidimensional maps or tapestries of reality. They attempt to integrate whatever other theories they are aware of into an ever more complex and comprehensive theory of everything. Thus some Construct-aware individuals spend a lifetime creating such theories in order to provide the meta-perspectives or supermaps they feel are going to help themselves and others to better understand the complexity of human affairs. Still others with the 5th person perspective begin to fathom the cognitive dimension of meaning making itself. They start to wonder about the meaningfulness of more and more complex thought structures and integrations such as can be imagined with a fifth or nth person perspective. Playing the complex numeric abstractions and formulas game is one way the ego can increase its sense of control and meaning. It also seems to please some individuals to demonstrate their capacity for mental gymnastics. Making the most of this talent and sharing it is a perfectly valuable contribution to the knowledge quest. But for those more interested in the quest for meaning, the simple question arises in the face of hypermentalism ‘so what?’ How does ever more cognitive complexity serve our daily living and our understanding of the human condition? Some Construct-aware individuals therefore may also begin to realize the absurdity or automatic limits of human map making in the discursive, representational domain. Becoming conscious of the futility of describing reality by ever more complex maps and approximations can lead individuals to suffer greatly as they experience the limits, but have no way to transcend them with the same rational means that have brought them to grasping this state of affairs. An altogether different relationship to knowing is necessary.</p> <p>B) THE EGO-AWARE EXPRESSION OF STAGE 5/6: “To summarize, Postautonomous meaning seekers are capable of perceiving the structure of their own thinking and feeling habits, comparing them to that of others and discovering the fundamental limitations of all rational thought and the limits of language. Usually they come across as very bright, but often impatient with their own cleverness as they see it as just that. They are intrigued by the human need for meaning making and its ubiquitous expression across time and the known world. They understand for the first time the underlying process of how such meaning is constructed through the invention-construction of ever more complex theories. These are based on the segmentation and reification of the underlying flux of phenomena. Thus they are often preoccupied with the limits of discursive meaning making and with learning how to live with the existential paradox of being a mortal yearning for significance and immortality. In contrast to the Construct-aware insights, Ego-aware individuals tend to be people who have become aware of the pattern of development that encompasses an ever broader realm of experience, action, feelings and thought. Above all they may viscerally get the absurdity of trying to understand reality with the mind and via representational means alone. The 5th person perspective enables them to analyze both their own becoming and the evolving theories about their own becoming as well as to begin to notice the fundamental need for orienting frameworks or stories that are at the heart of all human meaning making across the globe regardless of culture. They realize that the ‘ego’ has functioned both as a central processing unit for all incoming stimuli (ego as process) and as a central point of reference for self-identity formation (ego as representation). When the ego becomes transparent to itself, it may well desire ego transcendence, but the very attachment to detachment creates the paradoxical situation of exacerbating the attachment. The more one tries to move beyond with greater effort, the more one gets stuck. Noticing and experiencing such existential dilemmas is common at this stage. Final knowledge about the self or anything else is seen as illusive and unattainable through effort and reason because all conscious thought, all cognition is recognized as constructed and, therefore, split off from the underlying, cohesive, non-dual territory. By turning further inward, Ego-aware persons start to see through their own attempts at meaning making. They become aware of the profound splits and paradoxes inherent in discursive thought. The interconnected nature of concepts only becomes obvious at the post-conventional stages and then with increasing sharpness and clarity. Concepts make sense only in conjunction with their surround and their polar opposite. Good and evil, life and death, beauty and ugliness are now recognized as two sides of the same coin. They mutually necessitate and define each other. While polarities as used in polarity dynamics can be understood as pairs of interdependent values at earlier levels, here, a deeper understanding of the discursive conceptualizations and abstractions is sinking in, namely how these are created in the first place. Some Ego-aware individuals can become aware how the constant and automatic judging habit of what is good and what is not creates much of the unhappiness and striving for betterment so prevalent in ordinary waking consciousness. In general, Ego-aware individuals have a dynamic and multi-faceted understanding of human nature and the complexities of human interaction. They want to face their own profound need for theories and explanations. They hope to unearth the limits of the rational mind, and to unlearn their automatic, conditioned responses based on memory, acquired</p>

Table V-14b — EGO DEVELOPMENT THEORY per SUZANNE COOK-GREUTER

STG	DESCRIPTION
	<p>distinctions of what is good and bad through continuous, everyday cultural reinforcement. Ego-aware individuals start to pay attention to their own emotional and rational processing patterns. To watch oneself trying to make sense is intriguing and absorbing and can become all-consuming. Living at the edge of meaning and meaninglessness can be exhilarating at times and frustrating at others. Whether individuals at this level focus more on the liberating aspects of their awareness or more on the disillusionment and sense of loss that come with this mindset probably depends on many factors: among them personality type, the company of understanding others, and general life circumstances. One must learn to live in the tension of the paradox that as a human being one must embrace one's need for meaning while, simultaneously, understanding the futility of such an endeavor. At the Ego-aware stage not just cultural conditioning is seen through, but the predicament of living in language. In general, Ego-aware individuals try to remain aware of the pseudo-reality created by words. They realize that the pursuit of objective self-identification and rational, objective explanations of the universe are futile—artifacts of our need to make permanent and substantive that which is in flux, immaterial, and impermanent. As the process of self-awareness deepens and reasoning becomes further differentiated for individuals at the 5th person perspective, access to intuition, bodily states, feelings, dreams, archetypal and other transpersonal material increases. More than that, these sources of knowledge can become as important as rational deliberation for making sense of experience and for finding meaning in life. Most importantly, the more regular practice of turning inward and observing one's own mental processes also often leads to the spontaneous experience of a direct mode of being in which knower and known momentarily merge, and the personal self-sense disappears. Ego-aware individuals report more often than people at earlier stages that they are watching or witnessing the parades of thoughts and feelings come and go without trying to direct them. Thus, they experience moments of freedom from the ego's constant efforts at control and self-affirmation. Yet, at this stage, such experiences are short-lived. As soon as one evaluates and judges them, the magic is broken. Sometimes Ego-aware folks express a sense of envy at the simplicity of earlier periods because their own world is experienced as so complex. However, given their ego maturity, most are capable of arriving at a dynamic and hopeful balance within these fundamental conflicts: They fulfill their perceived or chosen destiny independently and courageously in full realization of their basic despair and aloneness. Ego-aware individuals represent the first stage that looks at all experience fully in terms of ongoing fluctuations. In terms of theory, one builds edifices of knowledge and dismantles them as soon as they are erected. In terms of the heart, one may feel any emotion and then question its very validity and appropriateness as soon as it is felt or expressed. When people with a postautonomous perspective choose to work in the public, they often rely on their fine-tuned interpersonal skills and insight into others' complex and dynamic personalities. As leaders, they tend to build their own novel organizations or work alone doing what they perceive to be their best contribution to humanity. Unlike earlier levels, they are less concerned with success and rewards for their efforts. Sowing seeds that may take a long time to germinate if at all, is part of what one does because one can do no other. The 5th person frame of mind with its deep questioning of meaning making is open to not-knowing that no previous stage can fathom. It provides a constant level of awe and wonder about being a human being and the mystery of consciousness development. In light of this, a good indicator that someone is able to look at himself and others' from this altitude is a profound humility about the limits of knowing. [Kowalski compilation of SCG quotes]]</p>
5	<p>[CARDINAL ZONES OF THE COLLECTIVISM WORLDVIEW]</p> <p>SELF-ACTUALIZING/AUTONOMOUS/STRATEGIST (<u>expanded fourth person perspective</u>): The Autonomous stage represents an enlarged fourth person perspective which places the individual's experience into the context of multiple worldviews and within people's whole lifetime. Cognitively Autonomous persons have a general systems view of reality, that is, they can comprehend multiple interconnected systems of relationships and processes both internally and externally as these are experienced as connected. The expanded 4th person perspective is now truly world-centric. While earlier stages may express world-centric values and goals, Strategists embrace the tenets of a global worldview and can embody them. They have internalized systems thinking. They not only see the interconnected aspects of the external world, but also that of their own meaning making. With the expanded time frame and wider social networks, Autonomous persons can perceive systemic patterns or long-term trends and are often valued for that 'strategic' capacity and vision. The Autonomous stage is the first level that fully recognizes the need and value for the existence of all stages both in terms of diversity in society as well as in terms of one's own development. At least, in the ideal. They are capable of 'owning' and integrating many disparate parts of themselves. Loevinger called this stage 'autonomous' because individuals can now make meaning autonomously, independent of conventional ideas. While one cannot change reality, one has the freedom to interpret it to serve one's own preferences and to make choices about life and who one wants to be. Autonomous persons consciously commit to create a meaningful life for themselves and for others in the world through self-determination and self-actualization. They realize that the way they tell their life stories changes with additional experiences and insights. Strategist possess a relatively strong, autonomous self sense that is both differentiated and well integrated. With their expanded awareness, Strategist use</p>

Table V-14b — EGO DEVELOPMENT THEORY per SUZANNE COOK-GREUTER

STG	DESCRIPTION
	<p>even more channels of information to make their moves. They are often conscious of energy dynamics (physical and otherwise), and notice underlying patterns that only emerge over longer period of time. They also have a deeper appreciation than any prior stage of how challenging it is to be a mature, responsible adult and how rare their own capacities are compared with most other people they are in contact with. Strategists are often motivated and infused with a grand purpose and a vision of what could be. Unlike Pluralists and Individualists, however, their enthusiasm is based on high ideals as well as on a more realistic view of what it takes to change old patterns in self, in organizations, and in society. Strategists want to hone themselves therefore as instruments of change. They realize that they need to be the most they can in order to be of most service to others. Wanting to help others evolve is one of the strongest motivators for Autonomous persons. When this need to have others 'become the most they can be' encounters resistance, Autonomous persons may feel impatient with others' pace of development and frustrated with their 'unwillingness' to grow despite their efforts and support. This need to have others transform is one of the central flaws of this stage along with an attachment to knowing and being coherent. Many Autonomous persons see life as an open-ended journey. It is at the Strategist stage, that individuals begin to see paradox and ambiguity as an inevitable dimension of living and to increasingly tolerate these. Autonomous persons become aware and fluent in using polarity thinking in order to examine issues and tensions. Based on this capacity to integrate and take a metasystematic view of different parts of experience, they tend to be quite certain of themselves and their cognitive and emotional capacity for synthesis and integration. Strategists sometimes present themselves as exemplars of humanity giving off a whiff of superiority. The Autonomous Stage 5 expands cognition to metasystematic operations as people at this stage are now able to integrate different frameworks of the self into a coherent new theory of who they are, that is, into a complex, coherent self-identity. [Kowalski compilation of SCG quotes]]</p>
4/5	<p style="text-align: center;">[ORDINAL ZONES OF THE COLLECTIVISM WORLDVIEW]</p> <p>SELF-QUESTIONING/INDIVIDUALIST/PLURALIST (fourth person perspective): The 4th person perspective represents the next differentiation stage in the sequence of the stage by stage differentiation-integration pattern. It is considered a major watershed in EDT as it signifies the move from conventional to postconventional meaning making. The transition to the first postconventional stage is a watershed in so far as it is the first time that the vertical move and the questioning of previously unexamined ideas is no longer supported by society and its chief conventional representatives. The 4th person perspective allows individuals to stand outside the system they grew up in and observe themselves and their cultural surround from a new altitude ... One can look at the familiar (status quo) through a new lens and query many of its tacit assumptions, values, and beliefs. The 4th person perspective allows individuals to focus on epistemology, that is, to examine how they came to believe what they believe and feel and how one knows and proves things. We cannot help but filter our observations through our personal and subjective lenses. Simultaneously, once we also allow for the validity of others' personal views and perspectives, we can no longer disregard the enormous diversity of people and their beliefs, values and preferences. They are all seem equally valid and worthy of consideration. At this stage of differentiation, individuals realize that all groups and societies see it as their mandate to mold the minds and hearts of their members. What's novel is that they can now perceive how much their values and worldviews have been influenced by the environments into which they were born, in which they were raised, and in which they currently operate ... We have far less control over being 'molded' than we previously understood. Stage 4/5 persons become interested in watching themselves trying to make sense of themselves. This constitutes an important change in thought mode. Individualists-Pluralists abandon purely rational analysis in favor of a more holistic, organismic approach in which feelings, body sensations and context are taken into account. When one fully realizes that most prior meaning making was socially and culturally conditioned, scientific certainty and the judgmental frame of mind break down. A big discovery for this stage is the relativity of points of view. As Stage 4/5 individuals explore their feelings and motivations, they can also begin to become aware of how easily we can fool ourselves.</p> <p>THE INDIVIDUALIST EXPRESSION OF STAGE 4/5: Rather than trying to analyze everything, Individualists want to enjoy their own subjective experience. What can be trusted is one's personal experience, sensations, thoughts and feelings in the here and now. Thus, there is a major shift from the Conscientious person's preference for 'doing' to focusing on 'being and feeling.' Their attention turns from outcomes and deliverables to an interest in the processes, the relationships and the complex, non-linear influences among variables. Individualists are often concerned with making a unique and personal contribution to the world independent of any socially approved roles or tasks. They often withdraw from external affairs and company life, or from ordinary daily routines. Instead, they turn inward in search of their unique gifts or answers to their own burning questions. The more one explores, the more confused one may get. When the overriding feeling becomes 'everything is relative,' and 'there is nothing to hold on to,' cynicism and nihilism can become a way to defend against the feeling of being adrift on a vast unknown sea unmoored and rudderless.</p>

Table V-14b — EGO DEVELOPMENT THEORY per SUZANNE COOK-GREUTER

STG	DESCRIPTION
	THE PLURALIST EXPRESSION OF STAGE 4/5: Pluralists, on the other hand, tend to focus on the multiplicity of voices and contexts. Aware of their own views as interpretations, they do not want to impose these on others. They seek instead to respect and understand all positions. Above all, an awareness of human diversity and multiple perspectives is the powerful and progressive contribution that this stage has brought to human affairs. The over-focus on fairness and voice, can lead to 'decision paralysis' as no one dares to take a lead role, assert a position, or make an executive decision for fear to be seen as unilateral, uncooperative, or oppressive. Indeed, it is one of the more problematic attributes of many proponents of radical pluralism that they judge all hierarchies as oppressive. [Kowalski compilation of SCG quotes]]
POSTCONVENTIONAL STAGES (15-20% of population): The transition from conventional [below this row] to postconventional [above this row] meaning-making also signifies an overall, large-scale shift from increasing differentiation and the creation of an independent self-identity towards increasing integration and deconstruction of the separation developed in the first half of the growth trajectory. The second half of the trajectory ... represents a step-wise deconstruction of the sharp and artificially created boundaries towards an ever deeper identification with all that exists. The second half can also be likened to an ongoing individuation towards a more holistic, full-bodied, and integrated self that is fully aware of its interdependence with other systems and one that can take a perspective on its fundamental non-separateness. This movement can be usefully described in having two layers: A) The General Systems Stages (from stage 4/5 to 5); B) The Post-autonomous Stages (from Stage 5/6 to 6).	
	[CARDINAL ZONES OF THE MATERIALISM WORLDVIEW]
4	SELF-DETERMINING/CONSCIENTIOUS/ACHIEVER (expanded third person perspective): The Conscientious stage is a stage of integration and re-embedding oneself in a larger cultural context, but now on ideological affinities and self-chosen criteria. It is the target stage for much of Western culture. This is the first stage where people grasp that they can continue to grow in mind and heart as adults. The critical new dimension of the Achiever perspective involves a full awareness of linear time along with the need for broader relational social context. The third person perspective allows individuals to look backwards and forwards in life. Conscientious folks deliberately want to find out who they are and what they would like to become by consciously exploring past experiences and choices and thinking about the ideal future self. Bob Kegan coined the felicitous term 'self-authoring' for this level. Our educational systems are geared towards producing adults with the <u>mental capacity</u> and emotional self-reliance of the Achiever stage, that is, <u>rationally competent and independent</u> adults. Our institutions of education, jurisprudence and much of business are based on the premise of independent adults pursuing their self-chosen interests within the given contours of the social environment. Along with expertise, an independent, <u>entrepreneurial</u> , and <u>self-reliant</u> mindset is the <u>financially most well-rewarded</u> stage in the US and much of the West. The major limitation of the conventional mindset is its acceptance of facts and the <u>external world</u> as real and its blindness to the acquired nature of their beliefs. They accept the grand myth of conventional science that all problems can be solved with the appropriate <u>technological inventions</u> , if not yet, certainly in the future. [Kowalski compilation of SCG quotes]]
	[ORDINAL ZONES OF THE MATERIALISM WORLDVIEW]
3/4	SKILL-CENTRIC/SELF-CONSCIOUS/EXPERT (third person perspective): This is a stage of differentiation. A conceptual watershed is crossed when one can take the third person perspective. At the Self-conscious stage 3/4 the focus changes to individual differences away from fitting in and being like those in the original reference group. This stage has a distinctly different clinical feel than earlier stages. Individuals begin to have access to some self-understanding. The Self-conscious stage 3/4 characterizes people who are now able to step back and look at themselves as objects from some distance for the first time. This allows them to begin to notice patterns and to start to reflect upon their own and others' behavior. This capacity to reflect on oneself, however, is as yet rudimentary as most of an Expert's energy is externally focused. Finding your own voice and becoming your separate self identity as an adult is the most widely supported and rewarded movement especially in the modern West with its emphasis on agency and individualism. The transformation from being a part of a group identity to finding one's separate identity and finding one's voice is in many ways the task of healthy adolescent development. [Kowalski compilation of SCG quotes]
	[CARDINAL ZONES OF THE TRADITIONALISM WORLDVIEW]
3	GROUP-CENTRIC/CONFORMIST/DIPLOMAT (expanded second person perspective): This is a stage of integration into a new <u>social</u> container. At the Diplomat or Conformist stage, people make sense of the world in a new way. They now have developed enough skills to get around in the world, accomplish the daily tasks of life and, in general, manage ordinary, concrete things and situations. They now actively want to <u>play by the rules</u> . The Conformist stage 3 describes persons with a frame of mind naturally developed in latency and early adolescence. It is <u>the first stage that</u>

Table V-14b — EGO DEVELOPMENT THEORY per SUZANNE COOK-GREUTER

STG	DESCRIPTION
	<p><u>can be considered as socialized</u>, that is, to know about basic interpersonal skills such as sharing, and protecting one another. One can now trade magical, egocentric thinking for group-centric thinking and the security of being a <u>member of the group</u>. Their self-identity is defined by their relationship to a group. Most importantly, people at this stage see others as important people in their own right. They want to be like those in their environment whom they <u>admire</u>. Conformists tend to <u>accept norms</u> without inspection or questioning. For the Conformist, you are either ally and friend and approve of us and what we do, or you are the enemy. In general, Stage 3 people try to <u>uphold tradition</u> and to avoid rocking the boat. Diplomats expect guidance from above or from those who lead them. They are not yet ready to take a stand to express themselves. Acquiring material assets and status symbols is important as these symbolize status and prove one's worth. [Kowalski compilation of SCG quotes]]</p>
<p>CONVENTIONAL STAGES: The [above] stages cover the ego stages of most people after about the age of 12. We have found that roughly 80% of adults populate these [next] three [higher-later] stages, with most people in the adult working world moving from the Expert to the Achiever stage. [Kowalski compilation of SCG quotes]]</p>	
<p>[ORDINAL ZONES OF THE TRADITIONALISM WORLDVIEW]</p>	
2/3	<p>SELF-PROTECTIVE/OPPORTUNISTIC: This is a stage of differentiation, of emerging out of total dependence on the care of others. At the pre-rational, pre-operational stage children learn to talk with more than one word sentences and begin to use symbols, but they don't yet understand cause and effect or the general rules regarding how the world works. For this reason, even adults at this stage of development tend to use magical thinking to make sense of the world and their place in it. This mindset may work adequately especially in certain cultures and subcultures (prisons), which is why some people stay at this stage, sometimes for a life time.</p> <p>In the modern world, most people at this stage are disadvantaged and considered "uncivilized" while as developmentalists we would say "not yet socialized."</p> <p>This stage is familiar to most people from watching or dealing with young children before they enter kindergarten. For a time, everything becomes a test of wills for two-year olds. Tantrums and hitting are the result of a thwarted will as well as a reaction to conflicting needs and frustrated desires that cannot yet be internally negotiated. At this stage, arguments and logic are useless. These behaviors are also common in adults at the Self-protective stage. They are not capable of insight into themselves or others in a psychological sense. But they have a greater sense of what works and what doesn't, who they can and who they cannot manipulate than the earlier, more helpless stages. Their actions have not only directionality but a target. They know that the only way one can get what one wants is by controlling others and protecting oneself. [thesis]</p>
<p>[CARDINAL ZONES OF THE PRIMITIVISM WORLDVIEW]</p>	
2	<p>IMPULSIVE: Children at the Impulsive stage are governed by their impulses; hence this is called the impulsive stage. They make sense of the world entirely through <u>senses and movement</u>. They don't have many ways to deal with setback, yet they may notice and react when they don't have enough of what [they] want, or when things are away.... At this stage, you're totally dependent upon others, and if you're reasonably well cared for, you make sense of being alive by feedback from your sensations. Magical ideas prevail Adults at this level show signs of the beginning use of language simultaneously with the emerging ego as reflected in such statements as "I want." They assert their budding sense of self by such words as "no," and by expressing ownership "mine." Like young children, adults at this stage are governed by trying to fulfill their basic needs. If these are not met, the Stage 2 persons have little recourse other than crying, screaming, or withdrawing into themselves. They are easily overwhelmed, feel abandoned. The general tenor of this level is a profound sense of helplessness.</p> <p>It is the first stage that is measured with the MAP, and reflects the first-person perspective. This means, people at this level can only look in one direction. The inability to grasp fully some of the verbal clues in the MAP instrument marks the limited understanding of the world characteristic of this stage.</p> <p>Other people are simply seen as objects who can gratify their needs, not as people with their own needs. Good people give to me, mean ones don't. There is cognitive simplicity together with verbal limitations. The impulsive individual has an inadequate conception of the complexities of adult life and of the world and readily appears confused, anxious, and overwhelmed.</p> <p>In most cases individuals at this early adult stage need protective custody, live at home with their parents or in institutions. They need legal guardians as they cannot make decisions for themselves. [thesis]</p>
<p>[ORDINAL ZONES OF THE PRIMITIVISM WORLDVIEW]</p>	
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Table V-14b — EGO DEVELOPMENT THEORY per SUZANNE COOK-GREUTER

STG	DESCRIPTION
	<p>SYMBIOTIC: It is at this stage that infants first begin to construct a stable world of objects for themselves. In doing so, they separate themselves out as objects in the world as well. They can now refer to themselves as “Bobby wants” or “me”. According to the conception of language as a fundamental aspect of meaning-making, the self sense develops in conjunction with the cultural context, the shared language and values as well as the outer reality. These are inevitably intertwined. Development does not happen outside of a viable environment. Strands of development later quite distinct are very much undifferentiated at this stage.... .. adults at this stage are likely pre- or nonverbal and usually institutionalized or completely dependent on the care and protection of others. They do appear in the work world as clients and patients and their care requires great patience, inner strength and compassion.... [thesis]</p>
<p>PRE-CONVENTIONAL STAGES: All development from birth to the beginning capacity for language is subsumed in the Symbiotic Stage 1 in Loevinger’s theory. We follow her tradition and just mention Stage 1 briefly. The Impulsive [Stage 2] to Self-protective [2/3] adult stages are next. These represent a child’s normal maturation from age 2 to about age 12 as well as stages of “arrested” development in adults. We introduce Stage 2 as representative of adults who have already achieved a vital move out of the very earliest totally dependent infant days.... Adults at the Impulsive Stage 2 can generally only survive under the protection of others or in institutions. Mentally delayed and seriously emotionally disturbed individuals are among those adults needing life-long support and protection. A good percentage of adults in some cultures operate from the Opportunist Stage 2/3. Natural disasters, social upheaval and war are some of the threat conditions that invite or may even demand opportunistic behavior for survival. The “Rule-oriented” stage between Self-protective stage 2/3 and the Conformist stage 3 is included here for theoretical reasons as well to show the step-wise evolution of perspective-taking. While common in adolescence, it is very rarely seen in adults....</p>	

My comments on this table are as follows:

1. The descriptions quoted in this table are abbreviated versions of the descriptions in the thesis. Please refer to that document for the full story.
2. The same as with all of the other developmental psychologists, Cook-Greuter does not make a distinction between what the Process/Aspect System matrix refers to as Life-Stages and Worldviews. The former refers to the stages that all healthy people go through during the “story arc” of a full lifetime from birth to advanced old age with its seven “chapters”, whereas the latter refers to the innate, inborn “ceiling” of psychological development or maturity to which healthy people rise during a lifetime, and that top stage becomes their “center of gravity”.
3. The cell of each stage is introduced with the name of the Ordinal or Cardinal phase of the corresponding Worldview in brackets. The last two of the seven Worldviews are omitted because they have so few representatives in the population.
4. The corresponding Life-Stage, from Infancy to Seniority, can be gleaned from the text of the description of the stages. Here again the last two Life-Stages can be omitted because they are usually experienced as a decline rather than as the continuation of the general ascent.
5. As one ascends from the bottom to the top of the table, the description of each stage morphs from mostly a description of the Life-Stage at the bottom to mostly a description of the Worldview at the top. It seems to me that this lack of distinction between the two (Life-Stage versus Worldview) is the major ambiguity in the EDT schema that is absent in the Natural Sequence schema.
6. The designations of the so-called “pre-conventional, conventional, post-conventional” stages came from Lawrence Kohlberg; refer to the earlier chapter on his work. Recall that SCG built on Kohlberg’s work, among others. However, Kohlberg had six stages with two stages in each of those three categories, and that led to a particular way of correlating Kohlberg with the Natural Sequence schema. SCG has ten stages, so that means that there is no way to correlate Kohlberg exactly with SCG, as it means that there is some inconsistency in the correlation of the Natural Sequence schema with Kohlberg and SCG.
7. Notice that the pre-conventional and the conventional stages of the EDT schema correspond to the Ordinal Life-Stages and Worldviews of the Natural Sequence schema. These are the same as the so-called “deficiency” Needs of Maslow’s so-called “Hierarchy of Needs”. These are the same as the so-called “Tier 1” of Clare Graves and Spiral Dynamics. Notice that the post-conventional stages of the EDT schema correspond to the Neutral Life-Stages and Worldviews plus the Ordinal phase of the fifth

Life-Stage and Worldview. Notice that the so-called “transcendent” stage of the EDT corresponds to the Cardinal phase of the fifth Life-Stage and Worldview. The post-conventional and transcendent stages correspond to the so-called “growth” Needs of Maslow’s Hierarchy.

Compared to the clarity of the Natural Sequence schema, the EDT schema seems ambiguous to me — you might have thought the same thing as you read the descriptions — so there was a bit of a struggle for me to correlate the two. With ten stages of the EDT schema, there is obviously no way to map this onto a seven-stage schema unless we divide each of the five lowest-earliest Worldview stages (the only stages that have a significant representation in the human population) into the Ordinal and Cardinal phases per the Fractilicity Principle. That procedure worked for Emergent Cyclical Theory and Spiral Dynamics, as documented in previous chapters, and it works well enough in the case of the EDT.

Another solid clue for correlation of the Natural Sequence schema with the EDT that I found was this quotation from SCG:

Stage 3, 4, 5, and 6, that is the single number stages, represent stages of integration. People at these levels are embedded in a specific holding environment. They move from identifying with others who are externally alike to oneself at [Conformist] Stage 3, to the like-minded at [Achiever] Stage 4, to the like-principled at [Autonomous] Stage 5, and to the like-spirited at the Unitive Stage 6.

That word “integration” tells me that the single number stages correlate with the Cardinal phases of the Worldviews. So, EDT 2 = Cardinal phase of Primitivism, EDT 3 = Cardinal phase of Traditionalism, EDT 4 = Cardinal phase of Materialism, EDT 5 = Cardinal phase of Collectivism, and EDT 6 = Cardinal phase of Holism. Thus the correlation of EDT and Natural Sequence becomes as tidy as I think it can be. An enterprising student could perhaps compare and contrast the two schemas and firm up the stereotypical descriptions on both sides of the correlation equation.

Another interesting tidbit of data that correlates the EDT schema with the Natural Sequence schema is this:

Bell-like Distribution of Stages

To begin with, it is useful to understand that the distribution of Stages has a bell-curve like shape. Early and late stages occur much more rarely in adults than the conventional and early post-conventional ones. The samples below represent different selection criteria. The newer samples come from more professional groups or from individuals who selected to take the MAP instrument on their own accord. The inclination to find out about one’s own personality make-up via testing rarely occurs before the Achiever [Cardinal Materialism] stage. When MBA students at Boston College — who had taken a sentence-completion test in the admission process — were given an opportunity to request feedback on their results free of charge, Diplomats [Cardinal Traditionalism] and Experts [Ordinal Materialism] chose not to engage. [thesis page 18]

Same as this data from the EDT testing, it is my observation that people who exist and function lower-earlier than mid-Materialism Worldview are typically not much interested in increasing their self-awareness.

Scoring Ego Development Theory against the Natural Sequence Principles

In my view, each DevPsy model has its strengths and weaknesses in terms of accuracy and completeness, judged on the basis of the results of subsequent research by other developmental psychologists, and on its conformity to the Natural Sequence schema. SCG’s DevPsy model checks all of the boxes of the ideal Natural Sequence schema. The possible exception is that in what little I have read about her, I do not see where she endorses what I refer to as the Fractilicity Principle, and what is generally referred to as the Great Chain/Nest of being, in terms of stages ‘below’ and ‘above’ the EDT in. However she is now affiliated with Ken Wilber in that they write internet postings together: ><https://integrallife.com/author/susanne-cook-greuter/><, and Wilber is very much a proponent of what I refer to as the Fractilicity Principle, aka the GC/NB — refer to previous chapter.

Concluding Comments on Cook-Greuter’s Ego Development Theory

There is nothing quite like a numbered list (or a table) for getting my thoughts in order, and for presenting them clearly to others.

[[Separate Life-Stages from Worldview – age of interviewees?]]

1. At the time of this writing in 2021, SCG is still alive and working and living near Boston, MA, USA. Last I heard, she was planning to retire from a forty-year career in research and teaching so that she has time to write the long-promised book on EDT.
2. SCG is the last person to have a chapter in this DevPsy Part of my *Cosmogony* book. This seems appropriate to me because, in my opinion, she is at the apex of a long line of academic researchers in the field of DevPsy, a field that spanned the entirety of the 20th Century, and continued into the 21st Century. She saw further because she stood on the shoulders of giants, and at this time in the history of the field, her work is the definitive and the authoritative work.
3. It looks to me as if, thanks to SCG, the development of the field of DevPsy has arrived at a place where its stages are seen to correlate nicely with the Natural Sequence schema. This result has been arrived at empirically, and as such, it merely *describes* the stages. My suggestion is that the way forward, beyond this achievement, is for developmental psychologists to consider and apply the theoretical framework, the Natural Sequence, which *explains* the stages in the sense that the Natural Sequence schema is derived by algorithm from first principles, from logic and mathematics.
4. Another improvement that EDT could conceivably derive from the Natural Sequence is if it were to appreciate, understand, and incorporate the distinction between Life-Stages, Zones, Worldviews, and Cultures. One wonders if the Maturity Assessment Profile test could be modified to tease out the distinction between these different developmental tracks that function simultaneously in the personality as a whole. There are other chapters in other Parts of this Cosmogony book that cover these subjects in detail.
5. The EDT schema acknowledges that there is a “ceiling” beyond which a person does not develop no matter how old they get or how smart they are. Developmental psychologists acknowledge that *nurture* is about half of the influence on the “ceiling” stage that a person develops into. The Natural Sequence acknowledges this also, but also proposes that the Process/Aspect System components of Zone and Worldview are predetermined by inborn *nature*, the same as other personality traits, and cannot change. What does change is the socio-cultural environment, the progress through the Life-Stages during a lifetime, and the Metamorphoses engendered by unusually serious crises.





Chapter V-15

② PHILIP WITTMAYER — LIFE STAGES

Here and now is the place and time to review what got us to where we are in this Part of this *Cosmogony* book, and then summarize the phenomenon that I prefer to call “Life-Stages”.

1. There is an enormous amount of academic research about developmental psychology that I have reviewed and documented in this Part. Although my review and documentation is brief and superficial, it is obvious that the researchers were seeing more-or-less the same general stages of development, regardless of the facet of development — such as ego, or morals, or faith — that they focused on.
2. Many of the DevPsy researchers were aware of each other, and they built their contribution on the work of their predecessors. Many of the DevPsy researchers were also aware that their particular realm of interest had correlations with other time-tracks, notably what I call the “Worldview” and “Culture” time-tracks.
3. What none of the DevPsy researchers were aware of, so far as I know, is that there are dozens of realms of nature other than DevPsy (and Worldview and Culture) that follow the same pattern, which I refer to as the Natural Sequence schema. What the Natural Sequence schema provides is a fully integrated perspective for understanding so many developmental transformations in the Cosmos, including DevPsy.
4. In this chapter I present my own synthesis of the DevPsy research, interpreted within the framework provided by the context of the Natural Sequence schema. Consequently, as you read my presentation in this section, you will see that I retain as much of the DevPsy research as I can, but the research is enriched and clarified by the added dimension of understanding provided by the Natural Sequence schema.
5. To my way of thinking, the added dimension of the Natural Sequence schema is that its foundation is logical and mathematical, just as physics is logical and mathematical. This is a step toward making psychology, in its foundation, as much of a ‘hard’ science as physics and chemistry are, although much more complex. As with all other aspects of personality, understanding the Life-Stages is augmented when one knows the Septenarian Attributes of each Life-Stage, and when one knows their context within the entire range of development, from the shortest to the longest septenarian time cycles in the Great Chain/Nest of Being.
6. Because the Natural Sequence schema is found throughout the natural world, I propose a schema that conforms to it, but which can vary somewhat from the composite of the fourteen DevPsy researchers reviewed in previous chapters. My proposed schema has seven evolutionary ‘plateaus’ bracketed by eight revolutionary ‘cliffs’, with physical birth as the beginning ‘cliff’ and physical death as the ending ‘cliff’.
7. In several chapters in this *Cosmogony* book it has been useful to note how the so-called “Taijitu Tango Principle” applies to the subject of that chapter. This was often done where some instantiation of the Natural Sequence schema was being discussed. One of my claims is that the Life-Stages follow the Natural Sequence schema, and therefore the TTP applies to it. Recall that the TTP refers to a paragraph in the “Michael Math” chapter of *More Messages from Michael*: “You can perceive that [from the point of view of space, being, noun] while one is ordinal and seven is cardinal, that [from the point of view of time, doing, verb] the first half is cardinal and the last half is ordinal — in other words, the pattern ‘doubles back on itself’. This is what is implied by the ‘yin-yang’ symbol, and it would probably be of use to

keep the ‘yin-yang’ in mind while considering what we tell you of the function of levels and numbers.” [MMFM, p. 189] One way to explain what this means in regard to Life-Stages is that the lifetime starts out with the most vitality and ends with the least vitality and is therefore entropic, thus Cardinal Action and Origination Process (Birth) progresses to Ordinal Action and Termination Process (Death), but on the other hand the Life-Stages are also syntropic in that they start out with an emphasis on the earlier–lower–outer Moving Center and end with an emphasis on the later–higher–inner Excitation Center.

8. More will be said about all of these additions and modifications where appropriate in this section.

Introduction

Part V, “Developmental Psychology”, of this *Cosmogony* book is dedicated to the exposition of the work of developmental psychologists. These are the academics who study the changes in personality and lifestyle that people typically go through during a full lifetime from birth to death in old age. Here you will read that the empirical research of development psychologists over the last century has somewhat converged on the theoretical framework of the Natural Sequence schema without knowing about the Natural Sequence schema.

In numerous and various other places in this *Cosmogony* book, it seemed expedient to me to compare and contrast other instantiations of the Natural Sequence schema to the Life-Stages, so that is why I provide the reader with this summary in this chapter. We humans all go through these stages, so my assumption is that readers might be able to relate better to other instantiations of the Natural Sequence that are less familiar to them by comparing and contrasting them with these familiar Life-Stages.

I first learned of this particular instantiation of the Natural Sequence schema from the Michaelian teachings. This is channeled information that I mention here and there in this book. In one of my books about the Michaelian teachings, namely *A History of the Overleaf Chart*, in Chapter 4Q, “The Seven Life-Stages”, I document a thorough examination of the subject as presented by various sources within the Michaelian teachings. Near the end of that chapter, I present a summary of my understanding of the subject, informed by the Michaelian teachings, informed by my study of developmental psychology, and informed by my understanding of the Natural Sequence schema.

Tabulation of Life-Stages

After much consideration and much pondering, I have come up with the following table. Take a look, compare this with what is said in previous chapters in this Part, and see if my insights add to your insights.

Table V-15a — LIFE-STAGES per WITTMAYER							
DIALECTIC	–ORDINAL– (ME)			=NEUTRAL=	+CARDINAL+ (WE)		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
CENTER	MOTION	EMOTION	INTELLECT	IMPULSE	CONCEPT	SYMPATHY	EXCITATION
LIFE-STAGE	+Coordination INFANCY –Clumsiness	+Socialization CHILDHOOD –Co-dependence	+Independence YOUTH –Irresponsibility	+Authenticity MIDDLE-AGE –Falseness	+Legacy SENIORITY –Self-indulgence	+Gratitude ELDERHOOD –Regret	+Anticipation DYING –Disengagement
AGE RANGE	0 > 2	2 > 13	13 > 35	35 > 50	50 > 65	65 > 75	75 > 80

My comments on this table are as follows:

1. Because Life-Stages are a developmental septenary, it is appropriate to here remind the reader how the Taijitu Tango Principle applies to it. This Principle is discussed throughout this *Cosmogony* book, but it is convenient for the reader if I provide a brief and basic review. This Principle means that, in

terms of Being (noun), the first triad (First, Second Third ranks) is Ordinal and the second triad (Fifth, Sixth, Seventh ranks) is Cardinal, but in terms of Doing (verb), the first triad is Cardinal and the second triad is Ordinal. One can get a feel for that inversion of Dialectic Attributes if one reverses the left-to-right sequence of the septenaries shown in the top six rows of this table (except for Rank), and then thinks deeply about what it means.

2. DevPsy researchers other than myself have not explicitly correlated Septenarian Attributes with the Life-Stage phenomenon. It is fairly obvious from reading the descriptions of the DevPsy that there is a correlation with Centers — and that is why I show Centers in this Table — but this is not the same as going all the way to the full acknowledgment that the Life-Stages are an instantiation of the Septenarian Attributes arranged in the Natural Sequence. It is my informed opinion that this reflects a deficiency in the common understanding. This chapter is dedicated to an improvement of that understanding.
3. DIALECTIC: The first row shows the names and the Signs (− , = , +) of the Dialectic Attributes that apply to the columns below this row.
4. AXIAL: The second row shows the names of the Axial Attributes that apply to the columns below this row.
5. The combination of Dialectic and Axial Attributes yields the Septenarian Attributes. Septenarian Attributes apply to the Life-Stages in the same column. The Septenarian Attributes can be codified and understood in terms of a couple of mathematical concepts having to do with the structure of space and time, specifically geometric Dimensions and vectorial Directions:
6. DIMENSION: Dimensionality with Signs (− , = , +) is another way to express the nature of the Septenarian Attributes. The meaning and implication of Dimensionality as it applies to the Natural Sequence is explained in detail in my book *The Process/Aspect System*. Briefly, Dimensionality has to do with space/time geometry in physics and time/space ‘geometry’ in personality. The difficulties of climbing the ‘cliffs’ (transitions) between Life-Stages (‘plateaus’) are caused by the change in Septenarian Attributes (aka Dimensions and Directions and Signs) in the transition from Life-Stage to Life-Stage.
7. DIRECTION: Directionality is also explained in detail in my book *The Process/Aspect System*. Briefly, this has to do with the mathematical framework called the Cartesian coordinate system, which is typically applied to motions in objective physical space/time, but can also be applied analogically to ‘motions’ in subjective psychological time/space. The names of the directional vectors shown in the table are so self-evident and intuitively obvious that they are commonly used as metaphors in our language when referring to ‘where we are headed’ in our lives.
8. There are almost always psychological difficulties when a person transitions from one Life-Stage to the next; this is often referred to as an “identity crisis”. These are caused by the differences in the Septenarian Attributes (with the change in Dimension and Direction and Sign) — it takes time to adjust the psyche to the change.
9. RANK: The rank of a Life-Stage is in keeping with the Holarchy Principle, which states that each successive stage is built upon and includes but transcends the previous Life-Stage(s).
10. CENTER: The Centers are documented in [Part II, Chapter 3, “The Gurdjieffian Teachings”, in the section “The Seven Centers”](#). My preferred names for the Centers are shown in the sixth row, and they are arranged per the Natural Sequence. It is useful to understand the Life-Stages as those intervals when a person is emphasizing the development of the corresponding Center. This is especially apparent in the first three Life-Stages, and the progression has not gone unnoticed by DevPsy researchers (e.g., Cook-Greuter) even though they are usually unaware of the notion of Centers as originated in the Gurdjieffian teachings and developed in the Michaelian teachings.
11. LIFE-STAGE: This row shows my names for the Life-Stages and their Positive and Negative Poles. These names and Poles take into consideration DevPsy models that are more focused on the ‘plateaus’ than they are on the ‘cliffs’, as should be the case when correlating them with the Septenarian Attributes. I have not chosen names and Poles for the ‘cliffs’ that bracket the Life-Stages; for that, the reader can refer to the work of those DevPsy researchers (e.g., Erikson) who did focus on transitions between Life-Stages.

12. AGE RANGE: The last row of this table shows how many years old a typical or average person is during each Life-Stage, assuming that a full lifetime is eighty years, which is about average in first-world countries at the present time in the history of humankind.

The Life-Stages as I understand them are described in the next sub-section.

Brief Descriptions of Life-Stages

In previous chapters, I review the work of more than a dozen academic researchers who have spent their professional careers studying human lifespans and looking for a standard or typical pattern in the stages of those lifetimes and the transitions from stage to stage. I have taken account of this research in arriving at the names and descriptions in this section.

Of course, there are few people who follow the idealized pattern perfectly as described below, but the general agreement of professional DevPsy observations, and the ubiquity of the Natural Sequence schema in the natural world, provide reason to believe that there is a general pattern that sorta kinda fits the majority of people as they go through their lives. It is impossible to do justice to this phenomenon because of the diversity and uniqueness of individual experiences of this pattern, both in terms of their revolutionary transitions and in terms of their evolutionary plateaus, but we researchers do the best that we can in the space and time allotted to us.

GESTATION (–0D–): It makes sense to me to regard the nine months of development of the physical body in the womb as the Zeroth Life-Stage. This fits with at least three other developmental septenaries reviewed in this *Cosmogony* book: 1) in the Gurdjieffian teaching, the so-called “Instinctive” Center had to do with physiology (not psychology or personality), so I refer to it as the zeroth Center; refer to Chapter II-X, “The Seven Centers”; 2) in Chapter II-X, “The Seven Chakras”, I noted differences of opinion about the locations of three lower chakras, thereby counting four of them, so I proposed a reconciliation by referring to the so-called “Root” chakra as the zeroth chakra, ascribing physiology to its function, whereas the first through seventh chakras are related to functions higher than physiology. 3) Maslow’s Hierarchy of Needs was discussed here in Part V in Chapter V-4, and his lowest of eight Needs also had to do with physiology, so I numbered it as the zeroth Need to bring its rank numbers into alignment with numerous other instantiations of the Natural Sequence schema. Perhaps with some study, one could discern a division of this Gestation stage into seven sub-stages of the development of the fetus *in utero* per the Fractality Principle.

INFANCY (–1D–): This Life-Stage has the Septenarian Attribute of Ordinal Action. Process/Aspect matrix traits that correspond to this Life-Stage are Submission, Martyrdom, Cynic, *Infant*, *Motion*, Warrior, and Perseverance.

The first transition occurs at birth; the transition being from *in utero* to in the world. Newborns operate entirely from awareness of the body and its physiological preference for continued survival — sleeping, eating, eliminating, crying, and so on. The plateau lasts just one to two years, during which there is much sensing of the body as it moves around (a “ME” Ordinal function) and much sensing of the environment (a “WE” Cardinal function), in addition to experiencing physiological bodily functions. It is important that infants receive much stimulation of the five senses in order to nurture their developing body/brain system. If this does not happen, then the infant will not thrive; severe physical problems will likely result. In the extreme case, an infant can even die of “sensory deprivation”. You cannot “spoil” the infant with “too much love (physical care)” at this stage. It is also essential for a healthy infant that they be allowed to experiment with their bodily movements at first, during the Ordinal/Me phase, and then explore their environment second, during the Cardinal/We phase, while they are being protected from physical harm. If this does not happen, the remainder of their lives could be stunted in many ways, because the foundation of self-competence and self-trust has not been established.

As an instantiation of Ordinal Action, during the Infancy Life-Stage, it is the Motion Center that is undergoing the most development. The development of the infant’s Emotion Center and Intellect Center are near minimal during this Life-Stage; the Centers ‘higher’ than Moving are not required for physical survival in infancy. I suggest that an appropriate name for the Positive Pole is +Coordination, which means that the infant learns to operate the physical body well, and learns to operate the body well within the environment. I suggest that an appropriate name for the Negative Poles is –Clumsiness, which is obviously the opposite of +Coordination. An infant that gets stuck in the Negative Pole is likely to continue

to act awkwardly within themselves and outwardly toward others and the environment for the remainder of the life. Infancy is by nature a time of clumsiness, but the positive function of allowing –Clumsiness to run its full course is, of course, for the infant to learn by ‘falling down’ and learn by ‘getting back up’ repeatedly, until the basic task of operating the physical body rebounds to +Coordination.

CHILDHOOD (–2D–): This Life-Stage has the Septenarian Attribute of Ordinal Inspiration. Process/Aspect matrix traits that correspond to this Life-Stage are Reduction, Lowliness, Stoic, *Child*, *Emotion*, Server, and Repression.

The second transition usually occurs sometime during the third year of life. Infants become aware that they are separate from the environment and from other individuals. They then realize that they are physically dependent upon those others, and that they are affected emotionally by them. The plateau of childhood lasts until adolescence. It is important that children receive emotional and social support, that they have a safe, fun, close, affectionate, and comforting family environment, and that they receive esteem from their playmates and classmates. They must come to realize that they are valued, or severe emotional problems will likely result, such that maladjustment and unhappiness could potentially beset them during the rest of their lives.

It makes sense that after the first Life-Stage (when its physical needs are presumably taken care of by attentive parents) during the plateau of the second Life-Stage, which takes about a decade, the child finds that it is a member of a family and lives in a community of playmates and schoolmates. Therefore it needs to have its emotional and social needs taken care of by family and friends in order to thrive into adulthood, and this fits with the Septenarian Attribute of Ordinal Inspiration in the Natural Sequence schema. It is the Emotion Center that is front and center for development at this Life-Stage. This is the time when the child is “socialized”, when it learns the rules about how to get along well with its associates. Typically, the child is more self-centered in the first half of childhood, the ME (Ordinal) phase, and gradually learns to share its toys with others during the second half of childhood, the WE (Cardinal) phase, especially after entering the formal educational system, which is the turning point in the Childhood Life-Stage.

Regarding the Positive and Negative Poles of this Life-Stage, I suggest that +Socialization and –Co-dependence are appropriate. The Positive Pole means that the child feels nurtured by family, friends, and classmates, and has in fact learned to “play well with others”. The Negative Pole manifests as a child who is whiny, clingy, and needy with respect to others, perhaps because they are not getting nurtured and ‘nourished’ by the other people in their lives during this critical phase of their development. The positive function of allowing –Co-dependence to run its full course is, of course, to learn how bad it feels to interact malevolently with others, and then to let go of it, and that rebounds to +Socialization, an acknowledgment of the desire, even need, for *interdependence* with others in a well-functioning society full of happy people.

YOUTH (–3D–): This Life-Stage has the Septenarian Attribute of Ordinal Expression. Process/Aspect matrix traits that correspond to this Life-Stage are Rejection, Renunciation, Skeptic, *Young*, *Intellect*, Artisan, and Caution.

The third transition occurs at the onset of the teenage years, at puberty. Some cultures mark this transition with a ceremony of “coming of age”. Many physiological changes happen at this time, and that can take a few years. At the same time, adolescents experience cognitive, psychological, and mental changes. During the plateau of this Life-Stage, the adolescent typically starts to separate themselves from the family psychologically, and that process eventuates in physically moving out of the family home, and that leads to the young adult ‘carving out their niche’ in the wider world. If adolescents are treated as developing adults rather than as dependent children then there is less tendency for them to rebel to prove their individuality. It is important that adolescents be prepared (by parents, teachers, and peers) to take a place in society, or severe problems may result when confronted with the world outside of the family home. The young adult must become intellectually competent, at least enough to make their way in the world on their own. The more self-responsibility they learn, and the more irresponsibility they reject, the more prepared they are to distinguish themselves with success in their adult life. However, even in the best scenario, at least some of the familial imprinting is likely to continue through the plateau phase of this Life-Stage, lasting into middle age, when the fourth Life-Stage is typically initiated.

Per the Hierarchy Principle, during the plateau of the third Life-Stage, the Motion Center development of the Infancy Life-Stage and the Emotion Center development of the Childhood Life-Stage continue, but in the Youth Life-Stage, the development of the Intellect Center is front and center. Developmental

psychologists comment on the explosion of mental development and organization that happens in the teen years. The gradual individuation of teenager from family is also reminiscent of the other Overleaves in the Ordinal Expression (“Analysis”) Process — particularly Rejection, Skeptic, and Self-destruction. Typically, during adolescence, as the teenager distinguishes themselves while still living with their family, the individual is more encumbered by personal adjustments because this is the Ordinal (ME) phase of the Life-Stage, and then, after the turning point of this Life-Stage at about age twenty-one, in the young adult phase, the individual becomes more concerned about distinguishing themselves in the world outside the family environment; they find their self-sufficient and self-governed place in the business world because they are now in the Cardinal (WE) phase.

Regarding the Positive and Negative Poles of this Life-Stage, I suggest that appropriate names are +Independence and –Irresponsibility. The Positive Pole is the culmination of the successful and healthy individuation process that happens during this Life-Stage. The Negative Pole means that the youth does not take responsibility for themselves; they become anti-social, perhaps even alienated, from both family and society. The positive function of allowing –Irresponsibility to run its full course is, of course, to acknowledge the proper place of alienation at this time in one’s life as part of defining oneself, and then one rejects that separation, so that one rebounds into self-sufficient +Independence.

MIDDLE-AGE (=PD=): This Life-Stage has the Septenarian Attribute of Neutral Assimilation. Process/Aspect matrix traits that correspond to this Life-Stage are Equilibrium, Stubbornness, Pragmatist, *Mature*, *Impulse*, Scholar, and Observation.

Although there often are early signs that something is impending, the fourth Life-Stage usually begins in earnest in the mid-thirties. If prior Life-Stages were not completed in the Positive Poles, this can be a traumatic transition, and can last as long as a decade. It is commonly called “the mid-life crisis”. In the previous Life-Stage, progress was made as the young adult shed the imprinting of family, but this Life-Stage is more about shedding acculturation, thereby becoming more fully individuated, not just separated from the family. This allows the inborn nature, or the “true” self, or the soul, or the essence (or whatever you want to call it) to begin to make its presence felt. The “lower self” must begin to take a back seat to the “higher self”, or the person will remain merely a product of their family and their environment — the person will be spiritually ‘retarded’, so to speak. Dramatic changes often occur as the personality seeks to express the emerging influence of its true nature. A successful assimilation is usually completed in the early forties, and it catapults the person into the higher self’s primary project for the lifetime.

This Life-Stage correlates with what I refer to as the Impulse Center. This Center prefers to manifest the +Intuitive and the –Instinctive faculty of the individual rather than manifest the dictates and preferences of associates in particular and of society in general. Consequently, it is not always easy for friends, family, and coworkers to adapt to the changes of the person going through the transition. The changes can be quite drastic at times, if the cultural or family programming has been very different from the innate personality of the individual. Marriages fail, careers change, friends and religions and political persuasions are dropped or changed. As usual, the person is focused on reorienting and reorganizing their inner world during the first half, the ME phase, of the Life-Stage, and then the person focuses more on reorienting and reorganizing themselves in the outer world during the second half, the WE phase.

I suggest that an appropriate name for the Positive Pole is +Authenticity, meaning that the true nature of the person is revealed and accepted and implemented henceforth in the life. I suggest that an appropriate name for the Negative Pole is –Falseness, which means that the person will likely remain stuck in their imprinting and acculturation for the rest of their lives, never having discovered and actualized ‘who they really are’ in the core of their being. The positive function of allowing –Falseness to run its full course is, of course, to acknowledge the proper place of the socialization and acculturation in one’s early life, and then to let go of it, and that rebounds to +Authenticity, an experience of integrity with the inborn nature.

SENIORITY (+3D+): This Life-Stage has the Septenarian Attribute of Cardinal Expression. Process/Aspect matrix traits that correspond to this Life-Stage are Acceptance, Greed, Idealist, *Old*, *Concept*, Sage, and Power.

At the beginning of the fifth Life-Stage, as the fifth transition is initiated, the person notices that their physical and mental faculties have begun to noticeably decline as part of the normal aging process. Furthermore, the temporal horizon flips, meaning that the person begins to deeply realize that their life is probably more than half over; they realize that they are ‘over the hump’ and they are now on the

'downhill' side of life; they realize that they have perhaps reached the peak of their career, and there is no more 'ladder' to climb. They might even find themselves saying, "I am getting too old for this." This transition usually begins to take hold at about age fifty. What to do now? How they respond to the realization of decline determines what they do during the plateau phase, which lasts until about the typical age of retirement, say 65. As I see it, there are two ways to go: either the person can graciously and gracefully let go of the ambitions of youth while continuing to make qualitative improvement in their lives and in the lives of those in their orbit, or the person can try to hang on to the things of youth with a self-centered grasping or clinging, in an attempt to keep the 'sands of time' from 'slipping through their fingers'. In other words — during the retrospection that starts in this Life-Stage and continues for the remainder of the lifetime — there is acceptance or there is denial of the reality of the inevitability of the aging process.

This Life-Stage is when the person begins to develop a 'philosophy of life', if they ever do. If a person has forethought, and they live through this Life-Stage in the Positive Pole of +Legacy, then they make and implement long-terms plans for retirement from their career occupation. They might also change their focus away from competing with younger people and toward mentoring younger people, passing on their accumulated knowledge and skills and wisdom. On the other hand, some people might express the Negative Pole of –Self-indulgence, which means that they fear, rather than embrace, the loss of their youth; they seek to hold on to youthfulness by "acting out" in ways that are inappropriate for their actual age. As usual, there are two fundamental phases to this Life-Stage, the Ordinal ME phase where the person is focused more on making adjustments in their inner life, and then the Cardinal WE phase where the person is focused more on making adjustments in their outer life. The positive function of allowing –Self-indulgence to run its full course is, of course, to acknowledge the proper place of the excessive self-love in one's life, and then to let go of it, and that rebounds to +Legacy, an expression of love for others.

ELDERHOOD (+2D+): This Life-Stage has the Septenarian Attribute of Cardinal Inspiration. Process/Aspect matrix traits that correspond to this Life-Stage are Growth, Arrogance, Spiritualist, *Elder*, *Sympathy*, Priest, and Passion.

The sixth Life-Stage begins at about the time that most people retire from their career profession, in their mid-sixties. The transition typically consists of making the adjustment from a working life to a not-working life. This is an especially difficult transition for those people who identified strongly with their career, such that it provided the central meaning to their lives ... and now that phase is over. This is also when most "senior citizens" begin to seriously review the lifetime 'in the rear-view mirror', so to speak. They ask themselves: Were their aspirations and expectations met or not? Did they accomplish what they set out to do? This does not necessarily have anything to do with their career; more often it has to do with their self-appraisal, their satisfaction about their life in general. In a successful transition, the person accepts the lifetime as lived, regardless of whether they achieved the ambitions of their youth or not, or even the goal of their true self. They come to appreciate themselves, and they are generous to others as well. The plateau of this Life-Stage typically lasts a few years, the so-called "golden years".

The ME (Ordinal) phase of this Life-Stage is the process of coming to terms with the life as lived, and the WE (Cardinal) phase of this Life-Stage is the process of sharing the blessings of a life well lived with others. A natural continuation of +Legacy, left over from the previous Life-Stage, is if the person gets involved in volunteer or charity work after retirement from a career occupation.

I suggest that an appropriate name for the Positive Pole is +Gratitude, which means that the person feels thankful for a life lived well; they focus on self-improvement; they are likely to volunteer for endeavors that make the world better. The Negative Pole is –Regret, which means that the person feels apologetic for the stupid, hurtful, foolish things that they did during the preceding decades. Or they might feel nostalgic for 'the good old days', when they were not encumbered by the limitations of old age. Or they might feel bad about the opportunities that they missed and will never experience. The positive function of allowing any –Regret to run its full course is, of course, to acknowledge the proper place of the "shadow", the "dark side" in one's life, and then to let go of it, and that rebounds to +Gratitude.

DYING (+1D+): This Life-Stage has the Septenarian Attribute of Cardinal Action. Process/Aspect matrix traits that correspond to this Life-Stage are Dominance, Impatience, Realist, *Ancient*, *Excitation*, King, and Aggression. This might seem counterintuitive, and I will address that concern below.

The seventh Life-Stage occurs in advanced old age, during the final physical deterioration. The transition begins when the person becomes aware of the terminal illness. It largely concerns the

psychological response to the physical dying process. This does not have to be an unpleasant process, but the more attached the person is to their physical or emotional or mental life, the more difficult it is. Perhaps you have heard of the stages of dying: disbelief or denial of mortality, anger that it should happen now, bargaining with God for more time, depression and despair, acceptance of the inevitable, and making preparations for the passing. Obviously, dying rarely lasts for more than a few years, so the plateau is brief. A person who has lived in their true nature subsequent to the successful completion of the Middle-Age Life-Stage, and who has completed their aspirations and ambitions, who has liberated their defects and deficiencies, and who is aware of their immortal essence, might actually find this to be a psychologically and spiritually energizing plateau, even while the body is de-energizing.

Regarding the ME/WE dichotomy, I would say that during the ME (Ordinal) sub-stages, the person is likely to have become mostly useless to themselves and others. Thus, the person is consumed by concern about how their deterioration is affecting themselves. But if the person gets through that phase successfully, then the person in the WE (Cardinal) phase becomes more concerned about how their inevitable demise will affect their loved ones. In both phases, there is the de-vitalization of the physical and the vitalization of the spiritual, which I regard as an instantiation of Cardinal Action.

Seemingly ironically, the Dying Life-Stage correlates with Cardinal Action, and the explanation for this is that people who are near death and who have completed all previous Life-Stages in the Positive Poles and who believe in an afterlife actually look forward to death as a new beginning. Some spiritual traditions recommend that, for best results, one should seriously contemplate one's mortality on an ongoing basis rather than wait until this Life-Stage; the sooner you start the better.

Regarding the Positive and Negative Poles of this Life-Stage, based on what I have read about developmental psychology, I suggest that the names +Anticipation and –Disengagement are appropriate. If a dying person looks forward to the transition to the afterlife with excitement, then this is the Positive Pole. However, if the person shrinks and shrivels into themselves as they withdraw from every aspect of life, then this is the Negative Pole.

(By the way, the reason that I chose +Anticipation as the name of the Positive Pole of the Dying Life-Stage is that it is quite common for dying people to have premonitions of the afterlife. For more information, refer to the website of a hospice worker who has written a book about it: >www.drchristopherkerr.com>. “*Death Is But a Dream*, based on Dr. Kerr’s extensive research with hospice patients and their families in Buffalo, New York, highlights and validates the powerful dreams and visions often experienced at end of life that bring comfort and meaning to the dying process.” Paradoxically, even though the body is nearing the end of its decline, the soul eagerly +Anticipates its launch into the afterlife.)

Summary Comments on Life-Stages

The following numbered list summarizes my present understanding of the Life-Stages.

1. In this chapter I have used the metaphor of ‘cliffs’ and ‘plateaus’ among the Life-Stages, indicating that there is a qualitative difference between the revolutionary and the evolutionary phases of the Life-Stages. This distinction was not always made clear in DevPsy models reviewed in previous chapter, but it is important if one is to have an unambiguous understanding of how the phenomenon is structured in time.
2. We transit the Life-Stages during a full lifetime, and this personal experience gives us an opportunity to validate and understand the longer time-cycles of the Cosmos reviewed in this *Cosmogony* book, namely Worldviews and Cultures and Planes.
3. We do well to compare and contrast the empirical work that DevPsy researchers have done over the last century — they have followed the lives of thousands of people — with the theoretical framework of the Natural Sequence schema: the two ways of knowing clarify and enrich each other significantly
4. The ‘foundation’ of Life-Stages is the physical body itself with its *physiology*, without which there would be no *psychology* to develop after birth. Upon this ‘foundation’, the Life-Stages are ‘built’ in seven successive ‘stories’ in the ‘building’. The foundation is gestated *in utero*. This notion is consistent with Gurdjieff’s notion of the “Instinctive Center” as having to do with physiology (refer to Chapter II-X); this notion is consistent with my notion that the Root Chakra has to do with physiology (refer to Chapters II-X); this notion is consistent with Maslow’s notion that physiology is at the foundation of his so-called “Hierarchy of Needs” (refer to Chapter V-4).

5. Per DevPsy models, the interval between birth and about age two is ruled by learning to operate the body. Thus, the Septenarian Attributes of this Life-Stage are Ordinal Action in general, and the Moving Center specifically. Of course this learning continues from birth to adulthood, because the body grows and changes all of that time — and beyond if you learn new physical skills for the Moving Center. Without this first ‘story’, the Moving Center maturation, no other ‘stories’ could be built.
6. The “emotions” expressed by infants during the first Life-Stage are extraordinarily primitive, and they do not dominate the development of the infant. The emotions begin to predominate and are developed and refined only after the infant learns to move the body in the environment, and tumbles to the realization that it is separate from the environment and can interact with it, including people, in pleasant and unpleasant ways; that is when the second Life-Stage kicks in. According to DevPsy models, the time between age two and school is ruled by “play” time in the body that has learned to move in the environment. Thus the Emotion Center begins to mature, and this emotional development, concomitant with social development, continues for the rest of the lifetime per the Holarchy Principle. With most people, the Intellect Center is too primitive for school work until about age six, at which time it can seriously start to mature. Even then, the time from the beginning of school to adolescence (the start of the third Life-Stage) is also very much about Ordinal Inspiration when you consider all of the socialization with family and classmates that occurs then. During the second Life-Stage, life is as much about learning to get along with others — the common good — as learning anything else. Yes, the brain is always “learning”, but “learning” is not just intellectual activity — there is the Motion and the Emotion Center learning as well, and that must precede the maturation of the Intellect Center that kicks into ‘full gear’ at puberty.
7. Per the Natural Sequence schema, the third Life-Stage has the Ordinal Expression Attributes. This Life-Stage is about the development of a personal identity that is distinct from the identity that one absorbs from the family and the school during the previous two Life-Stages. According to DevPsy models, adolescence is all about the personality developing its individuality, about differentiating from the family, and about striking out on its own within the cultural milieu. This process is very much in the same category as Ordinal Expression, or what I call the “Analysis Process”. Incidentally, according to what I have read in the DevPsy literature, it is also a period of intense development of the Intellect Center.
8. Per the Natural Sequence schema, the fourth Life-Stage has the Neutral Assimilation Attributes. This Life-Stage is often characterized as a time of the shedding of what may be called false personality and of the emergence of what may be called true personality. Per the Natural Sequence schema, the reason for this is because this Life-Stage correlates with the Impulse Center, which has a Positive Pole of +Intuition. Thus, a person in this Center and in this Life-Stage should begin to seriously tap into the so-called “higher self”. However, there is another thing going on here: this Life-Stage correlates with the Collectivism Worldview, about which it can be said that the person is metaphorically ‘adrift at sea’ because it has the Septenarian Attribute of Neutral Assimilation. Likewise, a person transiting the fourth Life-Stage may not ‘stand on firm ground’ until they have successfully passed into the fifth Life-Stage, a Cardinal Life-Stage.
9. Some of the DevPsy researchers focused more on the ‘cliffs’ of the Life-Stages, and some focused more on the ‘plateaus’. Additional study on my part of DevPsy models would be required for me to sort out what I think might be the best names for the Poles of the ‘cliffs’.
10. Recall that each stage in any developmental sequence is separated by an ambiguous or self-contradictory transition phase. This means that the transition does not have the characteristics of either the preceding stage or the following stage; it is either a blend of the two or a vacillation between the two. This is the essence of the Transition Principle.
11. It is obvious to me on theoretical grounds and experiential grounds that the Life-Stages follow the Natural Sequence schema, and that means to me that the Sub-stages also follow the Natural Sequence schema per the Fractality Principle, but a question remains in my mind about whether or not the transitions between Life-Stages, also consist of stages that follow the Natural Sequence schema. It is my current understanding that the transitions, when thought of as ‘cliffs’, are *revolutionary* and thus they do not have the Septenarian Attributes. However, the Life-Stages, when

thought of as ‘plateaus’, are *evolutionary* or developmental, and thus they do have the Septenarian Attributes of the Natural Sequence schema.

12. Per the Hierarchy Principle, each Life-Stage is “meta” to the previous Life-Stage(s). That means that whatever the stage that one is now traversing, it is “subjective” in the sense that one does not (yet) have an objective, self-aware, meta-cognitive view of it, whereas one does have an objective, self-aware, meta-cognitive view of the previous Life-Stage(s). For a person to successfully traverse a Life-Stage and ‘graduate’ from it means that the person has ‘learned the lesson’ of that Life-Stage to such an extent that it has become ‘automatic’ or ‘instinctive’. The person is thereby freed up to focus their attention on learning the lessons of the current Life-Stage.
13. Finally, all of this heavy noodling about the structure and the Attributes of the Life-Stages is for the purpose of arriving at an accurate description of them, so that readers may have a better understanding of what they are going through when they transit a ‘cliff’ and when they transit a ‘plateau’. This chapter is a scholarly academic exercise for sure, but it has practical implications in the lives of self-aware seekers. This information is worthless if does not improve the lives of its readers. Readers do well to study and ponder what is said in this Part, and see if it explains what they have experienced in past and current transitions and phases. This is one of the ways that the lessons of a lifetime are driven home during the lifetime.





Chapter V-16

CONCLUSION TO DEVELOPMENTAL PSYCHOLOGY

In my book, *The Tao of Cosmology*, I discoursed on the passage from the 42nd chapter of the Tao Te Ching:

The Tao produced the One, the One produced the Two, the Two produced the Three, the Three produced all things. All things carry the Yin and embrace the Yang, and through the blending of the Chi they produce harmony.

The discourse covered an explanation of the application of that passage to the fundamental *structure of space*. It did so in terms of logic, mathematics, physics, psychology, philosophy, theology, mysticism, and cosmology.

Here in this book, *The Tao of Cosmogony*, I continue the discourse on the application of that ancient passage to the fundamental *structure of time*. I do so in terms of time cycles that happen in seven stages, which I refer to as the “Natural Sequence”. The premise of this *Cosmogony* book (and my other books) is that the Natural Sequence is fundamental, meaning that it is ultimately real in the reality system in which we find our consciousness embedded. This reality system includes the interior world as well as the exterior world. This means that the interior world and the exterior world share the same underlying structure. This Part of the *Cosmogony* book is about the changing structure of the interior world as discovered by researchers in developmental psychology.

② Table of Developmental Psychologies

The following table is a collection of the various DevPsy models that have been discussed in previous chapters of this DevPsy Part of the *Cosmogony* book.

Table V-16a — CORRELATION of DEVELOPMENTAL PSYCHOLOGIES							
DIALECTIC	Ordinal			Neutral	Cardinal		
AXIAL	Action	Inspiration	Expression	Assimilation	Expression	Inspiration	Action
DIMENSION DIRECTION PROCESS	One Backward Termination	Two Downward Involution	Three Outward Analysis	Pan Complex Combination	Three Inward Synthesis	Two Upward Evolution	One Forward Origination
WORLD- VIEWS AND ZONES	Primitivism Resolution	Traditionalism Immanence	Materialism Separation	Collectivism Experience	Holism Unification	Transpersonal' Transcendence	Messianism Activism
LIFE-STAGES	Toddler-hood ----- Infancy	Late Childh'd ----- Early Childh'd	Youth ----- Adolescence	Middle Age	Seniority	Elderhood	Dying
CULTURES	Hunter-Gather.	Agricultural	Civilization	Science	Philosophy	Theology	Utopia
GEBSER (Structures)	Magic	Mythical	Mental	Integral	—	—	—
PIAGET (Childhood)	Pre-operational ----- Sensori-motor	Concrete Operational	Formal Operational	—	—	—	—

Table V-16a — CORRELATION of DEVELOPMENTAL PSYCHOLOGIES							
DIALECTIC	Ordinal			Neutral	Cardinal		
AXIAL	Action	Inspiration	Expression	Assimilation	Expression	Inspiration	Action
DIMENSION DIRECTION PROCESS	One Backward Termination	Two Downward Involution	Three Outward Analysis	Pan Complex Combination	Three Inward Synthesis	Two Upward Evolution	One Forward Origination
WORLD- VIEWS AND ZONES	Primitivism Resolution	Traditionalism Immanence	Materialism Separation	Collectivism Experience	Holism Unification	Transpersonal' Transcendence	Messianism Activism
LIFE-STAGES	Toddler-hood ----- Infancy	Late Childh'd ----- Early Childh'd	Youth ----- Adolescence	Middle Age	Seniority	Elderhood	Dying
CULTURES	Hunter-Gather.	Agricultural	Civilization	Science	Philosophy	Theology	Utopia
ASSAGIOLI (Psycho- synthesis)	"Primitive" Body Impulse/Desire	"Mythic" Feeling Emotion	"Rational" Thought	"Consolidated" Personality Self	"Transper- sonal" Soul Imagination	Intuition	Will
MASLOW (Needs)	Safety	Love/ Belonging	Self-Esteem	Cognitive/ Understanding	Aesthetic	Self- Actualization	Transcend- ence
ERICKSON (Psycho- social)	Toddlerhood ----- Infancy	Childhood ----- Pre-school	Young Adult ----- Adolescence	Middle Adulthood	Late Adulthood	Retirement	Dying
KOHLBERG (Morality, Ethics)	Obedience and Punishment	Reciprocal Self-Interest	Good Intentions; Social Conformity	Consensus Ethics	Individual Ethics	Universal Ethics	Transcendent Ethics
LOEVINGER (Ego)	Impulsive ----- Pre-social	Conformist ----- Self-protective	Conscientious ----- Self-aware	Autonomous ----- Individualistic	Unnamed ----- Integrated	—	—
KEGAN (Meaning)	Impulsive	Imperial	Inter-personal	Institutional	Inter- individual	—	—
FOWLER (Faith)	Primal Undiffer- entiated	Symbolic- Mythic-Literal Intuitive- Projective	Individuative- Reflective Synthetic- Conventional	Paradoxical- Conjunctive	Universal- izing Enlighten- ment	—	—
GRAVES (Emergent)	Tribalistic ----- Automatic	Saintly ----- Egocentric	Personalistic ----- Materialistic	Experientialistic ----- Cognitive	—	—	—
BECK & COWAN (Spiral Dynamics)	Kinspirits Clannish ----- SurvivalSense Instinctive	TruthForce Purposeful ----- PowerGods Egocentric	HumanBond Relativistic ----- StriveDrive Strategic	GlobalView Holistic ----- FlexFlow Systemic	—	—	—
WILBER (Integral)	Symbiotic ----- Impulsive	Diplomat ----- Opportunist	Achiever ----- Expert	Strategist ----- Relativist	Unitive ----- Alchemist	—	—

Table V-16a — CORRELATION of DEVELOPMENTAL PSYCHOLOGIES							
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AXIAL	Action	Inspiration	Expression	Assimilation	Expression	Inspiration	Action
DIMENSION DIRECTION PROCESS	One Backward Termination	Two Downward Involution	Three Outward Analysis	Pan Complex Combination	Three Inward Synthesis	Two Upward Evolution	One Forward Origination
WORLD- VIEWS AND ZONES	Primitivism Resolution	Traditionalism Immanence	Materialism Separation	Collectivism Experience	Holism Unification	Transpersonal' Transcendence	Messianism Activism
LIFE-STAGES	Toddler-hood ----- Infancy	Late Childh'd ----- Early Childh'd	Youth ----- Adolescence	Middle Age	Seniority	Elderhood	Dying
CULTURES	Hunter-Gather.	Agricultural	Civilization	Science	Philosophy	Theology	Utopia
BATTISTA (Conscious- ness)	Perceptual	Emotional	Subjective	Identified	Existential Self-Aware	Realized Transpersonal	Transcendent
COOK- GREUTER (Ego)	Symbiotic ----- Impulsive	Group-Centric Conformist Diplomat ----- Self-Protective Opportunistic	Self-Determ'd Conscientious Achiever ----- Skill-Centric Self-Consc'us Expert	Self-Actualizing Autonomous Strategist ----- Self- Questioning Individualist Pluralist	Unitive ----- Construct- Aware Ego- Aware Magician Alchemist	—	—
WITTMAYER (Life-Stage)	+Coordination INFANCY -Clumsiness	+Socialization CHILDHOOD -Co-dependence	+Independence YOUTH -Irresponsibility	+Authenticity MIDDLE-AGE -Falseness	+Legacy SENIORITY -Self-indulgen'	+Gratitude ELDERHOOD -Regret	+Anticipation DYING -Disengagem't

My comments on this table are as follows:

1. The table shows my correlation of the Natural Sequence Attributes with various developmental psychology models that are discussed in this Part. Other people with a penchant for synthesizing have their own ideas about how to correlate various DevPsy models. For instance, there are these two websites: ><https://www.integrationsociopsychology.net/theory/vmemes/comparison-map/><, and >http://www.clarewgraves.com/research_content/CG_others/intro.html<.
2. The first three rows show Attributes of the Natural Sequence: Dialectic, Axial, Dimension, Direction, and Process. These Attributes are claimed to apply to all of the stages below them in the same column.
3. The second three rows (Worldviews/Zones, Life-Stages, Cultures) show the names of stages that are Aspects of the Natural Sequence that are relevant to the DevPsy models in rows below. The DevPsy models are generally more ambiguous than these Aspects, so the DevPsy models often include characteristics of more than one Aspect.
4. Loevinger, Graves, Spiral Dynamics, Wilber, and Cook-Greuter understood the swing between Me and We sub-stages of each full stage ("full" stage, that is, according to the Natural Sequence schema). Therefore, they had different keyword names and descriptions for those sub-stages; I show these as two keywords separated by three horizontal dashes (---) in the table cell; the top word applies to the We sub-stage, and the bottom keyword applies to the Me sub-stage.
5. Where an em-dash (—) appears in a cell in the table, this obviously means that the particular DevPsy researcher did not have a stage in their model that fit the Natural Sequence schema Attributes of that cell.
6. It is obvious that different DevPsy researchers often came up with different keywords for the stages, but sometimes there was some similarity. Part of this difference/similarity was due to the fact that

they were each focused on different facets of life (behavioral, emotional, moral, social, cognitive, psychological, spiritual, ethical, whatever), and part of this was due to the fact they none of them ever tumbled to the realization that there might be an archetypal structural framework underlying the various facets of experience, namely the Natural Sequence schema.

7. In the expanded descriptions that the keywords in the table point to, we find that all of the DevPsy researchers, who have chapters in this book, sometimes obviously and sometimes not so obviously discerned the first four stages of the Natural Sequence schema. That is, the first stage mostly has to do with development of the bodily and behavioral dimension of development, the second stage mostly has to do with the emotional and social dimension of development, the third stage mostly has to do with the intellectual and cognitive dimension of development, and the fourth stage mostly has to do with some general experiential dimension of development. Those DevPsy researchers who discerned a fifth stage of development typically perceived it as a stage of final synthesis of the previous stages.

Feedback Principle Revisited

[[Review when full explanation of this principle is completed in Part I.]]

As noted throughout the DevPsy Part of this *Cosmogony* book, several Aspects of the Natural Sequence are mentioned, namely Needs, Life-Stages, Zones/Worldviews, and Culture. Three of these are internal characteristics, namely Needs, Life-Stages and Zones/Worldviews. The remaining Aspect is about external characteristics, namely Culture.

1. According to the Feedback Principle of the Natural Sequence, all of these Aspects influence each other. Numerous comments have been made about this feedback phenomenon in previous chapters in this Part, but a few general comments are appropriate for this concluding, summary chapter.
2. The Needs Aspects is Maslow's Hierarchy of Needs. An infant starts out at the bottom of the Hierarchy, namely Physiology, and typically works up through the other Needs as it grows up, until it reaches a center of gravity in adulthood where it normally resides. That Needs ceiling depends on the other internal factors. A person can go up and down in the Needs Hierarchy due to external factors. In a healthy personality it can rise gently throughout a full lifetime, but few people make it to the top at any time during a lifetime, and most people decline back down the Needs Hierarchy with the decline of the body/mind in old age, reversing the ascent in the reverse order of the ascent.
3. The Life-Stages Aspect is what the humanistic psychologists were mostly interested in, and that is the stages that a person goes through during the story arc of a full lifetime. There are various Dimensions in which development occurs: physical, emotional, religious, moral, social, intellectual, educational, philosophical, spiritual, and political. Different DevPsy researchers have tended to focus on one or the other of these.
4. The Worldview/Zone Aspect is an inborn personality trait, a measure of innate psychological maturity. It does not change over the course of a lifetime, but the other three Aspects influence how it manifests in any given time during the life and in any given situation. Typically, one does not become comfortably seated, with their "center of gravity" in their Worldview, until that person has successfully transited the corresponding Life-Stage. This means that a person with a very high-late Worldview does not fully manifest it until very late in their life. Contrariwise, a person with a very low-early Worldview gets stuck at their maturity ceiling very early in their life.
5. The Culture Aspect refers to the maturity of the socio-cultural maturity of the environment of the person. An infant or toddler is imprinted by its parents and siblings and playmates. A child is acculturated by its playmates and schoolmates and teachers. An adult is acculturated by society in general, and the business or career path, the church one chooses, and the friends one makes. An active strong personality will influence the environment, a passive weak personality, not so much. A Culture that one lives in can make that person act more or less mature than their Life-Stage and their Worldview.

② Transitions have Positive and Negative Poles

It is not merely an academic exercise for us to know that we go through awkward Transitions from one Life-Stage to the next, it can also be very helpful to understand the nature of the Transitions, and that is the purpose of this section.

In this Part, we have been told repeatedly by DevPsy researchers that there is an awkward Transition zone between all Life-Stages. That phenomenon is what I call the Transition Principle. During the Transition from one relatively stable and well-defined Life-Stage to the next relatively stable and well-defined Life-Stage, behavior, feelings, and thoughts can *blend* between old and new ways of being, or *alternate* between old and new ways of being. We may call this an “identity crisis” — because that is the common name for this common phenomenon. One might vacillate between old and new identities, or go blended for a while, until it all gets sorted out and stabilized in the new Life-Stage. There are many self-help psychology books devoted to methods for successfully traversing traumatic Transitions. By understanding that one is going through a rough or empty phase, one can better deal with the “slings and arrows of outrageous fortune” (Shakespeare) between more stable phases in life. It is genuinely beneficial for us to understand the nature of these Transitions.

There is even a mythic and psychological name associated with Transitions, namely “metamorphosis”. Wikipedia has an article on it: ><https://en.wikipedia.org/wiki/Metamorphosis><. The archetypal example of this process is that the caterpillar spins a cocoon around itself, the contents of the cocoon turns into mush, a butterfly forms in the cocoon, and then this new, very different form emerges, nothing like its former self. This biological phenomenon is often adopted as a metaphor for the similar psychological phenomenon of ‘death’ and ‘transition’ and ‘rebirth’ into a higher state of consciousness, a transformation so significant that the person feels like a new and different person; the old person has metaphorically ‘died’ and the new person has been ‘born anew’. If this has not happened to you, to some degree/extent or other, at some time or at some times in your life, you are a rare individual.

I suspect that what I am calling the Transition Principle goes deeper than ordinary phenomena in the psychological and biological worlds as documented in this *Cosmogony* book; there is perhaps also a physics instantiation that is more than metaphorical. I suggest that a physics analogy is the well-known Schrodinger’s cat, a stand-in for what is called a superposition of two opposite states in the sub-atomic realm. You know the story: a cat in a box is said to be alive and dead at the same time, depending on whether or not a random event generator triggers the death of the cat or not. What is called a “state vector collapses” happens when the box is opened, and an “observation” or “measurement” requires a definite state to appear. The universality of the Transition Principle suggests that perhaps we function in a state of ‘quantum superposition’ when we are going through a big change. When we are in a Transition, we do well to take a good hard look at our life, and notice what needs to change, so that we can be stabilized in a different and definite state.

I have another analogy to share with you.

The science of information theory has much to say about the phenomenon of signal versus noise. Signal and noise have a reciprocal relationship to each other, which simply means, the more of one the less of the other. In information theory, there are two states where there is no discernible information content in a data stream; I call these the –Void state and the +Chaos state. If there is no signal/noise at all, that can be called –Void; if there is only noise and no signal, that can be called +Chaos. Everyone is familiar with these opposite, information-free states in a television set, first as a television turned off, such that there is nothing on the screen, and then as a television tuned to no station, such that there is only ‘snow’ on the screen and ‘static’ in the audio. We could liken these two states of a physical system to two states of a psychological system and also call them “+Chaos” and “–Void”. Both states represent an absence of what is called “information”; the person is sensing, feeling, thinking, “I don’t know who I am anymore”.

There are other ways to explain the Poles of a Transition. In the –Void condition of the Transition, one is in *neither* the prior nor the following state; in the +Chaos condition of the transition, one is in *both* the prior and the following state. In the –Void condition, one is passive, ‘adrift at sea in the doldrums’, waiting for an inner signal about where to go from here. In the +Chaos condition, one is active, restlessly searching and experimenting, ‘scanning the horizon’, looking for an outer signal about where to go from here. My guess is that introverts experience more of the –Void condition, and that extroverts experience more of the +Chaos condition. In either Pole, the future life of the person is metaphorically in ‘incubation’ or ‘gestation’; it is ‘pregnant’ with possibilities. In either Pole, the person will be inconsistent, will vacillate, and will be indecisive.

What the outer-world objective state of ‘noise’ and the inner-world subjective state of the Transition lack is a ‘signal’ — a distinct and stable identity. Oftentimes we are metaphorically sailing through life ‘merrily rowing our boat gently down the stream’, and then we come upon some rapids with rocks and waterfalls buffeting us about — “Shift Happens”, as the bumper sticker says; we vacillate/oscillate/teeter between Life-Stages; we are inconsistent and self-contradictory in our behavior, feelings, and thoughts. I suggest that if you find yourself in

one of these vacillating +Chaotic or ambiguous –Void states, then take it easy for a while: center yourself, don't make any big decisions, and 'take a break' until the craziness passes.

Personally, I have found that the Transition Principle has shown up unmistakably during my lifetime. There has always been a –Void and/or a +Chaos at the Transition between Life-Stages, and at the Transition between the seven Sub-stages within each Life-Stage. During those times, I just have to 'bide my time' while the psyche does its thing getting from one Life-Stage or Sub-stage to the next Life-Stage or Sub-stage. During the Transitions, the past seems meaningless, the present seems directionless, and the future seems amorphous. Therefore, I do not make any life-changing decisions or major course corrections during the Transition. So far, I have never failed to emerge out of the +Chaos and/or the –Void, and so when that happens I just get on with the next 'chapter' of my life 'story' because it again has meaning, direction, and form.

Not all Transitions are created equal; they can be categorized into major, medium, and minor transitions (or primary, secondary, and tertiary). You might have already surmised this from the descriptions given above. The major Transitions are between Life-Stages, the medium Transitions are in the middle of the Life-stages (in the fourth Sub-stage, in the phase between the Ordinal/Me triad and Cardinal/We triad of Sub-stages), and the minor Transitions are between Sub-stages.

② The Hero's Journey

The title of this section refers to an article titled "To Lead a Meaningful Life, Become Your Own Hero". It was published in the January 2024 issue of *Scientific American* magazine. It was authored by three academics (Ben Rogers, Kurt Gray, Mike Christian), who had recently published the results of their joint study in the *Journal of Personality and Social Psychology*. They referred to the prior research of mythologist Joseph Campbell, published in 1949 as the "hero's journey"; you may read about that in many resources found on the internet, but Wikipedia has a good introduction: >https://en.wikipedia.org/wiki/Hero's_journey<. The three researchers had this to say about that:

... abridged and condensed the 17 steps into seven elements that can be found in both legends and everyday life: [1] a lead protagonist, [2] a shift of circumstances, [3] a quest, [4] allies, [5] a challenge, [6] a personal transformation and [7] a resulting legacy.

Readers of this Part, the DevPsy Part, of my *Cosmogony* book will recognize in that septenary some of the components of the Natural Sequence schema, both in the entire story arc of a full human lifetime, and in the Transitions between stages of the septenary.

One point that the researchers make is that a person is more successful and more fulfilled if they recognize that their lives and their Transitions from one stage to another are more meaningful if they view their journey in 'heroic' terms, but I would add: without being narcissistic or grandiose about it. For instance, they say:

Anyone can frame their life as a hero's journey — and we suspect that people can also benefit from taking small steps toward a more heroic life. You can see yourself as a heroic protagonist, for example, by identifying your [beliefs and] values [and behaviors] and keeping them top of mind in your day-to-day. You can lean into friendships and new experiences. You can set goals much like those of classic quests to stay motivated and challenge yourself to improve your skills. You can also take stock of lessons learned and ways you might leave a positive legacy or your community or lived ones. Although you might never save the world on a massive scale, you could save yourself. You can become a hero in the context of your own life, which, at the very least, makes for a better story.

② Concluding Comments on Developmental Psychology

There is nothing quite like a numbered list (or a table) for getting my thoughts in order, and for presenting them clearly to others.

1. There is a personality type that loves to correlate conceptual systems. I am one of those, and this *Cosmogony* book is an extreme example of the proclivity. Other Parts of this *Cosmogony* book discuss different alleged instantiations of the Natural Sequence schema. The challenge I set for myself was to discern the commonalities of the various realms and thereby correlate them with the help of the Natural Sequence schema.
2. The same as with other Parts of this *Cosmogony* book, this Part looks at a particular instantiation of the Natural Sequence schema, in this case developmental psychology. The attempt is made herein to

disambiguate DevPsy in the light of the archetypal, fundamental structural framework that the Natural Sequence schema provides.

3. As stated in the introduction to this Part, this Part is longer than other Parts in this *Cosmogony* book because I believe that it is important for us all to understand that there is a holarchy of maturity in all manner of human experience. This means that, over the course of a lifetime, there is a natural development, advancement, and evolution in our behavior system, our value system, our belief system, our overall perceptivity, and in our philosophical, spiritual, and political understanding.
4. As with every other Part of this book, this Part of the book just ‘scratches the surface’ of the deep and broad subject of DevPsy. I am so not doing justice to the life work of DevPsy researchers. Consequently, there must be innumerable distortions and maybe some errors. Apologies are in order. My own research for every one of these chapters is skimpy because I have relied on reductions of reductions of original research. Even so, my thesis is that these simplifications can be reduced to the ultimate simplification, as instantiations of the fundamental archetypes of the Natural Sequence schema, which has a logical and mathematical structure, and which also has an instantiation in physics.
5. There are ambiguities in the description of all of the models, whereas ambiguities are not found in the pure abstract archetypes named in the Attributes of the Natural Sequence schema. These ambiguities in DevPsy models can, of course, be attributed to the fact that humans (and their environments) are a lot more messy than logic, mathematics, and physics. In other words, the Natural Sequence scheme is a tidy pattern, but attempts to fit humans into a tidy scheme can only be messy. Nevertheless, DevPsy researchers seem to have converged on the Natural Sequence schema.
6. As I said, all DevPsy models are ambiguous, but put them all together, compare and contrast them, and, with the help of the Natural Sequence schema, they clarify and embellish each other. These make the correlation of DevPsy with the Natural Sequence schema firmer. When we put all of these accounts together, we get a rather complete understanding of the characteristics of each stage of the Natural Sequence schema, even though none of the DevPsy researchers knew about the Natural Sequence schema.
7. As already stated, the Natural Sequence schema is of pure abstract archetypes. The life of every particular individual person is really inestimably messy compared to the tidy theoretical formulation provided by the Natural Sequence model. Because people are messy and ambiguous, it is difficult if not impossible to ‘pigeon-hole’ them into a tidy category. In my opinion, in the grand cosmic scheme of differentiation, this uniqueness is one of the things that makes every life worth playing out.
8. In my view, each DevPsy model can be shown to be an instantiation of the Natural Sequence schema, but each model is flavored and colored by the reality of what actually is, as well as by the pre-conceptions and perceptions of the DevPsy researcher. One of my purposes in proposing the Natural Sequence as the deep explanation of each system is to eliminate the bias of the researchers, and thereby disambiguate each model.
9. One of the things that makes my synthesis of DevPsy models and the Natural Sequence schema compelling is that each DevPsy model has only part or most of the full seven-stage Natural Sequence schema with all of its Principles, but this only becomes obvious when all of the DevPsy models are compared and contrasted enough to complete the Natural Sequence ‘picture’, when all of the ‘puzzle pieces’ are fitted together.
10. There are various aspects of developmental psychology. Various DevPsy researchers have researched these various aspects: Maslow and needs, Loevinger and ego, Erikson and social, Kohlberg and morals, Fowler and faith, Kegan and self, and so on. If we look at them all, we get a fairly complete picture of average human maturity, but not a complete picture of any particular individual. It is a wonder to me that each researcher was able to tease their particular favorite metric out of such a mass of data, and come up with a model that can reasonably be fitted to the Natural Sequence schema.
11. It needs to be emphasized that a person at a later–higher maturity on one DevPsy model, say Kohlberg/morals, can be at an earlier–lower maturity on another DevPsy model, say Loevinger/ego, and so on for the other DevPsy models. I suppose it is theoretically possible for a person to be ‘all over the map’ in terms of the various models, but my guess is that a person tends to be clustered somewhere on the septenary in terms of the various models.

12. Extending Item #11, it needs to be emphasized that an individual can have their center of gravity at a different stage in the septenary in terms of their DevPsy Model versus their Life-Stage versus their Worldview versus their Zone versus their Culture versus their parental imprinting. Ambiguity reigns. However, this does not negate the validity of the concept of stages *per se*, nor does it denigrate the value of understanding the nature of stages, and their intricacies and their subtleties.
13. Whereas most of the DevPsy researchers reviewed in this Part focus on some aspect of psychological development over the course of a lifetime, some of these DevPsy researchers are also aware of socio-cultural development over the course of human history, which I refer to as Culture. Apparently without realizing the cause of it, they have also noticed that people have an inborn 'ceiling' that limits their maturity in that lifetime, which I refer to as Worldview. My claim is that, even though these aspects of maturity are all instantiations of the Natural Sequence schema, they should be disentangled from each other if we are to have the most complete and accurate account of human maturity factors and influences.
14. It is true that the various instantiations of the Natural Sequence schema and DevPsy models all influence how all of the other instantiations manifest, and it is true that one might not be able to discern which instantiation is the source of any particular individual behavior, value, or belief, but my assertion is that it is helpful, for theoretical clarity, to disambiguate and differentiate them.
15. For the most part, the DevPsy Part of this *Cosmogony* book discusses only the three lower-earlier Dimensions of psychological development: the body-behavioral, the social-emotional, and the cognitive-intellectual. Those Dimensions have been the most obvious objects of research to the most developmental psychologists. These correlate with the three Ordinal stages of the Natural Sequence schema: Ordinal Action, Ordinal Inspiration, and Ordinal Expression, respectively. Humanity as a whole has made progress in these Dimensions over the course of history. There are four higher-later Dimensions of development than those discussed in most chapters of this Part, but which are discussed in other Parts. For instance, there is the Neutral Assimilation Dimension which is concerned with the progress made in science; there is the Cardinal Expression Dimension, which is concerned with the progress made in philosophy; there is the Cardinal Inspiration Dimension which is concerned with the progress made in spirituality; there is the Cardinal Action Dimension which is concerned with the progress made in governance. People as individuals make progress in these Dimensions of their lives if they live a full and healthy life. Other Parts of this *Cosmogony* book are dedicated to those Dimensions.
16. All of the DevPsy models reviewed in this Part accept the Holarchy Principle, which states that each higher-later stage is built upon and includes the lower-earlier stages. One of the consequences of the Holarchy Principle is that the higher-later a stage a person is in, the more difficult it is to discern their actual stage, because those people are more flexible; they have more ability to revert to a lower-earlier stage as appropriate to fit in than a person in a lower-earlier stage has the ability to imitate a higher-later stage.
17. As stated in Item #13, one observation made by most developmental psychologists is that each person has a highest stage that they can achieve, a 'ceiling' so to speak, which they cannot exceed no matter the environmental influences. This tells me that stages cannot be entirely about *nurture* subsequent to birth. It also tells me that developmental psychologists should recognize that lifetime *nature* (Worldview) and lifetime *nurture* (Life-Stage), should be recognized as two different things that follow the same pattern, the Natural Sequence schema. A big debate among sociologists and psychologists and criminologists and society in general is how much restraint should be applied by more mature people to keep these less mature people from hurting themselves and/or others. The entire legal system is built on dealing with immature (or otherwise defective and deficient) people who do hurtful things as they learn lessons the hard way, lessons that their society has already learned and codified.
18. One point to be made here is that physical maturity would obviously not be included in my review of the DevPsy models discussed in this Part. Suffice it to say here that, obviously, physical changes over the course of a lifetime affect psychological maturity. Infants start out learning to operate the physical body (beyond what is provided by innate instinct), and they use the five senses to operate the body in their environment. Skills in the use of the physical body can increase until middle age, when it starts to go the other way, until toward the end we old geezers have a lot to complain about in terms of the

increasing dysfunctions of the body. This deterioration of the psycho-somatic apparatus can be so extreme as to cause a regression in psychological maturity; this has been called the “second childhood”.

19. Readers of this book will likely be adults, perhaps even aged adults, and so they will have already passed through some of these stages, and therefore have personal experience of them. I suggest that readers would do well to now review their memories of their life transitions and discern to what extent their personal experiences match the conclusions of the DevPsy researchers. One could also recall and review the transitions that their children went through, or their parents in their later years.
20. As for myself, I do not remember going through the “terrible twos” transition between the Infancy and Childhood Life-Stages in the Natural Sequence schema. (Looking at my baby pictures from that time period, it is obvious from my subtle beneficent smile that I was a perfect angel.) But I do remember the stormy transition at puberty, between the Childhood and Youth Life-Stages. The transition from Youth to Middle Age Life-Stage in my thirties was also tumultuous; a marriage and a religion ended and a career path barely survived. The transition from Middle Age to Seniority Life-Stage at about age fifty was not nearly as turbulent; it was more like a “tipping point” half-way in the story arc of my life: I implemented plans for retirement well in advance of the event, and shifted my focus away from career advancement to “extra-curricular activities”, one might say. After actual retirement, during the transition from Seniority to Elderhood Life-Stage in my sixties, I went through a major psychological re-evaluation and adjustment. For a while there I wanted to throw out all of my old value and belief systems, but instead I decided to tidy things up: I began to finish the book manuscripts that I had started during the previous decades. I would like to believe that you and I are the better for this decision. These are now my “golden years”, which I expect to last until the transition from Elderhood to the Dying Life-Stage, which is when advanced old age progressively minimizes any contribution that I can make to myself and others.

Four developmental time-tracks in the human realm (what I call Culture, Worldview, Zone, and Life-Stage) are built into the natural course of events. That is, after all, why I place them under the umbrella of the “Natural” Sequence. However, there is another developmental process that is not in the course of natural events; one could say that it is in the course of *unnatural* or *supernatural* events, and that has to do with paths to so-called “enlightenment”. These paths are of choice, not of necessity, but they do follow the Natural Sequence schema. They are the subject of **Part VI** in this *Cosmogony* book.





PART VI — STAGES OF ENLIGHTENMENT



Chapter VI-1

② INTRODUCTION TO STAGES OF ENLIGHTENMENT

This Part is a logical extension of the previous Part. In the previous Part, “Developmental Psychology”, there were repeated mentions of so-called “transpersonal psychology”. This is the notion that there are space-like levels and time-like stages of awareness available in the human experience that transcend the personal ego. In some circles, these transcendent levels are typically referred to as states of “enlightenment”, because that is what it feels like in these exalted states of awareness compared to normal states of awareness. As noted in that previous Part, in the Natural Sequence schema these are referred to as the “Cardinal” levels and stages of human experience. It so happens that many ancient and modern philosophical, religious, and spiritual traditions claim that one can embark on a developmental journey to foster and elicit those transpersonal experiences, and the journey is often said to consist of seven stages. It so happens that these seven stages usually follow the Natural Sequence schema even though they do not know about the Natural Sequence schema, as I hope to demonstrate to the satisfaction of the reader in this Part of this *Cosmogony* book. As usual, in this Part as in other Parts, we will see that the Taijitu Tango ontology, the Natural Sequence schema, and the Process/Aspect System matrix brings a clarity to phenomena and terminology that have heretofore been ambiguous.

Introduction

As perhaps a typical humanistic psychologist — one who does not believe in the transpersonal realm — will tell you, the “problem” with transpersonal psychology is that it is not as amenable to the scientific method of objective quantitative analysis as standard clinical and counseling psychology is. On the other hand, a transpersonal psychologist might say that, if a psychologist has not had a subjective qualitative transcendent transpersonal mystical experience, then that person is not really qualified to evaluate transpersonal psychology via the standard objective scientific methods, because those methods are not appropriate to the field. Transpersonal psychologists keep trying to make their field of research acceptable to the standard humanistic psychology community, but so far, the tipping point to mainstream acceptance has not been reached. Assuming that the use of psychedelic so-called “entheogens” continues to become mainstream and widespread — when transpersonal experiences can be initiated at will without an arduous journey of so-called “consciousness raising” practices — then perhaps this tipping point will be reached in coming years and/or decades.

In this introductory chapter on the septenarian (seven-stage) paths to enlightenment, we first review a definition and description of “transpersonal psychology”, then we do the same for “enlightenment” in general, and then we review various “spiritual” paths and practices that are studied by transpersonal psychologists and that allegedly promote enlightenment. Then in chapters that follow we will take a look at some specific

spiritual teachings about the levels and stages of transpersonal experience, those teachings that propose that the path exists and functions in seven steps, the Natural Sequence schema steps.

As the reader reads this chapter, when they encounter Natural Sequence schema words, if they need to, they can be reminded of the structure of the Natural Sequence schema by referring to the following table.

Table VI-1a — STAGES of ENLIGHTENMENT							
RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
DIALECTIC	–ORDINAL– (ME)			=NEUTRAL=	+CARDINAL+ (WE)		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
PROCESS → ASPECT ↓	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
CENTER	MOTION	EMOTION	INTELLECT	IMPULSE	CONCEPT	SYMPATHY	EXCITATION
CHAKRA	GONADIC	NAVEL	PLEXUS	HEART	THROAT	BROW	CROWN
NAME	—	—	—	BEAUTY	TRUTH	LOVE/BLISS	ENERGY

My comments on this table are as follows.

1. RANK: The seven stages of progress toward enlightenment are numbered, from the left column to the right column.
2. The five rows below the RANK row show the so-called “Attributes” of the stages of the Natural Sequence schema. These Attributes are discussed in more detail elsewhere in this *Cosmogony* book and in my other books, so I will not explain them here. Please review the names now if you are not already thoroughly familiar with these Attributes, because many references to them will be made in this Part of this *Cosmogony* book.
3. DIALECTIC: The First, Second, and Third Ranks have the Dialectic Attribute called “Ordinal”. We live most of our life in these three stages of the Natural Sequence schema, and these are the realms of mundane experience with which humanistic psychologists typically concern themselves. However, some people aspire to higher stages of being. The Fourth, Fifth, Sixth, and Seventh Ranks are degrees of what is generally called “enlightenment”. They have Neutral or Cardinal Attributes.
4. CENTER: Below the rows of Attributes, the third-from-bottom row shows the names of the seven so-called “Centers”. This is the Aspect, among seven Aspects, of the Process/Aspect System (PAS) 7x7 matrix that is most appropriate for this discussion about enlightenment.
5. CHAKRA: These energy nodes in the physical body are shown in this table because they correlate with Centers, and because they appear in Oriental spiritual religions and philosophies in the context of the stages of enlightenment, and because reference to them is made in this chapter and in this [Part VI](#). Chapter [II-x](#) has somewhat to say about the chakras.
6. NAME: For the sake of convenience, one-word names have been given to the four stages of enlightenment, and these are shown in the bottom row. The name somewhat characterizes and qualifies the nature of the stage. Descriptions of the characteristics, qualities, and nature of each stage are found throughout this *Cosmogony* book, so they are not reviewed here.

Transpersonal Psychology

Per the Natural Sequence septenarian hierarchical spectrum, humanistic psychology only concerns itself with what happens in the lower–earlier (Ordinal) states of awareness and function, whereas transpersonal psychology concerns itself with higher–later (Neutral and Cardinal) states of awareness and function. What we moderns refer to as “transpersonal psychology” has apparently been of interest to humanity since the dawn of humanity if you take such things as the use of shamanistic practices and the use of natural psychedelics as an

indication of an interest in achieving exalted states of awareness at all times in human history, in individuals, in mystery cults, and in tribal groups. One could also say that transpersonal psychology of a more formal sort has been a pursuit of a certain segment of humankind since the founding of those religions that involved priests and institutions and practices that fostered initiation into higher states of awareness. **These phenomena were discussed in Part III, “Ancient Religions and Philosophies”.** However, transpersonal psychology as a general formal academic endeavor has only come to prominence during and subsequent to the social revolution in the Occidental world, starting in the 1950s.

Wikipedia provides an introduction to the subject of transpersonal psychology, which the reader may find on the internet at >https://en.wikipedia.org/wiki/Transpersonal_psychology<. In what follows I quote extensively from that article. As usual, in the quotations that follow, underlined words are my emphasis, to point out stuff that I suggest the reader should pay special attention to. As usual, I provide brief explanatory comments in [brackets] within the quotations, and I provide more extensive comments interspersed between blocks of quoted material.

TRANSPERSONAL PSYCHOLOGY

Introduction

Transpersonal psychology, or spiritual psychology, is a sub-field or school of psychology that integrates the spiritual and transcendent aspects of the human experience with the framework of modern psychology. The transpersonal is defined as “experiences in which the sense of identity or self extends beyond (*trans*) the individual or personal to encompass wider aspects of humankind, life, psyche, or Cosmos”. It has also been defined as “development beyond conventional, personal, or individual levels”.

Issues considered in transpersonal psychology include spiritual self-development, self beyond the ego, peak experiences, mystical experiences, systemic trance, spiritual crises, spiritual evolution, religious conversion, altered states of consciousness, spiritual practices, and other sublime and/or unusually expanded experiences of living.

The discipline attempts to describe and integrate spiritual experience within modern psychological theory and to formulate new theory to encompass such experience....

That brief introduction is a succinct description of the Cardinal states, stages, or levels of awareness that are acknowledged by transpersonal psychologists and systematized in the Natural Sequence schema, as distinct from the Ordinal states, stages, and levels of awareness, which are typically researched by humanistic psychologists.

The Wikipedia article continues:

Definition

Lajoie and Shapiro reviewed forty definitions of transpersonal psychology that had appeared in academic literature over the period from 1968 to 1991. They found that five key themes in particular featured prominently in these definitions: [1] states of consciousness; [2] higher or ultimate potential; [3] beyond the ego or personal self; [4] transcendence; [5] and the spiritual. Based upon this study the authors proposed the following definition of transpersonal psychology: Transpersonal Psychology is concerned with the study of humanity’s highest potential, and with the recognition, understanding, and realization of unitive, spiritual, and transcendent states of consciousness....

Hartelius, Caplan and Rardin conducted a retrospective analysis of definitions of transpersonal psychology. They found three dominant themes that define the field: [1] beyond-ego psychology, [2] integrative/holistic psychology, [3] and psychology of transformation. Analysis suggested that the field has moved from an early emphasis on alternative states of consciousness to a more expanded view of human wholeness and transformation....

As we will see further on, there are varieties of transpersonal states of consciousness that can be discerned, and then we will note how these fit into the Natural Sequence schema.

Caplan (2009: p. 231) conveys the genesis of the discipline, states its mandate and ventures a definition:

Although transpersonal psychology is relatively new as a formal discipline, beginning with the publication of *The Journal of Transpersonal Psychology* in 1969 and the founding of the Association for Transpersonal Psychology in 1971, it draws upon ancient mystical knowledge that comes from multiple traditions. Transpersonal psychologists attempt to integrate timeless wisdom with modern Western psychology and translate spiritual principles into scientifically grounded, contemporary language. Transpersonal psychology

addresses the full spectrum of human psycho–spiritual development — from our deepest wounds and needs, to the existential crisis of the human being, to the most transcendent capacities of our consciousness.

The perspectives of holism and unity are central to the worldview of transpersonal psychology.

“Holism” and “unity” are qualities of the Neutral and Cardinal levels or stages of the Natural Sequence schema. All of these descriptions and definitions of transpersonal psychology indicate that it is concerned with understanding the experiences of the one Neutral and the three Cardinal stages of the Natural Sequence schema, which for the sake of brevity I refer to as Beauty (Neutral Assimilation), Truth (Cardinal Expression), Love/Bliss (Cardinal Inspiration), and Energy (Cardinal Action). In chapters that follow, we review some of those teachers, from ancient times to modern times, who claim that there are seven stages on a spiritual path that fosters transpersonal experiences.

The Wikipedia article continues:

DEVELOPMENT OF THE FIELD

Origins

The thinkers who have set the stage for transpersonal studies are William James, Carl Jung, Roberto Assagioli, and Abraham Maslow. More recent attention has brought to light transpersonal aspects of Jean Piaget’s untranslated French works, and argued that Piaget’s transpersonal experiences and theoretical interests were a major motivation for Piaget’s psychological research.... Commentators also mention the psychedelic movement, the psychological study of religion, parapsychology, and the interest in Eastern spiritual systems and practices, as influences that shaped the early field of transpersonal psychology.

Another important figure in the establishment of transpersonal psychology was Abraham Maslow, who had already published work regarding human peak experiences. Maslow is credited for having presented the outline of a fourth-force psychology, named transhumanistic psychology, in a lecture entitled “The Farther Reaches of Human Nature” in 1967. In 1968 Maslow was among the people who announced transpersonal psychology as a “fourth force” in psychology, in order to distinguish it from the three other forces of psychology: psychoanalysis, behaviorism, and humanistic psychology. Early use of the term “transpersonal” can also be credited to Stanislav Grof and Anthony Sutich. At this time, in 1967–68, Maslow was also in close dialogue with Grof and Sutich regarding the name and orientation of the new field. According to Powers the term “transpersonal” starts to show up in academic journals from 1970 and onward.

The developmental stage theories of Assagioli, Maslow, and Piaget are discussed in the **Part Five** of this *Cosmogony* book, which is on “Developmental Psychology”. The chapters that discuss their work also fit here, but they are not reviewed here in this Part on “Enlightenment”, other than to say that both Assagioli and Maslow had schemas that correlated exactly with the Natural Sequence schema. Rather, we will review the work of some spiritual teachers and teachings that are not a part of the academic transpersonal psychology movement.

The Wikipedia article continues:

Formative period

... In the 1970s the field developed through the writings of such authors as Robert Frager, Alyce and Elmer Green, Daniel Goleman, Stanley Krippner, Charles Tart, Roger Walsh, John Welwood, and Ken Wilber. Wilber emerged as a leading figure and major theoretician of the field. Another important contributor to the field, Michael Washburn, was drawing on the insights of Jungian depth psychology. According to Smith, Wilber and Washburn presented the major guiding theories of transpersonal development. The 1980s were also characterized by the work of Stanislav and Christina Grof, and their concept of spiritual emergence and spiritual emergencies.... While Wilber has been considered an influential writer and theoretician in the field of transpersonal psychology, his departure from the field was becoming more obvious during the decade of the 1990s. Although the date of his departure is unclear, Freeman notes that Wilber had been distancing himself from the label of “transpersonal”, in favor of the label of “integral”, since the mid-1990s. In 1998 he formed Integral Institute....

Ken Wilber’s developmental stage theory was also discussed in the **Part Five** of this *Cosmogony* book. Note that the words “emergence” and “emergency” indicate that some transpersonal psychologists were aware of the phenomenon that I refer to as the Transition Principle, the notion that stages of the Natural Sequence schema are separated by experiential crises, and that stable periods of evolutionary development emerge out of revolutionary transitions.

The Wikipedia article continues:

Branches and related fields

Several psychological schools, or branches, have influenced the field of transpersonal psychology. Among these schools we find the Analytical psychology of Carl Jung, the psychosynthesis of Roberto Assagioli, and the humanistic psychology of Abraham Maslow. The major transpersonal models of psychotherapy, as reviewed by Cortright, are the models of Ken Wilber, C.G Jung, Michael Washburn, Stanislav Grof, and Hameed Ali....

Transpersonal art is one of the disciplines considered by Boucovolas, in listing how transpersonal psychology may relate to other areas of transpersonal study. In writing about transpersonal art, Boucovolas begins by noting how, according to Breccia and also to the definitions employed by the International Transpersonal Association in 1971, transpersonal art may be understood as art work which draws upon important themes beyond the individual self, such as the transpersonal consciousness. This makes transpersonal art criticism germane to mystical approaches to creativity. Transpersonal art criticism, as Boucovolas notes, can be considered that which claims conventional art criticism has been too committed to stressing rational dimensions of art and has subsequently said little on art's spiritual dimensions, or as that which holds art work has a meaning beyond the individual person. Certain aspects of the psychology of Carl Jung, as well as movements such as music therapy and art therapy, may also relate to the field. Boucovolas' paper cites Breccia (1971) as an early example of transpersonal art, and claims that at the time his article appeared, integral theorist Ken Wilber had made recent contributions to the field. More recently, the *Journal of Transpersonal Psychology*, in 2005, Volume 37, launched a special edition devoted to the media, which contained articles on film criticism that can be related to this field.

The category of creative mystically-inspired art forms, which includes some exalted music and some exalted film as well as exalted graphic representation, fits well into the Neutral Assimilation (Beauty) and the Cardinal Expression (Truth) stages of the Natural Sequence schema. Graphic arts that are consistent with the Cardinal stages of consciousness are typically abstract rather than strictly representational. If you do an internet search on "psychedelic art" you will see what I mean; Wikipedia even has an article on it, which you can find here: >https://en.wikipedia.org/wiki/Psychedelic_art<. Other exalted forms of music fit well into the Cardinal Inspiration (spiritual, uplifting) and Cardinal Action (droning, hypnotizing) stages of the Natural Sequence schema. In fact, some composers and musicians intentionally aim their art form at the so-called "higher chakras", which have a correlation with the Cardinal Centers of the Natural Sequence schema; refer to **Chapter II-8, "The Seven Chakras" in Part Two, "Modern Day Spiritual Teachings"**.

The Wikipedia article continues:

RESEARCH, THEORY, AND CLINICAL ASPECTS

Research interests and methodology

The transpersonal perspective spans many research interests. The following list is adapted from the *Textbook of Transpersonal Psychiatry and Psychology* and includes: the contributions of spiritual traditions such as Taoism, Hinduism (Yoga), Buddhism, Kabbalah, Christian mysticism, Shamanism, and Native American healing to psychiatry and psychology; meditation research and clinical aspects of meditation; psychedelics; parapsychology; anthropology; diagnosis of religious and spiritual problem; offensive spirituality and spiritual defenses; phenomenology and treatment of Kundalini; psychotherapy; near-death experience; religious cults; psychopharmacology; guided imagery; breathwork; past life therapy; ecological survival and social change; aging and adult spiritual development.

The underlined words refer to religious and philosophical traditions that each have **a chapter in Part Three, "Ancient Religions"**, because they all have components that are explained by the Natural Sequence schema.

The research of transpersonal psychology is based upon both quantitative and qualitative methods, but some commentators have suggested that the main contribution of transpersonal psychology has been to provide alternatives to the quantitative methods of mainstream psychology. Although the field has not been a significant contributor of empirical knowledge on clinical issues, it has contributed important quantitative research to areas such as the study of meditation.

In the Natural Sequence schema, the three lower-earlier, aka Ordinal, stages are more *quantitative*, or objective, in nature, and the three higher-later, aka Cardinal, stages are more *qualitative*, or subjective, in nature. Naturally, people who have had a transpersonal experience, and/or are in the Cardinal stages of the Life-Stage septenary and/or in the Cardinal stages of the Worldview septenary as discussed in the **Part Five**, will tend to prefer the perspective and methods of transpersonal psychology over the perspective and methods of "mainstream" psychology. Another point to be made, one emphasized by Maslow, is that humanistic

psychology is focused on the experiences of psychologically unhealthy and maladjusted people, whereas transpersonal psychology is focused on the experiences of psychologically healthy and well-adjusted people.

The Wikipedia article continues:

THEORIES ON HUMAN DEVELOPMENT

One of the demarcations in transpersonal theory is between authors who are associated with hierarchical/holarchical, sequential, or stage-like models of human development, such as Ken Wilber and John Battista, and authors who are associated with Jungian perspectives, or models that include the principle of regression, such as Michael Washburn and Stanislav Grof.

Wilber and Battista have developmental psychology models that are reviewed in the [Part Five](#); Washburn and Grof did not have DevPsy models, so, obviously, there was nothing for me to review.

Ken Wilber and John Battista

Wilber's model of consciousness consists of three broad developmental categories: the prepersonal or pre-egoic, the personal or egoic, and the transpersonal or trans-egoic. A more detailed version of this model includes nine different levels of human development, in which levels 1-3 are pre-personal levels, levels 4-6 are personal levels and levels 7-9 are transpersonal levels. Later versions also include a tenth level. The transpersonal stages, or the upper levels of the model, are the home of spiritual events and developments. The framework proposed by Wilber suggests that human development is a progressive movement through these stages of consciousness. The theory implies that different schools of psychology are associated with different levels of the model, and that each level of organization, or self-development, includes a vulnerability to certain pathologies associated with that particular level. Each level also represents developmental tasks that must be properly met, or they might lead to developmental arrest.

The ten-stage version of Wilber's schema is reviewed in [Chapter V-12](#) in [Part Five](#) of this *Cosmogony* book. The six- and eight-stage versions of Battista's schema are reviewed in [Chapter V-13](#) in [Part Five](#) of this *Cosmogony* book. There you can see how I propose to correlate their schemas with Life-Stages and Worldviews, which are also instantiations of the Natural Sequence schema.

The Wikipedia article continues:

Wilber's understanding of the levels of consciousness, or reality, ranging from matter to body to mind to soul to spirit, or from pre-personal to personal to transpersonal, is often referred to as the "Great Chain of Being". This overarching framework, that is adapted from the "perennial philosophy" of the world's great spiritual traditions, is later reformulated by Wilber as the "Great Nest of Being". That is, not just a simple linear hierarchy, but a kind of nested hierarchy, or holarchy. Human development, and evolution, is considered to move up this holarchy....

It so happens that I learned about the concept of the "holarchy" from reading Wilber's writings. The "Great Chain/Nest of Being" is discussed in some detail in [Chapter I-x](#) in [Part One](#), "Principles of the Natural Sequence", in the [section on the Holarchy Principle](#). The "Perennial Philosophy" is discussed in the Introduction to [Part Three](#), "Ancient Religions". Basically and briefly, the notion espoused in the perennial philosophy is that the major influential religious traditions have all, to a large extent, tapped into a fundamental common source of psycho-spiritual understanding, even though they may be encumbered with, and distorted by, various erroneous and disparate dogmas and doctrines.

The Wikipedia article continues:

Similar to the model presented by Wilber is the information theory of consciousness presented by John Battista. Battista suggests that the development of the self-system, and of human psychology, consists of a series of transitions in the direction of enhanced maturity and psychological stability, and in the direction of transpersonal and spiritual categories. His model presents a series of developmental tasks with corresponding levels of consciousness and psychopathology, and discusses therapeutic interventions in relation to the different levels and transitions.

That was another reference to what I refer to as the Transition Principle, namely the notion that stages in the Great Chain/Nest of Being are separated by a so-called "identity crisis". The Transition Principle is discussed in [Chapter I-x](#) in [Part One](#), "Principles of the Natural Sequence".

Stuart Sovatsky

The idea of development is also featured in the spiritual psychotherapy and psychology of Stuart Sovatsky. His understanding of human development, which is largely informed by east/west psychology and the tradition and hermeneutics of Yoga, places the human being in the midst of spiritual energies and processes outlined in yogic

philosophy. According to Sovatsky these are maturational processes, affecting body and soul. Sovatsky adapts the concept of Kundalini as the maturational force of human development. According to his model a number of advanced yogic processes are said to assist in “maturation of the ensouled body”.

The oriental spiritual philosophies and practices of yoga and kundalini are discussed in some detail in **various other Parts and chapters of this *Cosmogony* book**. Basically and briefly, the idea taught in Yoga theory is equivalent to the Dialectic Principle of the Natural Sequence schema — the notion that experiencing the Dialectic Attributes (Cardinal versus Ordinal) propels the development of consciousness according to the pattern of Thesis + Antithesis = Synthesis, aka Ordinal + Cardinal = Neutral. Basically and briefly, Kundalini is an instantiation of the Holarchy Principle of the Natural Sequence schema, which is the notion that development in many realms of nature follows through the sequence of the Septenarian Attributes arranged in the Natural Sequence schema.

The Wikipedia article continues:

Transpersonal theory of Jorge Ferrer

The scholarship of Jorge Ferrer introduces a more pluralistic and participatory perspective on spiritual and ontological dimensions.... Ferrer focuses upon the great variety, or pluralism, of spiritual insights and spiritual worlds that can be disclosed by transpersonal inquiry. ... he introduces the idea of a “dynamic and indeterminate spiritual power”. Along these lines he also introduces the metaphor of the “ocean of emancipation”. According to Ferrer “the ocean of emancipation has many shores”. That is, different spiritual truths can be reached by arriving at different spiritual shores.

To me this means that, as one would naturally expect, different personality types are drawn to one or another path to arrive at, and become ensconced in, one or another transpersonal stage of psycho-spiritual maturity. In other words, pick a spiritual path that feels right to you, and see how far and where the journey takes you, and do not overly concern yourself about the fitness of some other journeys that others are taking. In this Part, several types of journeys are reviewed, but what they have in common is that they are septenarian, aka seven-step, paths, that conform to the Natural Sequence schema.

The Wikipedia article continues:

Transpersonal psychotherapy

... Within contemporary psychoanalysis it has been suggested that, from a clinical point of view, postulating a transcendent dimension to human experience is theoretically necessary in promoting non-reductive approaches to therapy....

According to commentators, transpersonal psychology recognizes that transcendent psychological states, and spirituality, might have both negative and positive effects on human functioning. Health-promoting expressions of spirituality include development and growth, but there also exist health-compromising expressions of spirituality.... [https://en.wikipedia.org/wiki/Transpersonal_psychology] — retrieved 06 May 2023]

In my view of mainstream psychology versus transpersonal psychology, there is the psychotherapeutic path, which involves metaphorically ‘casting out demons’ on the Ordinal steps of the path, and then there is the spiritual path, which involves metaphorically ‘listening to angels’ on the Cardinal steps of the path.

The negative as well as the positive effects of experiences on one’s path toward enlightenment are acknowledged by the Transition Principle of the Natural Sequence schema. Basically and briefly, the principle is that transitions from one stage to another on the path are often traumatic, or at least confusing, uncomfortable, and disconcerting.

Thereafter in the Wikipedia article followed several sections documenting the cool reception that transpersonal psychologists and transpersonal psychology has received over the few decades of its existence. Many psychologists criticize the movement for one reason or another, and even some people within the movement have some criticisms of it. This is to be expected for a field of inquiry in the primitive stages of its own evolution and development.

The point that I want to emphasize here is that it is not easy to accommodate the transpersonal data in the framework that is pervasive in the psychological profession at this time in history, and which is biased against transcendent, spiritual, and mystical interpretations of experience. They still believe that after the “Dark Ages”, the so-called “Enlightenment” in Western Civilization happened as an outgrowth of the Renaissance. This is when Rationalism and Scientism allegedly prevailed over faith, religion, superstition, and such. They regard this as the pinnacle of human achievement, so we need go no further; they might even regard spiritual

and religious experiences as pathological, as “crazy” because they are in fact “irrational”, or, more accurately, “trans-rational”.

In the Natural Sequence schema, objective experiences are typically found in the first half of the Natural Sequence septenary in this way: superstitious cultism is typically found in the first stage, fundamentalist religion is typically found in the second stage, Rationalism is typically found in the third stage, and Scientism is typically found in the Ordinal sub-stages of the fourth stage, of the seven-stage Natural Sequence schema. This leaves the second half of the Natural Sequence septenary for subjective experiences that are extraordinary, paranormal, transcendent, mystical, and such. My hope is that, the greater the number of psychologists who have a subjective transcendent experience of enlightenment of the spiritual type rather than the rational type, the more the field of psychology will change to accommodate transpersonal psychology as a legitimate field of inquiry. Then the science of the subjective can join the science of the objective, and arrive at the science of the omnijjective or transjective. Only then can the research discover and understand the entire spectrum of the human psyche.

Now that we understand that there is an actual field of academic study of enlightenment by so-called “transpersonal psychologists”, we can go on to ask, what is this experience called “enlightenment”?

Definition and Description of Enlightenment

Enlightenment is much more than the little epiphanies or occasional Eureka! that we have in our ordinary lives. As we will see in this section, spiritual teachings commonly use four metaphors for enlightenment:

1. FROM ASLEEP TO AWAKE, which I correlate with the Action Axis of the Process/Aspect System, where ‘sleep’ is a state of inaction (Ordinal Action = Termination Process = Goal Aspect) and ‘awake’ is a state of renewed activity (Cardinal Action = Origination Process = Mode Aspect). Other ways to term this particular metaphor of enlightenment is the progress from passive to active, and the metaphor of moving forward versus moving backward;
2. FROM PRISON TO FREEDOM, which I correlate with the Inspiration Axis of the Process/Aspect System, where ‘prison’ is a state of confinement or determinism (Ordinal Inspiration = Involution Process = Shadow Aspect) and ‘freedom’ is a state of liberation or free will (Cardinal Inspiration = Evolution Process = Role Aspect). Another metaphor for this dimension of enlightenment is ‘ascent’ upward (to ‘heaven’) versus ‘descent’ downward (to ‘hell’);
3. FROM SEPARATION from the divine TO UNIFICATION with the divine, which I correlate with the Expression Axis of the Process/Aspect System, where ‘separation’ is a state of alienation from self and other (Ordinal Expression = Analysis Process = Attitude Aspect) and ‘unification’ is a state of intimacy with self and other (Ordinal Expression = Synthesis Process = Mode Aspect);
4. FROM IGNORANCE TO KNOWLEDGE or FROM DARKNESS TO LIGHT or FROM BLINDNESS TO SIGHT, which I correlate with the Assimilation Axis of the Process/Aspect System, which means that this metaphor is a mixture of the three other types of enlightenment. **[[Documentation of these four types of enlightenment could be expanded in four subsections.]]**

My suggestion is that these four metaphors were intuited by the mystic philosophers of the world’s religions down through the millennia of human history because the Process/Aspect System matrix is the fundamental structure of the reality system in which we find our consciousness embedded, and progress is made by transmuting the Ordinal triad of experience into the Cardinal triad of experience during the ‘journey of life’ by ‘walking the steps’ of the septenary.

These metaphors are instantiations of the Dialectic Principle discussed in Part One, **Chapter I-X**, “Principles of the Natural Sequence”. Basically and Briefly, Ordinal + Cardinal = Neutral. Or, all learning happens via the reconciliation and transcendence of complementary opposites, by first experiencing the ‘negative’ and then experiencing the ‘positive’ and then assimilating them fully, which forms the foundation for experiencing the next pair of opposites in the holarchy of the septenary.

As you read the following history and description of enlightenment from the Wikipedia article on the subject, note the correspondence between that and the four higher-later stages of the Natural Sequence schema, which I will refer to as Beauty (#4–Neutral Assimilation, Impulse Center), Truth (#5–Cardinal Expression, Concept Center), Love/Bliss (#6–Cardinal Inspiration, Sympathy Center), and Energy (#7–Cardinal Action, Excitation Center). In subsequent chapters we will see that some teachings equate the stages of enlightenment with the

seven chakras or the seven Centers. I will help you with that correlation by the use of underlined words and words in [brackets] in the following quotations from the Wikipedia article on enlightenment.

Note that, in the following commentary on the Wikipedia article on enlightenment, there are often descriptions of various kinds of enlightenment. Sometimes I attempt to correlate these descriptions with specific stages in the Natural Sequence schema in order to help the reader to conceptually understand the differences between the stages of the Natural Sequence schema, but in practical experience, the boundaries between the higher-later stages are not nearly as well defined as they are in the Natural Sequence schema. In other words, in higher-later stages of awareness, the actual lived experiences are typically various mixtures of Beauty, Truth, Love/Bliss, and Energy in various proportions, and any particular experience might or might not emphasize any particular stage as predominant.

The Wikipedia article begins:

ENLIGHTENMENT

Introduction

Used in a religious sense, enlightenment translates several Buddhist terms and concepts, most notably *bodhi*, *kensho*, and *satori*. Related terms from Asian religions are *kaivalya* and *moksha* (liberation) in Hinduism, *Kevala Jnana* in Jainism, and *ushta* in Zoroastrianism. In Christianity, the word “enlightenment” is rarely used, except to refer to the Age of Enlightenment and its influence on Christianity. Roughly equivalent terms in Christianity may be illumination, *kenosis*, *metanoia*, revelation, salvation, *theosis*, and conversion. Perennialists and Universalists view enlightenment and mysticism as equivalent terms for religious or spiritual insight [Truth].

This paragraph tells me that the concept of “enlightenment” is an ‘umbrella’ term that ‘covers’ a range of experiences, which is the case with the four higher-later stages of the Natural Sequence schema. As we will see below, the subjective experience of enlightenment is usually a mixture of the four higher-later Natural Sequence stages, therefore the description of enlightenment is not as definitive or tidy as the description of each Natural Sequence stage is.

Buddhism

The English term enlightenment is the western translation of the abstract noun *bodhi*, the knowledge or wisdom, or awakened intellect, of a Buddha. The verbal root *budh-* means “to awaken”, and its literal meaning is closer to “awakening”. Although its most common usage is in the context of Buddhism, the term *buddhi* is also used in other Indian philosophies and traditions. The term “enlightenment” was popularized in the Western world through the 19th century translations of Max Müller. It has the western connotation of a sudden insight into a transcendental truth or reality.

The description of enlightenment in that paragraph correlates best with Cardinal Expression = Truth.

The term is also being used to translate several other Buddhist terms and concepts, which are used to denote insight (*prajna*, *kensho* and *satori*); knowledge (*vidhya*); the “blowing out” (*Nirvana*) of disturbing emotions and desires and the subsequent freedom or release (*vimutti*); and the attainment of Buddhahood, as exemplified by Gautama Buddha....

The description of enlightenment in that paragraph starts out correlating best with Cardinal Expression = Truth, but then drifts into the next higher-later stage, Cardinal Inspiration = Love/Bliss, what with its mention of the extinguishment of negative emotions.

Hinduism

In Indian religions *moksha* (Sanskrit: *mokṣa*; liberation) or *mukti* (Sanskrit: release — both from the root *muc* “to let loose, let go”) is the final extrication of the soul or consciousness (*purusha*) from *samsara* and the bringing to an end of all the suffering involved in being subject to the cycle of repeated death and rebirth (reincarnation).

According to these Indian religions, most people spend their entire lives trapped or ‘imprisoned’ in the three lower-earlier (Ordinal) states or stages (chakras, Centers) of consciousness, which is where suffering, aka *samsara*, exists and functions. The concept of liberation from *samsara* fits best with Cardinal Inspiration in the Natural Sequence schema, as it is experienced subjectively as a joyous uplifting blissful feeling, the antithesis of the emotional suffering that is commonly experienced in Ordinal Inspiration.

Advaita Vedanta

Advaita Vedanta ... is a philosophical concept where followers seek liberation/release by recognizing identity of the Self (Atman) and the Whole (Brahman) through long preparation and training, usually under the guidance of a guru, that involves efforts such as knowledge of scriptures, renunciation of worldly activities, and inducement of

direct identity experiences.... Advaita (literally, non-duality) is a system of thought where “Advaita” refers to the identity of the Self (Atman) and the Whole (Brahman). Recognition of this identity leads to liberation. Attaining this liberation supposedly takes a long preparation and training under the guidance of a guru. However Ramana Maharshi called his death experience *akrama mukti*, “sudden liberation”, as opposed to the *krama mukti*, “gradual liberation” as in the Vedanta path of Jnana yoga....

Although liberation (sixth stage = Cardinal Inspiration) is mentioned in this paragraph, I also see hints of seventh stage = Cardinal Action in the description of non-dual unitary consciousness, which in the Natural Sequence schema is “one-dimensional”. In Advaita, there is “identity” of the self and the Self, meaning that there is no longer a separation between them.

Neo-Vedanta

In the 19th century, [Swami] Vivekananda played a major role in the revival of Hinduism, and the spread of Advaita Vedanta to the West via the Ramakrishna Mission. His interpretation of Advaita Vedanta has been called “Neo-Vedanta”.

In a talk on “The absolute and manifestation” given in at London in 1896 Swami Vivekananda said,

I may make bold to say that the only religion which agrees with, and even goes a little further than modern researchers, both on physical and moral lines is the Advaita, and that is why it appeals to modern scientists so much. They find that the old dualistic theories are not enough for them, do not satisfy their necessities. A man must have not only faith, but intellectual faith [fifth stage = Cardinal Expression, Concept Center, Truth] too”.

Intellectual faith is the fifth stage of the Natural Sequence schema, and in mathematical terms it is three-dimensional, meaning that it has the duality of inside versus outside. The goal of Advaita Vedanta practices is to collapse this duality (and others) into a unitary awareness or non-duality.

Vivekananda emphasized *samadhi* as a means to attain liberation. Yet this emphasis is not to be found in the Upanishads nor in Shankara. For Shankara, meditation and *Nirvikalpa Samadhi* are means to gain knowledge of the already existing unity of Brahman and Atman, not the highest goal itself:

[Y]oga is a meditative exercise of withdrawal from the particular and identification with the universal, leading to contemplation of oneself as the most universal, namely, Consciousness. This approach is different from the classical yoga of complete thought suppression.

Thinking requires the duality of a thinker and a thought, so the suppression of thoughts via meditation can result in Universal Consciousness, which is a type of awareness that is not an awareness of something else, but is a pure awareness without an object. The correlate of this state of consciousness in the Natural Sequence schema is the seventh Stage (Cardinal Action, Excitation Center, Energy), which is one-dimensional, mathematically speaking.

Vivekananda’s modernization has been criticized:

Without calling into question the right of any philosopher to interpret Advaita according to his own understanding of it, [...] the process of Westernization has obscured the core of this school of thought. The basic correlation of renunciation and Bliss [sixth stage = Cardinal Inspiration, Sympathy Center, Love/Bliss] has been lost sight of in the attempts to underscore the cognitive structure [fifth stage = Cardinal Expression, Concept Center, Truth] and the realistic structure which according to Samkaracarya should both belong to, and indeed constitute the realm of māyā.

My interpretation of this is that the seventh stage — the highest enlightenment that Advaita practitioners aspire to — which correlates with Cardinal Action of the Natural Sequence schema, transcends the dualities of the sixth stage (“Bliss”) and the fifth stage (“cognitive structure”).

Neo-Advaita

Neo-Advaita is a new religious movement based on a modern, Western interpretation of Advaita Vedanta, especially the teachings of Ramana Maharshi. Neo-Advaita is being criticized for discarding the traditional prerequisites of knowledge of the scriptures and “renunciation as necessary preparation for the path of jnana-yoga”. Notable neo-advaita teachers are H. W. L. Poonja, his students Gangaji, Andrew Cohen, Madhukar, and Eckhart Tolle.

In terms of the Natural Sequence schema, it does seem to me that it is indeed a good idea to purify the Ordinal Centers of negativity before attempting to climb the ladder of enlightenment in the Neutral and Cardinal Centers. Thus it can be said that I agree with those who criticize proponents of Neo-Advaita who

depart from the “traditional prerequisites”. It is not wise to dismiss two thousand years of accumulated experience, believing that there is a ‘fast track’ to enlightenment.

YOGA

The prime means to reach *moksha* [liberation, release] is through the practice of yoga ... which is a commonly known generic term for physical [Energy], mental [Truth], and spiritual [Love/Bliss] disciplines which originated in ancient India. Specifically, yoga is one of the six *āstika* (“orthodox”) schools of Hindu philosophy. Various traditions of yoga are found in Hinduism, Buddhism, Jainism, and Sikhism.

With these various types of Yogic paths to enlightenment available, there is at least one form or another that will feel right to every personality type. **The subject of yoga is covered in some detail in various Parts and chapters of this *Cosmogony* book.** For instance, refer to chapters on Hinduism, Buddhism, Jainism, and Sikhism in Part III, “Ancient Religions and Philosophies”.

Pre-philosophical speculations and diverse ascetic practices of first millennium BCE were systematized into a formal philosophy in early centuries CE by the Yoga *Sutras* of Patanjali. By the turn of the first millennium, *Hatha* yoga emerged as a prominent tradition of yoga distinct from the Patanjali’s Yoga *Sutras*. While the Yoga *Sutras* focus on discipline of the mind [with a goal of Truth], Hatha yoga concentrates on health and purity of the body [with a goal of Energy].

In the Natural Sequence schema, the three fundamental “Dimensions” of experience have been given the names Action, Inspiration, and Expression. These three Dimensions have Ordinal and Cardinal Poles. Basically and briefly, various types of yoga usually emphasize one or another of these Dimensions, with the intention to transmute the Ordinal into the Cardinal. Take note of that here in this chapter, above and below, and in the discussions of yoga found scattered throughout this *Cosmogony* book.

Jnana yoga

Classical Advaita Vedanta emphasises the path of *jnana* yoga, a progression of study and training to attain *moksha*. It consists of four stages:

Samādhāna (the concentrating of the mind on God and Guru).

Sravaṇa, listening to the teachings of the sages on the Upanishads and Advaita Vedanta, and studying the Vedantic texts, such as the Brahma Sutras. In this stage the student learns about the reality of Brahman and the identity of *atman*;

Manana, the stage of reflection on the teachings;

Dhyāna, the stage of meditation on the truth “that art Thou”.

In the terms of the Natural Sequence schema, *jnana* yoga fits best with the notion that Ordinal Expression (Plexus Chakra, Intellect Center) can be transmuted into Cardinal Expression (Throat Chakra, Concept Center, Truth), although one can see hints of the other Dimensions.

Bhakti yoga

The paths of *bhakti* yoga and *karma* yoga are subsidiary. In *bhakti* yoga, practice centers on the worship God in any way and in any form, like Krishna or Ayyappa. Adi Shankara himself was a proponent of devotional worship or *Bhakti*. But Adi Shankara taught that while Vedic sacrifices, *puja* and devotional worship can lead one in the direction of *jnana* (true knowledge), they cannot lead one directly to *moksha*. At best, they can serve as means to obtain *moksha* via *shukla gati*.

In the terms of the Natural Sequence schema, *bhakti* yoga fits best with the notion that Ordinal Inspiration (Navel Chakra, Emotion Center) can be transmuted into Cardinal Inspiration (Brow Chakra, Sympathy Center, Love/Bliss), although one can see hints of the other Dimensions.

Karma yoga

Karma yoga is the way of doing our duties, in disregard of personal gains or losses. According to Sri Swami Sivananda,

Karma Yoga is consecration of all actions and their fruits unto the Lord. Karma Yoga is performance of actions dwelling in union with the Divine, removing attachment and remaining balanced ever in success and failure. Karma Yoga is selfless service unto humanity. Karma Yoga is the Yoga of action which purifies the heart and prepares the *Antahkarana* (the heart and the mind) for the reception of Divine Light or attainment of Knowledge of the Self. The important point is that you will have to serve humanity without any attachment or egoism.

In the terms of the Natural Sequence schema, karma yoga fits best with the notion that Ordinal Action (Gonad Chakra, Motion Center) can be transmuted into Cardinal Action (Crown Chakra, Excitation Center, Energy), although one can see hints of the other Dimensions.

Jainism

Jainism ... is an Indian religion that prescribes a path of non-violence towards all living beings. Its philosophy and practice emphasize the necessity of self-effort to move the soul toward divine consciousness and liberation [the Cardinal stages of the Natural Sequence schema]. Any soul that has conquered its own inner enemies and achieved the state of supreme being is called a *jina* ("conqueror" or "victor"). The ultimate status of these perfect souls is called *siddha*. Ancient texts also refer to Jainism as *shramana dharma* (self-reliant) or the "path of the nirganthas" (those without attachments or aversions) ...:

In the terms of the Natural Sequence schema, Jainism fits best with the notion that Ordinal Action (Gonad Chakra, Motion Center) can be transmuted into Cardinal Action (Crown Chakra, Excitation Center, Energy), although one can see hints of the other Dimensions.

Western understanding

In the Western world the concept of enlightenment in a religious context acquired a romantic meaning. It has become synonymous with self-realization and the true self, which is being regarded as a substantial essence which is covered over by social conditioning.

In the terms of the Natural Sequence schema, Western spirituality fits best with the notion that Ordinal Expression (Plexus Chakra, Intellect Center) can be transmuted into Cardinal Expression (Throat Chakra, Concept Center, Truth), although one can see hints of the other Dimensions.

As Aufklärung

The use of the Western word enlightenment is based on the supposed resemblance of *bodhi* with *Aufklärung*, the independent use of reason to gain insight into the true nature of our world. As a matter of fact there are more resemblances with Romanticism than with the Enlightenment: the emphasis on feeling, on intuitive insight, on a true essence beyond the world of appearances.

In light of my understanding of the Natural Sequence schema, I suggest that this paragraph reflects a vague awareness that enlightenment involves transmuting the lower-earlier Ordinal Expression stage into the higher-later Cardinal Expression stage ("reason" > "insight"), and the lower-earlier Ordinal Inspiration stage into the higher-later Cardinal Inspiration stage ("feeling" > "intuition").

Awakening: Historical period of renewed interest in religion

The equivalent term "awakening" has also been used in a Christian context, namely the Great Awakenings, several periods of religious revival in American religious history. Historians and theologians identify three or four waves of increased religious enthusiasm occurring between the early 18th century and the late 19th century. Each of these "Great Awakenings" was characterized by widespread revivals led by evangelical Protestant ministers, a sharp increase of interest in religion, a profound sense of conviction and redemption on the part of those affected, an increase in evangelical church membership, and the formation of new religious movements and denominations.

Although the term "awakening" has often been used as a synonym for enlightenment, and I agree that it is a suitable term for the experience of the higher-later states, stages, and levels of awareness, I do not see those historical events in American history as examples of the experience of the higher-later states, stages, and levels of awareness, which usually are limited to individuals or small groups of committed aspirants.

Illumination

Another equivalent term is Illuminationism, which was also used by Paul Demieville in his work *The Mirror of the Mind*, in which he made a distinction between "illumination subie" [sudden] and "illumination graduelle" [gradual]. Illuminationism is a doctrine according to which the process of human thought needs to be aided by divine grace. It is the oldest and most influential alternative to naturalism in the theory of mind and epistemology. It was an important feature of ancient Greek philosophy, Neoplatonism, medieval philosophy, and in particular, the Illuminationist school of Islamic philosophy.

Augustine was an important proponent of Illuminationism, stating that everything we know is taught to us by God as He casts His light over the world, saying that "The mind needs to be enlightened by light from outside itself, so that it can participate in truth, because it is not itself the nature of truth. You will light my lamp, Lord," and "You hear nothing true from me which you have not first told me." Augustine's version of illuminationism is

not that God gives us certain information, but rather gives us insight into the truth of the information we received for ourselves.

As we will see in subsequent chapters, awakening or illumination or enlightenment happen in different ways with different people. With some it is a spontaneous event via “divine grace”, whereas with others it is a gradual event via a long-term practice.

Note also that enlightenment as defined in this chapter is not the accumulation of data or information about awakening, illumination, and enlightenment. Rather, I am writing about the subjective experience of higher–later altered states, stages, and levels of awareness.

It is also important in the context of this chapter to make the distinction between epiphanies (“aha moments”), as when one comes to understand something intellectually or conceptually, versus the higher–later altered states, stages, and levels of awareness on the path to enlightenment. Not that there is anything wrong with epiphanies in the normal course of one’s life; they can be quite enjoyable and rewarding in the evolution of one’s awareness.

The Wikipedia article continues:

Romanticism and transcendentalism

This romantic idea of enlightenment as insight into a timeless, transcendent reality has been popularized especially by D. T. Suzuki. Further popularization was due to the writings of Heinrich Dumoulin. Dumoulin viewed metaphysics as the expression of a transcendent truth, which according to him was expressed by Mahayana Buddhism, but not by the pragmatic analysis of the oldest Buddhism, which emphasizes *anatta* [egolessness].

This romantic vision is also recognizable in the works of Ken Wilber.

Here again I want to emphasize that enlightenment as discussed in this chapter is not an intellectual or conceptual understanding, it is experiential. Reading all about enlightenment in this Part of this *Cosmogony* book will not likely produce enlightenment, but reading this book might help you to understand what happened if you are graced with a sudden but transient enlightenment experience.

In the oldest Buddhism this essentialism is not recognizable. According to critics it doesn’t really contribute to a real insight into Buddhism:

...most of them labor under the old cliché that the goal of Buddhist psychological analysis is to reveal the hidden mysteries in the human mind and thereby facilitate the development of a transcendental state of consciousness beyond the reach of linguistic expression.

Names in various languages have been given to the “transcendent states of consciousness”, and such is the case with the Natural Sequence schema. Methods for *experiencing* such states are reviewed in chapters subsequent to this introduction.

Experience

A common reference in Western culture is the notion of “enlightenment experience”. This notion can be traced back to William James, who used the term “religious experience” in his book, *The Varieties of Religious Experience*. Wayne Proudfoot traces the roots of the notion of “religious experience” further back to the German theologian Friedrich Schleiermacher (1768–1834), who argued that religion is based on a feeling of the infinite. The notion of “religious experience” was used by Schleiermacher to defend religion against the growing scientific and secular critique.

Scientists regard science as being an inter-personal objective experience, whereas enlightenment is mostly an intra-personal subjective experience. Over the last few hundred years, self-professed rational scientists have disdained and demeaned subjective experiences. Only recently have scientifically–trained academics begun to apply their attention and acumen to the study of subjective enlightenment.

It was popularised by the Transcendentalists, and exported to Asia via missionaries. Transcendentalism developed as a reaction against 18th-century rationalism, John Locke’s philosophy of Sensualism, and the predestinationism of New England Calvinism. It is fundamentally a variety of diverse sources such as Hindu texts like the Vedas, the Upanishads and the Bhagavad Gita, various religions, and German idealism.

It was adopted by many scholars of religion, of which William James was the most influential.

The notion of “experience” has been criticized. Robert Sharf points out that “experience” is a typical Western term, which has found its way into Asian religiosity via western influences. The notion of “experience” introduces a false notion of duality between “experiencer” and “experienced”, whereas the essence of *kensho* is the realization of the “non-duality” of observer and observed. “Pure experience” does not exist; all experience is

mediated by intellectual and cognitive activity. The specific teachings and practices of a specific tradition may even determine what “experience” someone has, which means that this “experience” is not the proof of the teaching, but a result of the teaching. A pure consciousness without concepts, reached by “cleansing the doors of perception”, would be an overwhelming chaos of sensory input without coherence.

It may be that the Natural Sequence schema provides a sensible, non-chaotic, coherent framework within which to understand one’s enlightenment experience, in the event that one has one, whether by grace or by practices.

Nevertheless, the notion of religious experience has gained widespread use in the study of religion, and is extensively researched.

WESTERN CULTURE

Christianity

The word “enlightenment” is not generally used in Christian contexts for religious understanding or insight. More commonly used terms in the Christian tradition are religious conversion and revelation.

Lewis Sperry Chafer (1871–1952), one of the founders of Dispensationalism, uses the word “illuminism”.

Christians who are “illuminated” are of two groups, those who have experienced true illuminism (biblical) and those who experienced false illuminism (not from the Holy Spirit).

It may indeed be that there are negative poles of the higher–later states and stages of consciousness, but at the time of this writing, my plan is to not discuss them in this Part.

Western esotericism and mysticism

Western and Mediterranean culture has a rich tradition of esotericism and mysticism. The Perennial philosophy, basic to the New Age understanding of the world, regards those traditions as akin to Eastern religions which aim at awakening/enlightenment and developing wisdom....

Judaism includes the mystical tradition of Kabbalah. Islam includes the mystical tradition of Sufism. In the Fourth Way [Gurdjieff] teaching, enlightenment is the highest state of Man (humanity).

The underlined words indicate to me that the mystical wings of the major monotheistic religions (Judaism, Christianity, Islam) are focused mainly on understanding and achieving the fifth rank of the Natural Sequence schema, which I refer to as Truth, and which has the Aspect which I refer to as the Concept Center. In the Gurdjieff teaching, this was called the Higher Intellectual Center, and it was (erroneously) placed in the seventh rank, the “highest state of man”. For a discussion of that history, refer to [Chapter VI-x, “Gurdjieff’s Levels of Being”](#) further on in this Part.

Nondualism

A popular western understanding sees “enlightenment” as “nondual consciousness”, “a primordial, natural awareness without subject or object”. It is used interchangeably with Neo-Advaita.

This nondual consciousness is seen as a common stratum to different religions. Several definitions or meanings are combined in this approach, which makes it possible to recognize various traditions as having the same essence. According to Renard, many forms of religion are based on an experiential or intuitive understanding of “the Real”.

This idea of nonduality as “the central essence” is part of a modern mutual exchange and synthesis of ideas between western spiritual and esoteric traditions and Asian religious revival and reform movements. Western predecessors are, among others, New Age, Wilber’s synthesis of western psychology and Asian spirituality, the idea of a Perennial Philosophy, and Theosophy. Eastern influences are the Hindu reform movements such as Aurobindo’s Integral Yoga and Vivekananda’s Neo-Vedanta, the Vipassana movement, and Buddhist modernism. A truly syncretistic influence is Osho and the Rajneesh movement, a hybrid of eastern and western ideas and teachings, and a mainly western group of followers.

Based on this description and my own personal experience of the non-dual state of consciousness, I would say that this phenomenon is at the seventh stage of the Natural Sequence schema, which has the Attribute of One-Dimensionality.

COGNITIVE ASPECTS

Religious experience as cognitive construct [Cardinal Expression, Concept Center, Truth]

“Religious experiences” have “evidential value”, since they confirm the specific worldview of the experienter:

'These experiences are cognitive in that, allegedly at least, the subject of the experience receives a reliable and accurate view of what, religiously considered, are the most important features of things. This, so far as their religious tradition is concerned, is what is most important about them. This is what makes them "salvific" or powerful to save.' [Yandell, 1994, *The Epistemology of Religious Experience*]

Yet, just like the very notion of "religious experience" is shaped by a specific discourse and habitus, the "uniformity of interpretation" may be due to the influence of religious traditions which shape the interpretation of such experiences.

Having the experience of one or another of those stages is quite another thing than having a systematic conceptual understanding of one or another of the higher-later stages of the Natural Sequence schema. However, if a person has a temporary, or even more-or-less permanent experience, of a higher state or stage of awareness, then the experiencer can put their particular experience into the context of an overall taxonomy such as the Natural Sequence schema provides, and they can also talk about it with others who share the same vocabulary.

Various religious experiences

Yandell discerns various "religious experiences" and their corresponding doctrinal settings, which differ in structure and phenomenological content, and in the "evidential value" they present. Yandell discerns five sorts:

1. Numinous experiences — Monotheism (Jewish, Christian, Vedantic, Sufi Islam)

Wikipedia defines numinous as:

"Numinous is a term derived from the Latin *numen*, meaning 'arousing spiritual or religious emotion; mysterious or awe-inspiring.' The term was given its present sense by the German theologian and philosopher Rudolf Otto in his influential 1917 German book *The Idea of the Holy*. He also used the [Latin] phrase *mysterium tremendum* as another description for the phenomenon." [><https://en.wikipedia.org/wiki/Numinous>< — retrieved 30 December 2022]

That is a good description of the sixth stage in the Natural Sequence schema, Love/Bliss.

2. Nirvanic experiences — Buddhism, "according to which one sees that the self is but a bundle of fleeting states"

Wikipedia defines *nirvana* as:

"In Indian religions, nirvana is synonymous with *moksha* and *mukti*. All Indian religions assert it to be a state of perfect quietude, freedom, highest happiness as well as the liberation from attachment and worldly suffering and the ending of *samsara*, the round of existence [obligatory reincarnation]. However, non-Buddhist and Buddhist traditions describe these terms for liberation differently. In Hindu philosophy, it is the union of or the realization of the identity of Atman ['spark'] with Brahman [Tao], depending on the Hindu tradition. In Jainism, *nirvana* is also the soteriological [salvation] goal, representing the release of a soul from karmic bondage and *samsara*. In the Buddhist context, *nirvana* refers to realization of non-self and emptiness, marking the end of rebirth by stilling the fires that keep the process of rebirth going. To achieve this status, one has to get rid of three psychological evils – *Raga* (greed, desire), *Dweshā* (anger) and *Moha* (delusion)." [><https://en.wikipedia.org/wiki/Nirvana>< — retrieved 30 December 2022]

The underlined words in that definition–description lead me to suggest that *nirvana* is referring to what amounts to the sixth stage (Cardinal Inspiration, Sympathy Center, Love/Bliss) and seventh stage (Cardinal Action, Excitation Center, Energy) of the Natural Sequence schema. The "three psychological evils" (*Raga*, *Dweshā*, and *Moha*) remind me of the three Cardinal Shadows of the Natural Sequence schema, namely Greed, Impatience, and Arrogance respectively.

3. Kevala experiences — Jainism, "according to which one sees the self as an indestructible subject of experience"

Wikipedia defines *kevala* as:

Kevala gyana or *Keval gyan* means omniscience in Jainism and is roughly translated as complete understanding or supreme wisdom. *Kevala jnana* is believed to be an intrinsic quality of all souls. This quality is masked by karmic particles that surround the soul. Every soul has the potential to obtain omniscience by shedding off these karmic particles. Jain scriptures speak of twelve stages through which the soul achieves this goal. A soul who has attained *kevala jnana* is called a *kevalin*. According to the Jains, only *kevalins* can comprehend objects in all aspects and manifestations; others are only capable of partial knowledge. [>https://en.wikipedia.org/wiki/Kevala_jnana< — retrieved 30 December 2022]

The underlined words in that definition–description lead me to suggest that *kevala* is referring to what amounts to the fourth stage (Neutral Assimilation, Impulse Center, Beauty) and fifth stage (Cardinal Expression, Concept Center, Truth) of the Natural Sequence schema.

4. Moksha experiences — Hinduism, Brahman “either as a cosmic person, or, quite differently, as qualityless”

Wikipedia defines *moksha* as:

“*Moksha*, also called *vimoksha*, *vimukti* and *mukti*, is a term in Hinduism, Buddhism, Jainism, and Sikhism for various forms of emancipation, enlightenment, liberation, and release. In its soteriological [salvific] and eschatological [goals, purposes] senses, it refers to freedom from *saṃsāra*, the cycle of death and rebirth [obligatory reincarnation]. In its epistemological and psychological senses, *moksha* is freedom from ignorance: self-realization, self-actualization, and self-knowledge. In Hindu traditions, *moksha* is a central concept and the utmost aim of human life; the other three aims being *dharma* (virtuous, proper, moral life) [Expression Axis?], *artha* (material prosperity, income security, means of life) [Action Axis?], and *kama* (pleasure, sensuality, emotional fulfillment) [Inspiration Axis?]. Together, these four concepts are called *Puruṣārtha* in Hinduism. In some schools of Indian religions, *moksha* is considered equivalent to and used interchangeably with other terms such as *vimoksha*, *vimukti*, *kaivalya*, *apavarga*, *mukti*, *nihsreyasa* and *nirvana*. However, terms such as *moksha* and *nirvana* differ and mean different states between various schools of Hinduism, Buddhism and Jainism. The term *nirvana* is more common in Buddhism, while *moksha* is more prevalent in Hinduism.”

[><https://en.wikipedia.org/wiki/Moksha>< — retrieved 30 December 2022]

Although the correlation is a bit tenuous, I propose to translate the description of the “three aims” of *moksha* practices into Natural Sequence concepts this way: enlightenment involves transforming and transmuting the three Ordinal experiences that comprise one’s physical life into their three Cardinal counterparts, which comprise one’s spiritual life.

5. nature mystical experience

This fifth type of enlightenment enumerated by Yandell was not defined and described in the Wikipedia article on enlightenment. Perhaps it refers to spontaneous mystical experiences rather than those arrived at by specific practices, or perhaps it refers to those that are induced intentionally by ingestion of naturally-occurring entheogens:

Entheogens

Several users of entheogens throughout the ages have claimed experiences of spiritual enlightenment with the use of these substances, their use and prevalence through history is well recorded, and continues today. In modern times we have seen increased interest in these practices, for example the rise of interest in Ayahuasca. The psychological effects of these substances have been subject to scientific research focused on understanding their physiological basis. While entheogens do produce glimpses of higher spiritual states, these are always temporary, fading with the effects of the substance. Permanent enlightenment requires making permanent changes in your consciousness. [>[https://en.wikipedia.org/wiki/Enlightenment_\(spiritual\)](https://en.wikipedia.org/wiki/Enlightenment_(spiritual))< — retrieved 06 May 2022]

In conclusion to this section, we note that the major religious traditions and spiritual practices are vaguely aware of some aspects and processes of the structure of the Natural Sequence schema, as follows:

1. I perceive in some of the descriptions in the Wikipedia article that the lower–earlier (negative, Ordinal) states of awareness can and/or should be transmuted into the corresponding exalted complements thereof, the higher–later (positive, Cardinal) states of consciousness. My guess is that if I were to research these traditions further, I would find firmer confirmation.
2. The given descriptions of states and stages of enlightenment tell me that those states can reasonably be mapped onto the four higher–later stages of the Natural Sequence schema: Neutral Assimilation (Impulse Center, Beauty), Cardinal Expression (Concept Center, Truth), Cardinal Inspiration (Sympathy Center, Love/Bliss), and Cardinal Action (Excitation Center, Energy). My guess is that if I were to research these traditions further, I would find firmer confirmation.
3. It also seems to me that the descriptions of the types and stages of enlightenment from various ancient sources are not as definitive as the Natural Sequence schema. So, this book presumes to add something to the conversations about enlightenment that have been happening for millennia.

Concluding Comments on Introduction to Enlightenment

The previous sections of this chapter were about traditions of enlightenment in general; the following chapters are about the seven-step journey to enlightenment that is documented in some of the traditions introduced in those sections. These correspond to, but are different from, the seven-step cosmologies and cosmogonies that discuss the structure of the Cosmos in space/time and time/space, as discussed in other Parts of this book.

So much for the theorizing of transpersonal psychologists, and the documentation about actual experiences of enlightenment in various religious traditions, about the stages of higher consciousness. Now let's turn our attention to the those who claim to have personal experiences of higher states of consciousness, and presume to teach others how they are fostered.





Chapter VI-2

② GURDJIEFF — LEVELS OF BEING

During the first half of the 20th Century, a charismatic spiritual teacher appeared in Russia. He taught methods for achieving exalted states of awareness, aka enlightenment, that are far higher than those that most people experience. The same claims have been made by other personages, and those are reviewed in other chapters of this *Cosmogony* book, especially here in **Part VI**. In this chapter, the person being reviewed was named George Gurdjieff. His claim was that the path to enlightenment consisted of seven stages, or “Levels of Being”, and he referred to these with “Man Numbers”: Man Number One through Man Number Seven.

This chapter is an extension of **Chapter II-3 in Part Two, “The Gurdjieffian Teachings”**. In that chapter, other components of the Gurdjieffian teaching that are relevant to this *Cosmogony* book are discussed; it includes the following sections:

- a brief biography of Gurdjieff, who lived during the last quarter of the 19th Century and the first half of the 20th Century;
- a section on the so-called “Law of Three”, which was Gurdjieff’s understanding of the time-structure of the Cosmos, which is just another nomenclature for what the Process/Aspect System (PAS) embodies as the Dialectic Attributes: Ordinal + Cardinal = Neutral;
- a section on the so-called “Law of Seven”, which was Gurdjieff’s understanding of the septenarian time-structure of the Cosmos;
- a section on the seven so-called “Centers”, which are the seven ways that people process and understand their life experiences, and respond therefrom;
- a section on his so-called “Fourth Way”, which was in addition to paths to enlightenment taught by oriental gurus. Basically and briefly, in terms of the Natural Sequence schema, Gurdjieff’s Fourth Way system proposed and applied practices intended to transmute #1) the Ordinal Action (“Moving”) Center into the Cardinal Action (“Sexual”) Center (the way of the fakir), #2) transmute the Ordinal Inspiration (“Emotional”) Center into the Cardinal Inspiration (“Higher Emotional”) Center (the way of the monk), and #3) transmute the Ordinal Expression (“Intellectual”) Center into the Cardinal Expression (“Higher Intellectual”) Center (the way of the yogi).

Unless the reader has fully assimilated that chapter already, it would certainly help them to understand this chapter if they reviewed that chapter.

This chapter in this Part is limited to the Gurdjieffian ‘map’ of a path toward enlightenment. The question examined in this chapter is, does this septenarian Gurdjieffian schema fit the Natural Sequence schema, or not? And if so, how? It so happens that his “system” of attaining enlightenment does indeed conform to the Natural Sequence schema in many ways, as I aspire to demonstrate in this chapter, and demonstrated in that previous chapter. The following section is the documentation.

Ideas and Methods of Gurdjieff

As usual, I turn to Wikipedia to introduce the Gurdjieffian teaching on enlightenment:

Ideas

Gurdjieff believed that people cannot perceive reality in their current condition because they do not possess a unified consciousness but rather live in a state of a hypnotic “waking sleep”.

As we will see further on, Gurdjieff said that people typically live in what he called the “lower” Centers (Moving, Emotional, Intellectual), wherein people had a fragmented consciousness that he called “many I’s”. Therein, people had a low level of self-awareness that he likened to ‘sleep’. His program was aimed at transmuting these lower (Ordinal) Centers into the higher (Cardinal) Centers, where awareness was unified. It is not as if you have not read about this previously in this *Cosmogony* book; the word Centers appears in most chapters. And, in terms of the Natural Sequence schema, it is not as if I have not said many times previously that one of the defining characteristics of Ordinality is fragmentation and one of the defining characteristics of Cardinality is unification.

“Man lives his life in sleep, and in sleep he dies.” As a result of this each person perceives things from a completely subjective perspective. He asserted that people in their typical state function as unconscious automatons, but that a person can “wake up” and become a different sort of human being altogether.

‘Waking up’ is one way to rephrase what I refer to as the Holarchy Principle, the notion that there are stages in the process of ‘waking up’. The point to be emphasized here is that people in the lower Centers have some awareness of self and world, but their perspective is “subjective”, meaning that they typically do not perceive themselves from anything resembling an objective perspective. Psychologists call the objective perspective “meta-cognition”, meaning that one observes the self as as if one were not that self. One of the ways to characterize spiritual growth is to say that whatever level one is currently functioning in is a subjective state of consciousness, but that one views their previous level(s) objectively; as one matures into the next ‘higher’ subjective stage, the previous stage then becomes objective. Besides the metaphor of “waking up” in the next ‘higher’ state of consciousness, Gurdjieff referred to this phenomenon of progressive meta-cognition as “self-observation” and “self-remembering”:

Some contemporary researchers claim Gurdjieff’s concept of self-remembering is “close to the Buddhist concept of awareness or a popular definition of ‘mindfulness.’ ... The Buddhist term translated into English as ‘mindfulness’ originates in the Pali [ancient south Asian language] term ‘*sati*’, which is identical to Sanskrit [ancient south Asian language] ‘*smṛti*’. Both terms mean ‘to remember’.

So, it is not as if Gurdjieff invented something new; his ideas were just a retreading and retelling of ideas from ancient religious traditions, some of which are reviewed in other Parts of this *Cosmogony* book. Besides the metaphor of ‘waking from sleep’ — which is used in many esoteric teachings — another often-used metaphor for enlightenment is ‘remembering’; This Part, **Part VI**, “Stages of Enlightenment”, is dedicated to exploring such metaphors.

Self-development teachings

According to Gurdjieff, only one dimension of the three dimensions of the person — namely, either the emotions [Emotional Center], or the physical body [Moving Center], or the mind [Intellectual Center] — tends to develop in such schools and sects, and generally at the expense of the other faculties or centers, as Gurdjieff called them. As a result, these paths fail to produce a properly balanced human being. Furthermore, anyone wishing to undertake any of the traditional paths to spiritual knowledge (which Gurdjieff reduced to three — namely the path of the fakir [Action Axis], the path of the monk [Inspiration Axis], and the path of the yogi [Expression Axis]) were required to renounce life in the world. Gurdjieff thus developed a “Fourth Way” which would be amenable to the requirements of modern people living modern lives in Europe and America. Instead of developing body, mind, or emotions separately, Gurdjieff’s discipline worked on all three to promote comprehensive and balanced inner development.

That word “balance” refers to a Level of Being (see further on) that was between the three lower Centers and three higher Centers, although the latter are not mentioned in this quotation. In Gurdjieff’s system, it was necessary to pass through the balanced state of awareness on the path to experiencing the higher Centers. Even without further descriptions, we see the rudiments of the structure of the septenarian Natural Sequence schema, with its three Ordinal stages, an intermediate or Neutral stage, and three Cardinal stages, thus seven stages in a holarchy of development. (Further descriptions are forthcoming.)

In parallel with other spiritual traditions, Gurdjieff taught that a person must expend considerable effort to effect the transformation that leads to awakening. The effort that is put into practice Gurdjieff referred to as “The Work” or “Work on oneself”. According to Gurdjieff, “...Working on oneself is not so difficult as wishing to work, taking the decision.” ... To provide conditions in which inner attention could be exercised more intensively, Gurdjieff also taught his pupils “sacred dances” or “movements”, later known as the Gurdjieff movements, which they

performed together as a group. He also left a body of music, inspired by what he heard in visits to remote monasteries and other places, written for piano in collaboration with one of his pupils, Thomas de Hartmann....

Dance has the ability to help transmute the Moving Center into the Higher Moving Center; music has the ability to help transmute the Emotional Center into the Higher Emotional Center.

"The Work" is in essence a training in the development of consciousness. Gurdjieff used a number of methods and materials, including meetings, music, movements (sacred dance), writings, lectures, and innovative forms of group and individual work. Part of the function of these various methods was to undermine and undo the ingrained habit patterns of the mind and bring about moments of insight.

The "materials, meetings, writings, and lectures" were aimed at transmuting the "mind" (Intellectual Center) into "insight" (Higher Intellectual Center).

Gurdjieff felt that the [three] traditional methods of self-knowledge — those of the fakir [Moving Center], monk [Emotional Center], and yogi [Expression] (acquired, respectively, through pain [Action], devotion [Inspiration], and study [Expression]) — were inadequate on their own and often led to various forms of stagnation and one-sidedness. His methods were designed to augment the traditional paths with the purpose of hastening the developmental process. He sometimes called these methods The Way of the Sly Man because they constituted a sort of short-cut through a process of development that might otherwise carry on for years without substantive results. The teacher, more adept, sees the individual requirements of the disciple and sets tasks that he knows will result in a transformation of consciousness in that individual. Instructive historical parallels can be found in the annals of Zen Buddhism, where teachers employed a variety of methods (sometimes highly unorthodox) to bring about the arising of insight in the student. [https://en.wikipedia.org/wiki/George_Gurdjieff — retrieved 05 January 2023]

The following section, which documents the various kinds of yoga and their associated lifestyles and goals, could have been made into a separate chapter in this Part, but because I became aware of it via Gurdjieff, I insert it here in this chapter. It also provides an excellent introduction to the section that follows, which is on the Levels of Being.

The Fourth Way

It is relevant to note here again that Gurdjieff referred to his teaching as the "Fourth Way" because he regarded his teaching as the combination of three types of spiritual paths that he learned about in his travels in the Orient. The three kinds referred to work on what he referred to as the "lower" Centers: 1) the Instinctive–Moving Center, 2) the Emotional Center, and 3) the Intellectual Center. (In the Natural Sequence schema, these have the Attributes of Ordinal Action, Ordinal Inspiration, and Ordinal Expression respectively.) According to Gurdjieff, combining the disciplines resulted in the proper functioning of these three Centers, which made one into a "Balanced Man". (In the Natural Sequence schema, this person embodies the Neutral Assimilation Center, Impulse.)

Wikipedia has an article on the Fourth Way, which says:

The Fourth Way is an approach to self-development developed by George Gurdjieff over years of travel in the East (c. 1890 – 1912). It combines and harmonizes what he saw as three established traditional "ways" or "schools" [or "lifestyles"]: those of the body, the emotions, and the mind, or of fakirs, monks, and yogis, respectively.

Gurdjieff taught that traditional paths to spiritual enlightenment followed one of three ways:

[1] The Way of the Fakir [Physiology Center and Moving Center]

The Fakir works to obtain mastery of the attention (self-mastery) through struggles with [controlling] the physical body involving difficult physical exercises and postures.

As it says above, Work on the three Ordinal Centers correlate with the Work of "fakirs, monks, and yogis", but it seems to me that some specific types of yoga are also aimed at Work on specific Centers. This description of "the way of the Fakir" appears to me to be most similar to what is referred to as Hatha Yoga and Karma Yoga:

Haṭha yoga is a branch of yoga which uses physical techniques to try to preserve and channel the vital force or energy. The Sanskrit word ... literally means "force", alluding to a system of physical techniques.... Some of the early haṭha yoga texts (11th–13th c.) describe methods to raise and conserve *bindu* (vital force, that is, semen, and in women *rajas* — menstrual fluid). This was seen as the physical essence of life that was constantly dripping down from the head and being lost. Two early Haṭha yoga techniques sought to either physically reverse this

process of dripping using gravity to trap the *bindhu* by inverted postures ... or force *bindu* upwards through the central channel by directing the breath flow into the center channel using *mudras* (yogic seals, not to be confused with hand *mudras*, which are gestures).... Haṭha yoga's components include Shatkarmas (purifications), Asanas (postures), Mudras (manipulations of vital energy), Pranayama (breath control). [https://en.wikipedia.org/wiki/Hatha_yoga — retrieved 18 December 2022]

From the description above, I would say that hatha yoga involves Work on the physiology of the body, hence what I refer to as the “Physiology Center”, which provides a foundation for the seven psychological Centers. From the description below, I would say that karma yoga involves Work on what the Moving Center does with the physical body in the world, namely that it does good works, for the betterment of humankind:

Karma yoga (Sanskrit: also called Karma marga, is one of the four classical spiritual paths in Hinduism, one based on the “yoga of action” To a karma yogi, right action is a form of prayer.... Of the classical paths to spiritual liberation in Hinduism, karma yoga is the path of unselfish action. It teaches that a spiritual seeker should act according to dharma, without being attached to the fruits or personal consequences. Karma Yoga, states the Bhagavad Gita, purifies the mind. It leads one to consider dharma of work, and the work according to one's dharma, doing god's work and in that sense becoming and being “like unto god Krishna” in every moment of one's life. [https://en.wikipedia.org/wiki/Karma_yoga — retrieved 08 November 2022]

Gurdjieff called the lowest Center the “Instinctive–Moving” Center, but I prefer to separate them as hatha and karma yoga seem to do, into Physiology and Moving.

Let us return to the Wikipedia article on Gurdjieff's Fourth Way:

[2] The Way of the Monk [Emotional Center = Ordinal Inspiration]

The Monk works to obtain the same mastery of the attention (self-mastery) through struggle with [controlling] the affections, in the domain, as we say, of the heart, which has been emphasized in the west, and come to be known as the way of faith due to its practice particularly in Catholicism.

This description of the “way of the Monk” appears to me to have some similarity to another type of yoga, specifically what is referred to as Bhakti Yoga:

Bhakti yoga is often called the yoga of love or the path of devotion. Nubia Teixeira is a well-known Bhakti yoga teacher and the author of *Yoga and the Art of Mudras*. Teixeira describes the Bhakti yoga path as “different practices that support one's heart to express love in any and many different devotional ways.” The word “bhakti” comes from the root “bhaj”, which means “to pray” or “to share”. While there can be a heavy focus toward specific deities or the Divine, depending on your lineage, many modern scholars and teachers now explain Bhakti yoga much more globally. They consider it the practice of seeking unconditional loving for everyone and everything. [<https://www.healthline.com/health/fitness/bhakti-yoga> — retrieved 08 November 2022]

Let us return to the Wikipedia article on Gurdjieff's Fourth Way:

[3] The Way of the Yogi [Intellectual Center = Ordinal Expression]

The Yogi works to obtain the same mastery of the attention (as before: ‘self mastery’) through struggle with [controlling] mental habits and capabilities.

It seems to me that the various types of yoga emphasize one or another of the Centers, but they ultimately involve improvement of the Intellectual Center, because the Intellectual Center is higher than, and is fed by, improvement in the other Ordinal Centers: Emotional, Moving, and Physiology. This Gurdjieffian description of “the way of the Yogi” appears to me to have significant similarity to what is referred to as Raja Yoga:

Raja yoga is one of the four classical schools of yoga In Sanskrit, raja means “king” or “royal”, referring to the status of Raja yoga as a “royal path” or principal form of yoga. Traditionally, Raja yoga refers to both the goal of yoga and the method of attaining it. As such, it is also considered to be the state of peace and contentment that arises from sustained yoga and meditation practice. In essence, Raja yoga is the yoga of mind and body control, with a focus on meditation and energetics.... According to Raja yoga, the biggest obstacle to self-realization is a busy mind, in which excessive thinking, ego, craving, attachment, and a separate sense of self all contribute towards suffering. [<https://www.yogapedia.com/definition/5338/raja-yoga> — retrieved 08 November 2022]

Notice that this description of raja yoga, the alleged ‘king’ of yogas, emphasizes disciplines of the mind, or Intellectual Center, and this results in improvements in the other Ordinal Centers. This description reminds me of so-called “Rational Emotive Behavior Therapy”, a type of psychotherapy that recognizes the same sequence of the Ordinal Centers; refer to **Chapter IV-x** for the whole story.

Let us return to the Wikipedia article on Gurdjieff's Fourth Way:

Gurdjieff insisted that these paths, although they may intend to seek to produce a fully developed human being, tend to cultivate certain faculties at the expense of others. The goal of religion or spirituality was, in fact, to produce a well-balanced, responsive [rather than reactive], and sane human being capable of dealing with all eventualities that life may present. Gurdjieff therefore made it clear that it was necessary to cultivate a way that integrated and combined the traditional three ways.

[4] Fourth Way [Impulse Center = Neutral Assimilation]

Gurdjieff said that his Fourth Way was a quicker means than the first three ways because it simultaneously combined work on all three centers rather than focusing on one. It could be followed by ordinary people in everyday life, requiring no retirement into the desert [to pursue the lifestyle of the fakir, the monk, or the yogi]. [https://en.wikipedia.org/wiki/Fourth_Way< — retrieved 08 November 2022]

This description of Gurdjieff's "fourth way" reminds me of another one of the "classical" types of yoga, namely what is referred to as "jnana yoga":

Jñāna yoga, also known as *jñāna mārga*, is one of the three classical paths (*margas*) for *moksha* (liberation) in Hinduism, which emphasizes the "path [lifestyle and/or discipline] of knowledge", also known as the "path of self-realization" The jñāna yoga is a spiritual practice that pursues knowledge with questions such as "who am I, what am I" among others. The practitioner studies usually with the aid of a guru, meditates, reflects, and reaches liberating insights on the nature of one's own Self (Atman, soul) and its relationship to the metaphysical concept called Brahman in Hinduism. The jñāna-mārga ideas are discussed in ancient and medieval era Hindu scriptures and texts such as the Upanishads and the Bhagavad Gita. [https://en.wikipedia.org/wiki/Jnana_yoga< — retrieved 08 November 2022]

The reason that I correlate jnana yoga with Gurdjieff's fourth way is that the fourth Center, the Neutral Assimilation Center — which in the Natural Sequence schema is the Impulse Center — is the 'gateway' or 'bridge' between the (physical) Ordinal Centers and the (metaphysical) Cardinal Centers. The quotation mentions "insights" gained via jnana yoga; my names for the Poles of the Impulse Center indicate metaphysical insight, namely +Intuition and -Instinct. Another reason for my correlation is that the fourth Role in the PAS Matrix, the Scholar, is also known for its pursuit of knowledge as a way of life that leads to enlightenment.

It is obvious to me that these three "ways" are correlated with the three Ordinal Centers of the PAS matrix, and that the Fourth Way, which Gurdjieffians refer to as "Balanced Man", is to be correlated with the Neutral Assimilation Center, aka the Impulse Center, but Gurdjieffian students never tumbled to that realization; it took the Michaelian teachings to make that point.

One point to be emphasized here is that improvement of any one of the Ordinal Centers improves the function of the other Centers, whether this is done as a "way" or "path" or "lifestyle" (fakir, monk, yogi), or done as a discipline, aka yoga (hatha, karma, bhakti, raja, jnana).

Another point to be emphasized here is that various clinical psychotherapeutic modalities can be regarded as ways to improve the healthy function of the lower Centers, and if one pursues a path to enlightenment, that can be understood as a way to transmute the lower Centers into the higher Centers, to use Gurdjieffian terms. For instance, subsequent to, but probably not consequent to, the Gurdjieffian teachings, a psychotherapy was developed, called "Rational, Emotive, Behavioral Therapy" — REBT. The astute reader will notice that this refers to the three Ordinal Centers, Intellectual, Emotional, and Moving respectively. Refer to Part Four, Chapter IV-X, for the whole story.

This arrangement of Ways is also reminiscent of the Triune Brain Theory, which I discuss in Part Four, in Chapter IV-X. In that theory, it is shown how the brain of vertebrates evolved from "reptilian" Moving Center to "mammalian" Emotional Center to "human" Intellectual Center. The three Ways used in other systems were each aimed at a different one of these "brains". Gurdjieff regarded his method as a combination of these methods, therefore "whole brain", you might say.

Now that we know something about the means and methods of transmuting the lower Centers into the higher Centers via the Gurdjieffian Work, we are ready to look at a description of the seven stages of the process of enlightenment.

Gurdjieff's Levels of Being

Gurdjieff taught that there were seven stages in the development of awareness or consciousness on the spiritual path, which he called "Levels of Being". The middle or fourth stage was said to be transitional between the "lower" and the "higher" stages, and the key descriptive word for it was "Balanced". The fourth stage was also described as the first stage of genuine Self-awareness, "awakeness", or higher/wider consciousness. Before this stage, people were said to be "mechanical" and "asleep". The following quote is from Gurdjieff's best-known pupil, P. D. Ouspensky.

Man number one, number two, and number three: these are people who constitute mechanical humanity on the same level on which they are born.

Man Number ONE means man in whom the center of gravity of his psychic life lies in the MOVING CENTER. This is the man of the physical body, the man with whom the moving and the instinctive functions constantly outweigh the emotional and thinking functions.

Man Number TWO means man on the same level of development, but man in whom the center of gravity of his psychic life lies in the EMOTIONAL CENTER, that is, man with whom the emotional functions outweigh all others; the man of feeling, the emotional man.

Man Number THREE means man on the same level of development but man in whom the center of gravity of his psychic life lies in the INTELLECTUAL CENTER, that is, man with whom the thinking function gains the upper hand over the moving, instinctive, and emotional functions; the man of reason, who goes into everything from theories, from mental considerations. (P. D. Ouspensky, *In Search of the Miraculous*, p. 71)

The first three categories are practically on the same level. Man Number 1: a man in whom the moving or instinctive centers predominate over the intellectual and emotional — Physical Man. Man Number 2: a man in whom the emotional center predominates over the intellectual, moving, and instinctive — Emotional man. Man Number 3: a man in whom the intellectual center predominates over the emotional, moving, and instinctive — Intellectual man. In ordinary life we meet only these three categories of man. Each one of us and everyone we know is either Number 1, Number 2, or Number 3. There are higher categories of man, but men are not born already belonging to these higher categories. They are all born Number 1, Number 2, Number 3 and can reach higher categories only through [spiritual] schools.

Man Number FOUR is not born as such. He is a product of [esoteric] school culture. He differs from man Number 1, Number 2, and Number 3 by his knowledge of himself, by his understanding of his position, and as it is expressed technically, by his having acquired a permanent center of gravity. This last means that the idea of acquiring unity, consciousness, permanent 'I', and will — that is, the idea of his development — has already become for him more important than his other interests. It must be added to the characteristics of Man Number 4, that his functions and centers are more balanced, in a way in which they could not be balanced without work on himself, according to school principles and methods.

Man Number FIVE is a man who has acquired unity and self-consciousness. He is different from ordinary man, because in him, one of the higher centers [the Higher Emotional Center] already works, and he has many functions and powers that an ordinary man — that is, Man Number 1, Number 2, and Number 3 — does not possess.

Man Number SIX is a man who has acquired objective consciousness. Another higher center works in him [the Higher Intellectual Center]. He possesses many more new faculties and powers, beyond the understanding of ordinary man.

Man Number SEVEN is a man who has attained all that a man can attain. He has a permanent 'I' and free will. He can control all the states of consciousness in himself and he already cannot lose anything he has acquired.

Understanding this division of man into seven categories is very important, for the division has very many applications in all possible ways of studying human activity. It gives, in the hands of those who understand it, a very strong and very fine instrument or tool for the definition of manifestations which, without it, are impossible to define.

Take, for instance, the general concepts of religion, art, science, and philosophy. Beginning with religion, we can see at once that there must be a religion of man number one that is all forms of fetishism, no matter how they are called. A religion of Man Number 2 is emotional, sentimental religion, passing sometimes into fanaticism, the crudest forms of intolerance, persecution of heretics, and so on. A religion of Man Number 3 is theoretical, scholastic religion, full of argument about words, forms, rituals, which become more important than anything

else. A religion of Man Number 4 is a religion of man who works for self-development. A religion of Man Number 5 is the religion of a man who has attained unity and can see and know many things that Man Number 1, 2, and 3 can neither see nor know. Then there is a religion of Man Number 6 and a religion of Man Number 7, about neither of which can we know anything. The same division applies to art, science, and philosophy. You must try to find examples of these for yourselves. [P. D. Ouspensky, *The Psychology of Man's Possible Evolution*, pp. 53–56]

From this brief description of Levels of Being we can take away two important conclusions. First, the Levels of Being adhere to the Law of Three: they have Ordinal ('lower') and Cardinal ('higher') components separated by a Neutral, as described and explained in the section in [Chapter II-3](#), "The Law of Three". Second, in the Gurdjieffian teaching, the Levels of Being are generally related to the Centers, as also documented in [Chapter II-3](#).

The following table provides correlation of the Levels of Being with the Centers:

Table VI-2a — GURDJIEFF'S LEVELS of BEING				
RANK	LEVEL OF BEING	DESCRIPTION	GURDJIEFF'S CORRELATION	EVENTUAL CORRELATION
1	MAN NUMBER ONE	Instinctive-Moving Man	Moving Center	Lower Moving Center
2	MAN NUMBER TWO	Emotional Man (feeling)	Emotional Center	Lower Emotional Center
3	MAN NUMBER THREE	Thinking Man	Intellectual Center	Lower Intellectual Center
4	MAN NUMBER FOUR	Balanced Man	unspecified	Impulse (Instinctive) Center
5	MAN NUMBER FIVE	Integrated Man (the Adept)	Higher Emotional Center	Higher Intellectual Center
6	MAN NUMBER SIX	Conscious Man	Higher Intellectual Center	Higher Emotional Center
7	MAN NUMBER SEVEN	Perfected Man (the Master)	unspecified	Higher Moving Center

My comments on this table are as follows:

- RANK: These numbers in the first column are shown for comparison with other septenaries shown on other tables in this book that show Ranks.
- LEVEL OF BEING: The second column shows Gurdjieff's so-called "Man Numbers".
- DESCRIPTION: The third column indicates the Gurdjieffian understanding extracted from passages in books about the Gurdjieffian teaching.
- GURDJIEFF'S CORRELATION: The fourth column shows the Centers that correspond to the Man Numbers, aka Levels of Being, in previous columns. The information was extracted from the quotations of the GT in sections above.
- EVENTUAL CORRELATION: The last column shows the understanding that the Process/Aspect System has arrived at, which is different in the higher Centers than the Gurdjieffian teaching. The Gurdjieffian understanding was that the higher Centers repeated the sequence of the lower Centers, whereas the Process/Aspect System provides the understanding that the higher Centers mirror the lower Centers, the pivot being the Neutral Center in the middle of the septenary. This aligns the Levels of Being with the other instantiations of the Natural Sequence schema documented throughout this *Cosmogony* book.

So far as I have been able to determine, Gurdjieff did not correlate all of the Levels of Being with particular Centers, probably because he did not understand that there were seven separate Centers. As we saw in [Chapter II-3](#) "The Seven Centers", in Part Two, Gurdjieff considered the Instinctive and Sexual Centers to be mere Parts of the Moving Center, and not separate Centers. However, in the Process/Aspect System they are distinct Centers. This is an improvement made in the Michaelian Teachings, as documented in my book *A History of the Overleaf Chart*.

Tabulation of Levels of Being with Yoga Lifestyles and Types of Yoga

For your convenience, and as is my custom, I provide a table showing the correlations between instantiations of Natural Sequence septenaries that I discuss in a section or chapter. In this case, it is a correlation with Gurdjieffian teachings and Hindu teachings:

Table VI-2b — LEVELS OF BEING and TYPES OF YOGA							
RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
DIALECTIC	–ORDINAL– (ME)			=NEUTRAL=	+CARDINAL+ (WE)		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
PROCESS → ASPECT ↓	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
LEVEL OF BEING	MAN #1	MAN #2	MAN #3	MAN #4	MAN #5	MAN #6	MAN #7
CENTER	MOTION	EMOTION	INTELLECT	IMPULSE	CONCEPT	SYMPATHY	EXCITATION
LIFESTYLE	FAKIR	MONK	YOGI	—	—	—	—
YOGA	KARMA	BHAKTI	RAJA	JNANA	—	—	—

My comments on this table are as follows:

- **ATTRIBUTES:** The first six rows are the Attributes of the septenarian Natural Sequence schema. These Attributes are described and explained with many other tables and in Part One, so there is no use doing it again here.
- **LEVEL OF BEING:** This, of course, is the subject of this chapter in the Part on paths to enlightenment.
- **CENTER:** In the Gurdjieffian teachings, the Levels of Being are correlated with Centers. However, Gurdjieff did not know about the Natural Sequence schema, and consequently he did not correctly correlate the higher Centers with the higher Levels of Being. This table makes the appropriate corrections, and also uses my preferred names for the Centers.
- **LIFESTYLE:** In the Fourth Way component of the Gurdjieffian teachings, it is said that the lowest Levels of Being relate to certain enlightening lifestyles that are espoused in Hinduism. Gurdjieff said that his Fourth Way teaching was a combination of those three lifestyles, which he said correlate with the three lower Centers. The point I want to make is that, per the Dialectic Principle, the three lower Centers are transmuted to the three higher Centers via dedication to the means and methods advocated in those lifestyles.
- **YOGA:** In reading about yoga, it was obvious to me that there are types of yoga that seem to emphasize the transmutation of certain lower Centers into their higher counterparts, regardless of the lifestyle chosen; those are named in this row.
- If I had constructed the table with a Rank Zero, I would have put hatha yoga in that column because it seems to be concerned with managing the physiology of the body, thus correlating with the Zeroth Center, the Physiology Center.

Concluding Remarks on Levels of Being

There are various ways and means to raise one's Level of Being. These were espoused by the Gurdjieffian teachings, and by other spiritual teachings. Monasteries and communes have historically been established to foster spiritual growth. There is a correlation of Levels of Being with other septenaries in the Natural Sequence schema. This is all explained in the other chapters here in Part VI of this *Cosmogony* book.

1. These quotes are from Peter Ouspensky's writings, but they are about the Gurdjieffian teachings. Both of them generally correlated these ascending steps of greater consciousness with Centers.
2. In my research so far, outside of the Michaelian teachings reviewed in Chapter II-4, I have not found anyone who correlated all seven of Gurdjieff's so-called "Man" numbers with Gurdjieff's seven Centers/Parts of Centers. To me this says a lot about the preliminary and provisional status of the Gurdjieffian teaching; it is not to be taken as the final, authoritative word on the subject.
3. The fact that the three higher Centers in the Gurdjieffian teaching are not shown per the Natural Sequence is, in my opinion, another indication of the preliminary and provisional status of Gurdjieff's understanding.
4. Man #4 is referred to as "balanced", but unlike the other Men in the ascending Levels of Being, is not correlated here — or anywhere else among Gurdjieff/Ouspensky students that I know of — with any of Gurdjieff's version of the Centers. This omission of correlation was eliminated in the Michaelian teachings reviewed in Part Two, Chapter II-4, where Man #4 correlates with the Impulse Center.





Chapter VI-3

② THE RA MATERIAL — POLAR ENERGY TRANSFERS

[[Refer to Chapter I-3, “Source Material — The Ra Material” in my book *Making Love: A Spiritual Path — The Chemistry and Alchemy of Service and Intimacy*. There is less confusion if I make tweaks to that one version than make tweaks to both versions, because something like 99% of the versions are identical. At the time this book is completed, then maybe I will copy that version here and tweak it to be suitable for this book.]]





Chapter VI-4

② FRANKLIN JONES — STAGES OF LIFE

Some time in the 1980's I received a book catalog from an organization built around an alleged spiritual master. He was given the name Franklin Jones at birth, but he later gave himself the name "Da Free John", and gave himself the title "Da Avodhoota". Other names and titles followed. In that catalog there was a description of spiritual development through seven stages, ending at full transcendent enlightenment. He claims that he did not borrow this sequence from anyone else, and indeed it does differ in some respects from other septenaries of spiritual development that I have seen and that are reviewed in this *Cosmogony* book, but yet it is so similar to the Natural Sequence schema espoused herein that their correlation is obvious.

Biography of Franklin Jones

As part of an introduction to a chapter, I typically provide a brief biography of the person, if any, who originated or developed or spread the ideas reviewed in the chapter. As usual, my source is Wikipedia. As usual, I underline words that I want to emphasize, I insert clarifying words or phrases in [brackets], and I intersperse explanatory comments between blocks of quoted material.

Adi Da Samraj, born Franklin Albert Jones (November 3, 1939 – November 27, 2008) was an American-born spiritual teacher, writer, and artist. He was the founder of a new religious movement known as Adidam.

Adi Da initially became known in the spiritual counterculture of the 1970s for his books and public talks and for the activities of his religious community. He authored more than 75 books, including those published posthumously, with key works including an autobiography, *The Knee Of Listening*, spiritual works such as *The Aletheon* and *The Dawn Horse Testament*, and social philosophy such as *Not-Two Is Peace*.

Enlightenment per Franklin Jones

The Wikipedia article continues:

Adi Da's teaching is closely related to the Indian tradition of nondualism. He taught that the 'ego' — the presumption of a separate self — is an illusion, and that all efforts to "attain" enlightenment or unity with the divine from that point-of-view are necessarily futile. Reality or Truth, he said, is "always already the case": it cannot be found through any form of seeking, it can only be "realized" through transcendence of the illusions of separate self in the devotional relationship to the already-realized being. Distinguishing his teaching from other religious traditions, Adi Da declared that ... fundamental self-understanding, was the sole means of awakening to seventh stage spiritual enlightenment....

Further on in the Wikipedia article is a brief introduction to the seven stages. As usual, underlined words or phrases are my emphasis, as usual some explanatory words or phrases are enclosed in [brackets], and as usual I provide some commentary between blocks of quoted text.

SEVENTH STAGE REALIZATION

Adi Da developed a schema called "the seven stages of life" which he says is a precise "mapping" of the potential developmental course of human spiritual experience as it unfolds through the gross, subtle, and causal dimensions of the being. "Gross" means made of material elements and refers to the physical body. The subtle dimension, which is senior to and which pervades the gross dimension, consists of the etheric (or personal life-energy), and includes the lower mental functions (conscious mind, subconscious mind, and unconscious mind) and higher mental functions (discriminative mind and will). The causal dimension is senior to both the subtle and the gross dimensions. It is the root of attention, or the essence of identity with the separate self or ego-"I".

Refer to **Chapter X-x in Part X, “The Seven Planes”** for more about these so-called “dimensions”. Reading that chapter will make it obvious that the “gross” dimension is elsewhere called the Physical Plane, the “subtle” dimension is elsewhere called the Etheric levels of the Physical Plane, Astral Plane, and the Mental Plane, and the “causal” dimension is elsewhere called the fourth through seventh planes, with various names given in various teachings and traditions. Thus, we see that there is a correlation of ‘dimensions’ in Adi Da’s teaching with ‘planes’ in numerous other teachings.

Returning to the Wikipedia article, we see that the seven stages are then listed as follows:

- First Stage—“individuation/physical development”
- Second Stage—“socialization”
- Third Stage—“integration/mental development”
- Fourth Stage—“spiritualization/Divine Communion”
- Fifth Stage—“spiritual ascent”
- Sixth Stage—“abiding in consciousness”
- Seventh Stage—“Divine Enlightenment: awakening from all egoic limitations”

Those who have read the previous Part on “Developmental Psychology” will recognize the first three Stages as the Ordinal triad of what I generally refer to as “Life-Stages”: the Infancy Stage, the Childhood Stage, and the Youth Stage are psychological, not spiritual. Stages Four through Seven are not part of typical adult psychological development; rather, they are spiritual development. All seven of these stages are discussed in much greater detail in the next section of this chapter.

Adi Da categorized the fourth, fifth, and sixth stages of life as the highest respective stages of human development. He characterized those who have reached these stages as “saints”, “yogis”, and “sages”, including other religious figures such as Gautama Buddha and Jesus Christ.

It should be self-evident to those who have read this *Cosmogony* book up to this point that the first three Stages of Adi Da’s septenary correlate with the Ordinal stages of the Natural Sequence schema, and the Fourth Stage correlates with the Neutral stage of the Natural Sequence schema, and the last three Stages correlate with the Cardinal stages of the Natural Sequence schema.

The Wikipedia article continues:

In Adi Da’s schema, the sixth stage or horizontal process is “the exclusion of all awareness of the ‘outside’ world (in both its gross and subtle dimensions), by ‘secluding’ oneself within the heart — in order to rest in the Divine Self”, or Consciousness Itself. As this is “achieved by conditional means — the conditional effort of exclusion”, it is non-permanent. Relative to this spectrum, Adi Da stated that ... the seventh stage has nothing to do with development and does not come after the sixth stage in a sequential manner. Seventh stage Realization is a permanent, natural state of “open-eyed ecstasy”, for which Adi Da employed the Sanskrit term *Sahaj Samadhi* or Seventh Stage *Sahaja Nirvikalpa Samadhi*. Adi Da claimed to be in the seventh stage of life, most perfectly realized as Conscious Light Itself, which is absolutely unconditional and is therefore permanent.

>https://en.wikipedia.org/wiki/Adi_Da< — retrieved 09 January 2023

The Wikipedia article continues with more biography on this teacher, and more discussion of his influence on other people.

Tabulation of Correlations

For your convenience as you read the subsequent sections, I provide the following table showing the correlation of Da’s “Stages of Life” with other relevant instantiations of the Natural Sequence schema that are discussed in various Parts and chapters of this *Cosmogony* book.

Table VI-4a — DA’S STAGES of ENLIGHTENMENT							
NAME	Vital-Physical	Emotional-Social	Mental-Intentional	Heart Awakening	Mystical Spirituality	Conditional Self-realization	Enlightenment God-realization
RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
DIALECTIC	–ORDINAL– (ME)			=NEUTRAL=	+CARDINAL+ (WE)		
AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
PROCESS → ASPECT ↓	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
CENTER	MOTION	EMOTION	INTELLECT	IMPULSE	CONCEPT	SYMPATHY	EXCITATION
CHAKRA	SACRAL	NAVEL	PLEXUS	HEART	THROAT	BROW	CROWN

My comments on this table are as follows:

- **NAME:** The first row shows the names that Da gave to the stages of enlightenment. Compare these names with those given in the previous section and the following section.
- **RANK:** The rank numbers given by Da are the same as the rank numbers given by numerous other sources that present a septenarian (seven-stage) schema.
- **DIALECTIC:** Da does not explicitly apply the Dialectic Attributes to his septenarian schema, but he does make a distinction between the first three stages as the domain of normal human life, and the last four stages as the domain of extraordinary human life; see below. This is reminiscent of Gurdjieff’s so-called “Levels of Being”, reviewed in a previous chapter.
- **AXIAL:** Da does not explicitly state that the Ordinal triad of stages is the reverse of the Cardinal triad of stages, but it can be vaguely discerned in the descriptions that he provided; see below.
- **DIMENSION:** Da uses this word Dimension when characterizing his Stages of Life as they correspond to what others refer to as planes, or, more completely, “planes of consciousness”; refer to [Chapter II-B](#). In this, Da seems to subscribe to the common notion that development through seven stages of consciousness during physical life is a subset of development of consciousness during the afterlife of the soul or essence or spark through seven planes. In the Natural Sequence schema, dimensions of enlightenment are correlated with mathematical geometric dimensions as shown in the table.
- **DIRECTION:** Da does not use the concept of Directionality in his descriptions of his Stages of Life, but I do when I describe numerous instantiations of the Natural Sequence schema, so I include it here.
- **PROCESS:** This row shows the names of the seven fundamental ways that systems develop over time, as given in the Natural Sequence schema and explained in Part I. A human is a system with a consciousness that evolves.
- **ASPECT:** In the descriptions given in the next section, Da’s Stages of Life are often explained in terms of the Centers and the chakras, two other septenaries often used to label stages of psychological and/or spiritual development.

The Seven Stages of Life

The following lengthy quotation is copied verbatim from the Adidam book catalog as it was in the 1980s. As you read the following descriptions, note that some of them fit best with one or another of three time-tracks that are discussed in other Parts of this *Cosmogony* book, namely Worldviews/Zones (see [Part II](#)), Cultures (see [Part IV](#)), and Life-Stages (see [Part V](#)). Those three can be regarded as unintentional in that they happen in the normal course of natural processes over time. However, the time-track reviewed in this Part, “Enlightenment”, is distinct from those other three in the sense that it is intentional on the part of an aspirant — and it is supernatural — but the evidence presented in this *Cosmogony* book suggests that the Natural Sequence schema governs the character of the stages of development on all four time-tracks.

In the quotation, underlines are my emphasis, to draw the reader's attention to what I regard as important in the context of this *Cosmogony* book. My comments are interspersed between blocks of quoted text.

INTRODUCTION

An introduction to the stages of progressive transcendence of the body-mind as described by Heart-Master Da Free John.

To provide the larger, Spiritual context in which we can orient and examine our life critically, Heart-Master Da has formulated the developmental schema of the seven stages of life. Equipped with profound insight born of his own *sadhana* and Realization, and unencumbered by allegiance to the inherited dogmas of any single tradition, Heart-Master Da has developed a complete map of the psycho-physical processes involved in Man's ultimate transformation in God.

It may be the case that Da developed his schema independently from any other schema, but he nevertheless arrived at a schema that is consistent with those other schemas documented throughout this *Cosmogony* book, and which is consistent with the Natural Sequence schema.

The seven stage model is not a mere hypothesis about the future evolution of Man. It is based on the understanding of one who has regained Man's native state of Realization, through his own devotional surrender and self-sacrifice. Thus, the seven stage model serves as a literal description of each stage of the human ordeal that must be engaged (and transcended) by every individual who would realize the same Transcendental Condition enjoyed by the Enlightened Adept in the seventh stage of life. (The animal logos of the seven stages as explained on the first page on each of the sections of the books from the "Great Tradition".)

There are statements in that paragraph that seem to equate "Man" with humankind in general, and the development of humankind in general is covered in this *Cosmogony* book using the umbrella term "Culture", which is discussed at length in various chapters in **Part Four, "Natural Evolution"**.

There are also statements in that paragraph that seem to be referring to the evolution of individual souls or essences or sparks (it goes by different names in different traditions) via the process of reincarnation, a time track that is covered in this *Cosmogony* book using the umbrella term "Worldview", which is discussed at length in various chapters in **Part II, "Modern-Day Spiritual Teachings", especially Chapter II-7, "The Seven Soul Ages/Worldviews"**.

Most of us are engaged in a frantic quest for Happiness in the **first three** stages of life. We indulge in bodily [and emotional] and mental experiences — notably eating and the acquisitions of objects (corresponding to the developmental capacities of the first stage of life), sexual experiences and exploitation of the emotional life (second stage), and adventures of the intellect or will (third stage) — but are unable to learn their respective lessons.

Da groups the first three of his Stages of Life into a category, that of ordinary human consciousness; these are referred to as the Ordinal stages in the Natural Sequence schema, and named there as Ordinal Action, Ordinal Inspiration, and Ordinal Expression respectively. A predecessor of Da, Georges Gurdjieff, whose teaching is reviewed in **Chapter VI-2** in this Part, said very much the same thing about the vast majority of people, who have no motivation or aspiration to transcend these first three stages of development. Gurdjieff correlated these stages with the Moving, Emotional, and Intellectual Centers, respectively.

Only a few exceptional people have achieved relative maturity in the first three stages of life. Fewer still have gone on to the **fourth** stage, or heart-awakening, which tends to flourish in combination with a simple lifestyle and basic renunciation. However, from the Transcendental point of view, even the saintliness characteristic of the fourth stage of life contains its own element of egoic seeking.

My suggestion is that it is no coincidence that the fourth Stage in Da's schema, here called "heart-awakening", correlates with the fourth chakra, the Heart Chakra.

Then there are those rare yogis and mystics who do their seeking in the fascinating realm of esoteric experience in the **fifth** stage of life. They generally have renounced much worldly ballast, but even they have not fully renounced the ego-personality.

In the **sixth** stage the mood [an Inspiration-dimension word] of renunciation is strongest because the Witness-Consciousness, which the Spiritual practitioner intuitively feels as his real Identity, looks with indifference upon everything. Yet, even in this sublime condition the ego-program is not altogether transcended.

The Ra Material, which is reviewed in the previous chapter, also commented on the rarity of achieving the higher-later Stages of their schema.

Truly Radical renunciation and self-transcendence is demonstrated only in the **seventh** stage of life, in the Enlightened Condition, when the distinction between the “Witness-Consciousness” and the witnessed conditions is permanently dissolved. When everything is Recognized as the One Being, there is no question of clinging or conventional renunciation, because the ego that clings and renounces is perfectly transcended. What remains is eternal Happiness, regardless of the fate of the body-mind and the world.

In the quotations that follow, in the title line of each stage, enclosed in [brackets] I provide some Attributes of the Natural Sequence schema that correlate with Da’s Stages. Da also mentions some correlations of his schema with the chakras of the body and the Centers of the mind, so I found it expedient to comment on those correlations.

Note as you read the following that Da divided the early phase of a lifetime into periods of seven years. This notion is found elsewhere ([Rudolf Steiner and his Waldorf schools](#)), and some might find it meaningful. However, in my view, this would seem to be an artificial and arbitrary way to divide up a life into stages, so I do not lend it much credence; refer to Part V, “Developmental Psychology” for a description of the varying duration of life-stages discerned empirically by academic researchers, rather than by alleged revelation.

Note also as you read the following that Da uses two metaphors for “enlightenment” that are used by other sources reviewed in this Part, namely ‘awakening from sleep’ and ‘liberation from bondage’. These are apt metaphors for the transmutation of the lower-earlier stages into the higher-later stages of any spiritual path.

Note also as you read the following that Da uses the same metaphor for stages of enlightenment that are used by other sources reviewed in this Part, namely ‘lower’ and ‘higher’. This is the Hierarchy Principle of the Natural Sequence schema, viewing stages in time as if they were levels in space. Stratigraphy in sedimentary rocks, where younger layers are on top of older layers, naturally gives rise to that metaphor, but also there is the sense that maturity gives one an expanded view of the past, just as one gets an expanded view of the world from a higher vantage point.

Quotation of the Adidam book catalog resumes.

FIRST STAGE — The Vital-Physical Dimension [Ordinal Action — Gonad Chakra — Motion Center]

In the first stage of life, which generally occupies the first seven years after birth, human beings adapt to vital-physical existence in the world of the senses. The child learns to individuate himself from both the mother and others through the development of his physical capacities and rudimentary [second stage] emotional, [third stage] mental, and [fourth stage] psychic awareness. In the maturity of the first stage, the child grows beyond the unconscious dependency of infancy into a state of conscious relatedness. Da Avadhoota has described these signs of fulfillment of the first stage of life: “When this stage is complete, we will not exist in isolation but in a state of conscious relatedness to all others and the world of Nature. Thus, the fulfillment of the first stage of life is marked by the beginnings of the movement toward more complex socialization, cooperation with others, and sensitivity to the total world of Nature.”

Da Avadhoota has associated the seven stages of life with seven members of the animal kingdom. The symbol of the Whale best captures the earliest phase of human unfolding, in which the emphasis is on bodily development and participation in the sensate world. The whale is a reminder of Man’s fish-like origins, first as a sperm in the seminal fluid and later as a developing embryo and a fetus in the amniotic fluid of the womb, where it recapitulates major evolutionary stages. As the largest living mammal, the whale serves as a fitting symbol for the vast potential of the human being, barely hinted at in the fumbling effort of the young child, to participate in and understand the world. This is indicated by our depiction of a mother whale — drawn here as a humpback whale — with her calf. Finally, the whale symbolizes the relative unconsciousness and lack of Spiritual awareness in the first stage of life. By extension, the whale represents Man’s status as a seeker who plows the ocean of conditional existence, ever in search of Happiness, but always only encountering fleeting pleasures and frustrating pain. However, just as the humpback whale can leap completely out of the water, Man too can utterly free himself from bondage to his subhuman adaptation to life.

Regarding the correlation of the first stage of Da’s schema with chakras and Centers, it is a conflation of two chakras-Centers: Zero = Root Chakra and Physiology Center; One = Gonad Chakra and Motion Center. Refer to [Chapter II-8, in Part Two, “The Seven Chakras”](#), for an explanation of the variations in the locations and functions of the lower chakras. Basically and briefly, because of the difference in location of the genitalia, in males sexuality is sometimes affiliated with the Gonad Chakra or Motion Center, whereas in females it is sometimes affiliated with the Navel Chakra or Emotion Center, per the description of the next Stage of Life:

SECOND STAGE — The Emotional-Sexual Dimension [Ordinal Inspiration — Navel Chakra — Emotion Center]

In this phase of development usually comprising the second seven years of life, the individual adapts to the emotional and social sphere of human activity. At this stage a child learns to feel a conscious and functionally effective relationship to others and to his environment through awakened sensitivity to the etheric or emotional-sexual forces of life. Da Avadhoota defines the etheric dimension of life as “the dimension of energy nerve-force and direct feeling-sensitivity to the conditions of existence.” Through growth in feeling sensitivity to the surrounding world the child lays the foundation for a benign and moral involvement in all social relations as well as the capacity for entering into heart-felt relationship with the Living Divine.

The social, emotional, and psychic dimensions of the being are beautifully unified in the image of the peacock. From earlier times the psyche has been portrayed as a bird representing sensitivity to the All-Pervading Current of Life-Energy beyond egoic identification with the physical body. The peacock in particular has long been considered a sacred symbol of immortality and resurrection because its flesh is supposedly incorruptible and its plumage is periodically renewed. More than a reference to the awakening sexuality of the second stage individual, the exquisite fantail of the peacock is a symbol of the child’s sensitization to the etheric or psychic dimension of the wheel of existence.

In the previous Part, we saw that many developmental psychologists often made the same connection between internal emotional development and external social development in the equivalent stage in their model.

As we all know, the maturation of the physical body results in the beginning of sexual development at the very end of Da’s Second Stage, with the advent of puberty. In the Ra Material, reviewed in a previous chapter here in **Part Six**, sexuality is located in the first stage of RA’s schema. I attribute this discrepancy to semantic differences regarding the definition of sexuality.

THIRD STAGE — The Mental-Intentional Dimension [Ordinal Expression — Plexus Chakra — Intellect Center]

The third stage of life stretches approximately from the fifteenth to the twenty-first year in the case of an individual maturing in a true Spiritual culture. However most adults never pass beyond the complications of failed adaptation in the first three stages of life. Even those individuals regarded by society as creative geniuses generally only represent a greater or lesser degree of third stage adaptation.

The third stage marks the full development of mental functions and the will. The individual who is truly mature in the third stage of life according to Da Avadhoota “is fully prepared (physically, emotionally, etherically, psychically, mentally, and with a free or intelligent will) to enter into the social, personal and Spiritual responsibilities of true Manhood.” Then he or she is “able to be present as a clear will and as love under all the otherwise frustrating or pleasurable conditions of lower experience. Those who seek to begin Spiritual life must be mature in this sense in order to move on to higher maturity.” The third stage of life culminates ideally in the conscious integration of the [first stage] vital-physical, [second stage] emotional-sexual, and [third stage] volitional-mental capacities.

This statement is very congruent with Gurdjieff’s teaching that the so-called “lower” Centers must be fully functioning in a harmonious way before one becomes what Gurdjieff referred to as a “Balanced Man”. Only then does the psychotherapeutic path end and the spiritual path begin; refer to **Chapter VI-2, “Gurdjieff — Levels of Being”**.

Our symbol of a nude man and woman indicates the physicality and ordinary humanity of the third stage. The fulfillment of this stage requires a degree of human maturity that is unusual — hence the positive archetypal images of the mature adult male and female forms. However, in general even the conventionally mature adult fails to fulfill his evolutionary potential as a Spiritual being, settling instead for the experiential possibilities of the first three stages, notably the experiences of sexuality and family life (indicated in our illustration by the holding of hands). Full humanness begins with the fourth stage, in which the higher centers of the body-mind begin to awaken.

In my understanding of the Natural Sequence schema, chakras are of the body and Centers are of the mind.

Per the Hierarchy Principle, each stage represents a higher level of self-awareness that includes the previous level(s), and transcends them. The next stage could be called the first level of Self-awareness, with a capital “S”, referring to the higher Self as distinct from the lower self.

FOURTH STAGE — Heart-Awakening [Neutral Assimilation — Heart Chakra — Impulse Center]

The fourth stage of life marks the beginnings of a higher destiny that requires the individual's conscious participation in the process of Spiritual evolution. This coincides with the awakening of the "psychic heart", or the establishment of the being in the disposition of genuine faith and love based on the gesture of true self-surrender to the Divine Presence that pervades the body-mind and the total world. Such surrender continues "to the point of generally harmonizing the body-mind in that Life-Current and otherwise Realizing self-transcending devotional Union with that Living Reality in occasions of Love-Bliss that involve and simultaneously transcend the body-mind". Individuals rarely enter into stages beyond the third unless they are involved in intensive spiritual practice. The length of time spent maturing in the fourth and each higher stage of life depends upon the individual's qualities and the strength of his or her Spiritual practice.

Da was aware that the 'lower' triad of stages in this septenarian schema is distinct from the other four, but so far as I have found, he was not aware that the 'higher' stages are another triad, with the fourth stage sandwiched between the 'lower' triad and the 'higher' triad, and also distinct in that it is the bridge between the triads. However, the underlined words in the quoted paragraph below are totally appropriate for the fourth stage reviewed in other instantiations of the Natural Sequence schema, where the fourth stage is understood as a bridge between the triads. As with Gurdjieff, Da emphasizes that spiritual development typically requires that the aspirant pursue practices and disciplines; development of the "supernatural" is not something that happens naturally.

The elephant conveys not only tremendous strength but above all endurance and balance. As such it is a fitting symbol for the fundamental equanimity and peace of the fourth stage Spiritual practitioner who by resorting to intimacy with the Divine Spirit, is committed to stably transcending the worldly tendencies of the first three stages of life — the binding distractions of "money, food, and sex". Significantly, the symbol of the elephant also figures in the esoteric imagery Hindu Yoga, where it is associated with the subtle energy center at the heart ("anahata chakra"). The upturned trunk indicates the heart-open individual's orientation toward the Divine Self rather than to the conventional motivations of the Spiritually unconverted "usual man". In Chinese iconography, the same idea is also suggested by the use of the elephant as an emblem for the Bodhisattva, the Spiritual practitioner who has resolved to incarnate the highest virtue for the sake of the Liberation of all beings. The elephant is finally a symbol of intelligence and wisdom, which are the gifts of a heart wounded by love. Thus, the elephant is the mount of the deities, notably the Hindu God Indra, Bringer of the rain of Grace.

In other septenarian systems that discuss matters of spirituality, notably Worldview, the Bodhisattva is typically correlated with the sixth stage or the seventh stage, not the fourth stage, as here.

FIFTH STAGE — Mystical Spirituality [Cardinal Expression — Throat Chakra — Concept Center]

The fifth stage of life is the stage of the cultivation of esoteric or mystical Spirituality. Here the Spiritual practitioner explores, through the disciplined inversion of attention, the unimaginable possibilities of the subtle dimensions of existence. The Life-Current is used in its ascending arc to unlock the wonders of the "inner" realms of cosmic existence, which are revealed in the subtle psycho-physiology of the central nervous system and the brain core. Da Avadhoota: "In the fifth stage of life this harmonizing trend (of the fifth stage) is continued, as well as the ecstatic gesture toward Union, but the plane of self-awareness ascends, to become dominantly subtle (or psychic) rather than gross (or merely physical), and the Realization of Union involves experiences of ascended attention that eventually go beyond physical references and, at last, even beyond mental references."

In that description I see hints that Da vaguely understood the Mystical Stage to be the exaltation of the Intellectual Stage, which is the case in the Natural Sequence schema. The underlined words are applicable to the function of the Concept Center.

The cobra is an archetypal symbol not only for esoteric knowledge but also for the ascending energy of the life-Force. The traditional goal of the fifth stage of life is the transcendence of gross self-consciousness through the manipulation of the nervous system via the ascending Life-Current. In our illustration the cobra is depicted with an inclined head and the tongue pointing to the right side of the chest. This symbolizes the primacy of the Awakening of Consciousness at the heart over the yogic process of channeling the serpentine Life-Current (the so-called "Kundalini Shakti" of Tantric Yoga) along the vertical axis of the subtle "chakra body". Thus, the true fulfillment of the fifth stage of life is not conditional *nirvikalpa samadhi*, or ascended formless union with the Radiant Matrix of the Life-Current in the topmost chakras. Rather, it is disorientation from the whole process of manipulating energy and attention for the sake of higher, subtle experience and knowledge. It is dissolution of

that very principle of attention, and all self-contraction, in the prior locus of both the Life-Current and Consciousness — the right side of the heart.

SIXTH STAGE — Conditional Self-Realization [Cardinal Inspiration — Brow Chakra — Sympathy Center]

The sixth stage of life is the last of the progressive stages previous to Transcendental Awakening. It is the basic stage in which the transition is made from terrestrial and cosmic conceptions of the Divine or Real Being to conceptions of the Ultimate as the Transcendental Reality and Condition and Identity of all apparent beings and conditions. And the process of self-sacrifice is thus transformed from an effort that serves the development of knowledge and experience in the planes of the psycho-physical personality to a direct effort of utter self-transcendence.

The extraordinary qualitative shift from Third Stage to Fourth Stage was commented previously. It seems that another extraordinary qualitative shift happens in the transition from Fifth Stage to Sixth Stage, according to Da. This phenomenon has been noted in at least two other schemas, namely the Kabbalah, as discussed in **Chapter III-X**, and in Soul Ages or Worldviews, as discussed in **Chapter II-7**.

Like the elephant, the tortoise is traditionally associated with endurance and strength, as when Vishnu assumed the shape of a giant tortoise to support the world mountain on his back. Its cosmic significance is brought out in Chinese mythology and divination, where the curved top of the tortoise shell symbolizes the celestial vault and the flat underside symbolizes the Earth. In ancient Hindu mythology, similarly, the Creator God Prajapati is said to have changed into a tortoise before issuing forth all creatures. The association of the tortoise with cosmic creation contains a hidden reference to the creative Spiritual process of withdrawing attention from the external world and tracing it back to its causal root in the heart. In the sixth stage of life, a clear distinction is made between the Subjective Witnessing Self and the objective world, a distinction captured in the image of the tortoise with its soft inside and its nearly impervious shell, and the withdrawal of the tortoise into its shell signifies the error of the sixth stage — the attempt to cling to the Transcendental Self by excluding all arising conditions.

The notion of “error” with respect to each of Da’s Stages is not mentioned elsewhere in Da’s document reviewed here, but it might be elsewhere in his writings. This is reminiscent of the notion of Positive and Negative Poles in all elements of the Process/Aspect System.

SEVENTH STAGE — Enlightenment, or God-Realization [Cardinal Action — Crown Chakra — Excitation Center]

In the seventh stage of Life, the Transcendental Self of the Realized or Enlightened being is no longer pitted against the phenomenal world. The world and all its conditions are recognized as arising in and as the Ultimate Being, which is co-essential with the Self. Da Avadhoota has said of the seventh stage: “In the seventh stage of life there is native or radical intuitive identification with Radiant Transcendental Being, the Identity of all beings (or subjects) and the Condition of all conditions (or objects). This intuitive identification (or Radical Self-Abiding) is directly Realized, entirely apart from any dissociative act of inversion. And, while so Abiding, if any conditions arise, or if any states of body-mind arise, they are simply recognized in the Radiant Transcendental Being as transparent or non-binding modifications of Itself. Such is *Sahaj Samadhi*, and it is inherently free of any apparent implications, limitations, or binding power of phenomenal conditions. If no conditions arise to the notice, there is simply radiant Transcendental Being. Such is *Bhava Samadhi*, about Which nothing sufficient can be said, and there is not Anywhere beyond It to be Realized.”

In the seventh stage of life (perfect God-Realization or Enlightenment), the mechanism of ego-bound attention is utterly and permanently transcended. The Transcendental Consciousness, intuited at the right side of the heart, is no longer experienced as an exclusive reality. The inward gaze upon the Self is replaced by the Ecstatic Mood “Open Eyes”.

The Lion, the lord of all beasts, symbolizes perfect mastery over the egoic body-mind. The lion is reputed never to sleep, which hints at the eternal Wakefulness of Enlightened Being. As a traditional symbol of the sun, he also points to the Radiant Transcendental Self. His yawn in our illustration indicates the natural ease, or spontaneity, of *Sahaj Samadhi*, or the native and effortless Intuition of the Divine Reality. The lion-hearted Realizer in the seventh stage of life abides, free of all stress, continuously in the majestic Splendor and Bliss of the One Reality.

If you should happen to want to pursue these descriptions further, you can find more information at the following web sites.

>http://www.beezone.com/AdiDa/7Stages/7_stages_of_life.html<

><http://www.dabase.org/7stages1.jpg><

>https://www.adidaupclose.org/introduction/seven_stages.html<
><http://www.dawnhorsepress.com/infostagesoflife.aspx><
><https://www.adidam.org/teaching/seven-stages><
><http://malankazlev.com/kheper/topics/gurus/Da-7stages.html><

Comments on Adi Da

In the material quoted above, we see that Da has only a vague understanding of the Principles that I ascribe to the Natural Sequence schema, such as the **Holarchy Principle, the Transition Principle, the Feedback Principle, the Taijitu Tango Principle, and the Gestalt Principle.** *[[Review names when that chapter is finished.]]* However, notice that the natural *development* through stages of human and soul growth is here clearly presented. This description of development toward full enlightenment through seven stages unequivocally follows the Natural Sequence schema in the first three stages. And the fourth and fifth stages are also obviously descriptions of Neutral Assimilation and Cardinal Expression respectively, right where they are in the Natural Sequence. The sixth and seventh stages are not so obviously equivalent to Cardinal Inspiration and Cardinal Action, but close enough for all practical purposes.

This description is different enough and yet similar enough to other cosmologies of sevenness that are documented in this *Cosmogony* book that it might seem to indicate that it is an independent presentation — not copied from other sources. Even if it is based on some other source or sources, at minimum it seems to be the result of independent thinking or experience because it seems to chronicle Da Free John's own path to enlightenment. For instance, this description of spiritual development is very reminiscent of Gurdjieff, discussed in **Chapter VI-2, "Gurdjieff — Levels of Being"**.

This description constitutes a map of our potential path to our own enlightenment, if we choose to follow such a path. It would be counterproductive to follow an inaccurate map of the path if we plan to consciously participate in our progress on the path.





Chapter VI-5

② BASHAR — MANIFESTATION

The last septenary that I will discuss is the shortest time-cycle of the Natural Sequence schema that I have so far identified. It is channeled information, and therefore soft evidence for the validity of the Natural Sequence schema, but on the other hand it is hard evidence in the sense that we can observe and practice and validate this septenary in our own lives.

Introduction

The source for the following information is “Bashar”, the alleged future self of channel Darryl Anka. Near as I can tell, the Bashar information contains yet another instantiation in the real world of the abstract pattern of the Natural Sequence schema. Some friends, when I shared with them about the Natural Sequence schema, asked me the “so-what” question. In response, I opined that the Natural Sequence schema was an *accurate* map of our developmental journey through *time*, unlike other possible arrangements of the elements of the septenary (which might just be pictures of specific deployments in *space*), and I opined that it is better to have an accurate map than to have an inaccurate map of the stages of the journey in time that we are traveling through. I said the Natural Sequence schema is not just an abstract, theoretical concept such as we see in some of the other instantiations of the Natural Sequence schema discussed previously — there are practical applications of it.

Bashar presents one of those practical applications of the Natural Sequence journey. It has to do with responding to challenges in our lives in a positive rather than in a negative way, and then consciously and intentionally creating a preferred reality. This is often called “manifesting” in some esoteric circles, where the idea that “we create our own reality” is commonplace. My opinion about this is that, even if we do not actually bend *objective* reality to our will by something other than acting on it directly, at least we can manage our own *subjective* response to what happens in our lives, by following the procedure advocated by Bashar, and others.

Following is the source material: verbatim quotes extracted from an internet blog. After that presentation, I explain it in terms of the Natural Sequence schema. Just so you can begin to understand my perspective, [in brackets] among the following, I give my interpretation of where Bashar is among the stages of the Natural Sequence schema, which are, of course, the same stages that we have found in the previous many chapters. If you have not already done so, you would do well to memorize the stages of the Natural Sequence schema in the following list, using the words of the Septenarian Attributes and the Centers discussed at length in previous chapters:

- Step 1 = Ordinal Action = Motion Center
- Step 2 = Ordinal Inspiration = Emotion Center
- Step 3 = Ordinal Expression = Intellect Center
- Step 4 = Neutral Assimilation = Impulse Center
- Step 5 = Cardinal Expression = Concept Center
- Step 6 = Cardinal Inspiration = Sympathy Center
- Step 7 = Cardinal Action = Excitation Center

As you read the following, it is important to recall that a “Center” is the part of one’s psyche and personality *within* which one subjectively processes subjective events in one’s awareness or objective events in one’s world, and *from* which one then subjectively or objectively responds or reacts to those events.

Iasos Explains Bashar:

This entire quotation was retrieved verbatim (with some deletions) in about the year 2000 from:

><http://iasos.com/metaphys/bashar/><

Three phases for receiving the “version” of reality you prefer:

1. See it. (mental) [Step 5]

Visualize it. Imagine it. Daydream it. Visualize it clearly. You don’t need to visualize it for a long time. Short time is sufficient, but you need to visualize it clearly. You need to have a solid clear picture. Visualizing it creates the blueprint, so see it in great detail.

See it → Become an efficient Mental Antenna to receive this “version” of reality.

2. Feel it. (emotional) [Step 6]

Get excited & passionate about it! How would you feel if you had it now? Feel that now! Plug into your vision [Step 5] with all your emotions & all your senses, as if you had it now! Involve all your senses — imagine smelling it, touching it, tasting it, etc.

Feel it → Become an efficient Emotional Antenna to receive this “version” of reality.

3. Be it. (physical) [Step 7]

Physical action. Do it! To ground the experience. Do actions that most closely mimic the actions you “see” yourself doing in your vision. Gather and use whatever props mimic that scenario, and do a “dry run”. Doing this “make believe” physical action trains the body consciousness. This makes it “real for you now”, so the universe then delivers it to you. NOTE: This physical action does not directly cause this desired reality to manifest. Instead, this physical action creates a more precise vibration in yourself, making you a better antenna to receive it, by you becoming more aligned to the same vibration. The reality you desire already exists. You do not have to create it. You only have to receive it.

Be it → Become an efficient Physical Antenna to receive this “version” of reality.

Neutral Props:

In a theater that shows many plays, there may be some props back-stage that are frequently used for several different plays. For each play, that prop has a special meaning, but outside that play, the prop has no innate intrinsic built-in meaning. All the props are basically without meaning. From this innate absence of meaning, we can assign any meaning we want to them.

Likewise, all the events [Step 1] that you experience as “happening” in your life are “neutral props” [Step 4]. Each event you experience has no innate intrinsic built-in meaning. These events are blank, neutral, no innate significance. And from this “blank slate”, we get to assign [Steps 2 & 3, or 5 & 6] any significance or meaning we wish for each event we experience. If you assign a positive meaning to an event [Steps 5 & 6], this will produce a positive experience for you. If you assign a negative meaning [Steps 2 & 3] to an event, this will produce a negative experience for you.

Important!

The corollary to this is:

If an event occurs to you [Step 1] that you would normally automatically assign a negative meaning to (“This is a real bummer!”) [Steps 2 & 3], choose [Step 4] to assign a positive meaning [Steps 5 & 6] to that event — even if it “appears” negative and you do not yet know what is so positive about it. Just by assigning a positive meaning to this event and choosing to believe there is something really “good” about this for you [Steps 5 & 6], this will produce an experience that you will consider quite positive! Try it! Next time you think “This is just terrible!” [Steps 2 & 3], turn it around [Step 4] and believe “This is really positive! This is really going to be good! I can’t wait to find out what is positive about it!” [Steps 5 & 6] You may even be startled by how effectively this works [Step 7].

Elaboration of Bashar’s Teaching on Manifestation

It dawned on me after I read the above that the procedure recommended by Bashar for turning a “negative” reality into a “positive” reality is an application of the stages of the Natural Sequence. Even if Bashar did not have the Natural Sequence schema or something like it in mind when he presented his information on “manifesting”, I definitely do have it in mind as I read his presentation, and I present it to readers as an explanation and clarification of Bashar’s recommended technique. It helped my understanding of the

technique to translate Iasos's understanding of Bashar's teaching into the Natural Sequence schema, and my hope is that it will help readers also in their journey through life.

Following is the summary of what I have extracted from Bashar's teaching interpreted in the light of the Natural Sequence schema. (I acknowledge that someone who does not know about the Natural Sequence schema might not extract exactly this seven-Step procedure from the above quotes, but I see it there.) After that I have some general comments.

STEP 1 = Ordinal Action: Something happens to you in your external (or internal) reality that you would rather not have happened. In other words, either something comes up that was unexpected, or something goes contrary to your expectation; the result of your actions or the actions of your world was not the intended or preferred event. As the bumper sticker says, "Shit happens". Nothing good can come out of an adverse event unless you are self-aware enough to catch yourself at the next Step or the Step after that, and 'jump out' of your habitual reactions. This first Step in the journey corresponds with the Motion Center.

STEP 2 = Ordinal Inspiration: You have a negative emotional reaction to the event — you are upset and you "curse" it because it seems unpleasant on the surface; the event has offended your value system in some way. The emotion might be fear, anger, mistrust, resentment, jealousy, envy, hatred, disgust, or whatever. Perhaps you have a "favorite" negative emotion that is your usual response when things seem to go awry. At this Step it is proper to feel the emotion thoroughly and unequivocally, without denial or repression. This negative emotional reaction is, of course, a function of the Emotion Center.

STEP 3 = Ordinal Expression: Then you realize that the unpleasant feeling was due to your negative beliefs/thoughts about the desirability or value of the event. At this Step you should mentally analyze exactly what it was about the event that upset you emotionally, and you must notice what particular negative emotion was evoked by the event. First of all, this shift to the cognitive realm above and beyond the emotional realm gets you out of the negative emotion, and then it prepares you to transmute the negativity into positivity. You can only do this if you are definitive in what you wish to transform. This Step, this kind of analyzing and thinking, is, of course, a function of your Intellect Center. Notice that the first three Steps are Ordinal — these are Steps in which you are a passive recipient of events which, in the Ordinal phase, are interpreted as "negative" in some way. You are not yet doing anything about the reality; you are just reacting to events.

STEP 4 = Neutral Assimilation: Then you realize that the event itself is neutral, but that you and your interpretation are not necessarily neutral about it. You realize that you have the capacity to turn the interpretation or understanding of the event from negative to positive. In its most basic form, at this Step, you can choose love over fear. "Love" in this case, as in so many other cases, is to have an unconditional regard, neither positive nor negative. So, you turn the corner in the full cycle of experience (all seven Steps) at this Step. This Step is a function of the Impulse Center. The following Steps in the Cardinal phase of the cycle reverse the sequence of the Steps that you followed in the Ordinal phase. In the Cardinal phase you are no longer a reactive, passive recipient or experiencer of events; you are a pro-active creator of events.

STEP 5 = Cardinal Expression: You reinterpret your belief/thoughts about the past seemingly adverse event in the light of higher wisdom, realizing your mystical union with All That Is. Then you reprogram or envision in your imagination a more gracious reality in the future. I have seen this Step referred to as "imagineering". This is a function of the Concept Center.

STEP 6 = Cardinal Inspiration: You bless the past event with positive emotions such as benevolence and joy, realizing that everything happens for the greater good. Then you bless the future events, which you have imagined and envisioned in Step 5, likewise. This is a function of the Sympathy Center.

STEP 7 = Cardinal Action: You act as if the past event was a positive event. At this Step, you act as if the future you envisioned in Step 5 and blessed in Step 6 is already present. With your subjective intention and will, you make the desired result your internal reality before it presumably manifests in your external reality. This is a function of the Excitation Center.

When this entire seven-step procedure is complete, this leads to another cycle/octave of manifestation. And you go round and round these cycles until you fill your life with beauty rather than ugliness, bliss rather than misery, success rather than failure. Honing your skills of manifestation through repeated cycles, you gradually experience the preferred reality in full, by the application of this creative process in the exercise of free will, unencumbered by the same old bad habits.

Now if you read the Bashar quotation again, you will understand why I inserted the Step numbers in [brackets] into the quotation where I did.

By the way, an actual formal professional psycho-therapeutic method, “cognitive emotional behavioral therapy”, uses some of the same techniques as recommended above. Refer to the following reference for an introduction to the subject: >https://en.wikipedia.org/wiki/Cognitive_emotional_behavioral_therapy<. An internet search will lead you to many other freely-available resources on the topic.

As with so many other chapters in this book, some of the information in this chapter can be graphically represented in a table.

Table VI-5a — BASHAR on MANIFESTATION							
DIALECTIC	Ordinal			Neutral	Cardinal		
POLARITY	Negative = re-active = Lower Self			Inter-active	Positive = pro-active = Higher Self		
AXIAL	Action	Inspiration	Expression	Assimilation	Expression	Inspiration	Action
CENTER	Motion	Emotion	Intellect	Impulse	Concept	Sympathy	Excitation
STEP	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
DESCRIPTION	Negative Events	Negative Emotions	Negative Thoughts	Unconditional Regard	Positive Thoughts	Positive Emotions	Positive Actions

My comments on this table are as follows.

1. DIALECTIC: In the first row, the Dialectic Attributes are shown. Refer to a chapter in Part One, “Derivation of the Natural Sequence”, for more information about the meaning of this category of these terms.
2. POLARITY: In the context of this chapter, “Negative” and “Positive” are subjective evaluations and characterizations and attributions that we ascribe to events in our lives; there is no absolute or objective truth in these words; it is all relative. Therefore, we can reinterpret them by adjusting our point of view, our narrative framework, the story we tell ourselves about them. This is done by intentionally jumping perpendicular to the usual unconscious machinations of our habitual reactions in the “lower” self, first into the Neutral Zone, and then into our “higher” selves.
3. AXIAL: These are the names of the Axial Attributes. Prefix the names of the Dialectic Attributes shown in the first row and you have the Septenarian Attributes. Refer to a chapter in Part One, “Derivation of the Natural Sequence”, for more information about the meaning of this category and these terms.
4. CENTER: These are my names for the Centers, not the original names given by Gurdjieff. Refer to a chapter — “Gurdjieff on Centers” for more information.
5. STEP: The procedure that Iasos/Bashar presents is easier for readers to understand if the story line is methodically arranged as the numbered Steps in this sequence, which is congruent with the Natural Sequence, which is not a happenstance sequence.
6. DESCRIPTION: The phrases in each box are the distillation of what happens at each Step.

Comments on Bashar:

Besides Bashar, channeled entity Seth had much to say about creating your own reality. In fact, his book *The Nature of Personal Reality* covered this subject in considerable detail. I read this in the early 1980s, but since learning about the Natural Sequence schema, I have not gone back to that book to check to see if it could be understood as following the Natural Sequence.

This Bashar technique reminds me also of things they told us in the Unity Church that I used to go to about “manifestation”, but I never quite got it the way I get it now, relating it to the Natural Sequence schema. This was a minor epiphany for me. So now that I really understand it in terms of my personal philosophical metaphysical system, I can finally begin to consciously and intentionally apply it if I decide to.

It seems to me that many people do not get beyond Step 2, stewing in their bad feelings, cursing their lot in life when something goes “wrong”. Consequently they experience more of “the same old shit” repeatedly in their lives. I suspect that we do not really “learn” something until we complete the entire 7-Step cycle regarding it. Then of course we go on to other cycles of learning other lessons about other shit happening. This is the way “shift happens”, as another bumper sticker says. In the Process/Aspect System, this 7-Step process is similar to the Dialectic Principle, where one must fulfill both the Ordinal (negative) side and the Cardinal (positive) side of every experience in order to have a complete understanding of whatever the Dialect is about. In this Bashar technique, there are three Dimensions, the Axial Dimensions, that must be completed as negative and positive experiences, not just the two opposite sides as in the case of dialectics.

In metaphysical literature I have sometimes seen this kind of process referred to as “alchemy” because it is like turning lead into gold. You reinterpret unpleasant events into pleasant events. Some people call this sort of thing “turning lemons into lemonade”. In my opinion, this procedure is better at changing your consciousness than changing your reality. Your reality might indeed change — I have not yet implemented the procedure to see if it works — but at minimum you will be a happier, healthier person by changing your interpretation of events from “unpleasant” to “pleasant”. To some this will seem Pollyanna-ish, but hey, you do want to be happy and successful, don’t you? So give it a try; just chose to reinterpret events from a happier, healthier perspective. At minimum, it can be argued that, if you decide to approach seemingly adverse events with a positive mindset, then you will be more effective and efficient in creating a reality that is more conducive to your well-being.

The positive perception or interpretation of events comes more naturally to people who have the Cardinal personality trait of Realist, Spiritualist, or Idealist rather than the Ordinal personality trait of Cynic, Stoic, or Skeptic. It is also easier for people who are of the Cardinal Roles — Sages, Priests, and Kings — to get into the manifestation mode than it is for people who are of the Ordinal Roles — Artisans, Servers, and Warriors. As an Ordinal Role myself, an Artisan, this sort of thing has never appealed to me when I read or heard about it from Cardinal personalities, bent on bending reality to fulfill their desires. I am inclined not to move beyond Step 4 — just getting neutral about what happens. I don’t seem to have the energy to program a “better” reality. At best, I might look for the ‘silver lining in the cloud’. I would like to think that as I get further into Life-Stage 6, I will implement more of this procedure for creating a more pleasant internal and/or external reality.

As we saw in previous chapters, this method of manifesting a preferred reality is of course the same cycle (Natural Sequence) of development through the Life-Stages, Levels, Ages, and Planes, but on a shorter time scale. There is a principle here. Development through time is a cycle of sevens within sevens within sevens *ad æternum*, and that cycle follows the Natural Sequence schema throughout.





Chapter VI-6

DANIEL SHEEHAN — THE OCTAVE OF POLITICAL WORLDVIEWS

② In late 2023 I was watching a YouTube video of a guy named Daniel Sheehan talking about something else when he happened to mention seven political “worldviews”: Authoritarian, Reactionary, Conservative, Moderate, Liberal, Progressive, Utopian. If you have read the previous Parts of this *Cosmogony* book, and if you have any savvy whatsoever about political mindsets, then you will probably immediately recognize, as I did, that Sheehan’s seven political worldviews are yet another instantiation of the Natural Sequence schema. Immediately after watching that video, I looked for and found other internet resources that confirmed my first impression. Hooray! Yet another chapter for this *Cosmogony* book! I love it when this happens!

On his personal website, ><https://www.danielsheehan.com/><, Sheehan characterizes himself as an “attorney, a Harvard College-trained Political Scientist; a Harvard Law School-trained Constitutional Legal Scholar, and a Harvard Divinity School-trained Comparative Social Ethicist”. Thus it appears that not only is Sheehan a lawyer, he also has a background in theological, spiritual, and ethical matters. It is obvious that he has a religious streak as well as a legal streak in his personality. It is also obvious that he is not just some random guy with big ideas but no credentials. As you can imagine, this makes for an unusual and interesting character.

Part of his story is that, early in his professional career, Sheehan encountered the notion of “worldviews” as a framework for understanding the difference between people’s perspectives and perceptions, not only in terms of what is happening in the world of legal and political and social–justice issues, but also in terms of a spectrum of consciousness in a journey from endarkenment to enlightenment. More is said about his biography in a section further on.

My own views on the subject of worldviews, using the same term, are covered in Part Two, Chapter II-8, “The Seven Soul Ages/Worldviews”, and also in Part Three, “The Seven Worldviews”, in my book *The Tao of Personality: The Process/Aspect System of Personality Traits*. I have my names and descriptions of them, and Sheehan has his names and descriptions of them, and the two are compared in the sections that follow. Presumably, the reader will see that he and I are both talking about the same thing, the Natural Sequence schema, in one of its many instantiations, in one of the realms that Worldviews manifest, in this case, political philosophies. Sheehan often uses the terms “paradigm” and “ideology” and “philosophy” as synonyms for “worldview”, and I agree that these are very apt. As we will see further on, he does understand the political worldviews as instantiations of something far grander than what government leaders are all about. For instance, Sheehan refers to his octave of political worldviews as an instantiation of “natural law”, meaning that not just sociology and politics are governed by his worldview spectrum, all of nature is. I make a similar claim for the Natural Sequence schema, so it looks to me as if there is a basis for merging his understanding of the lawfulness of his worldviews and the Worldviews of the Natural Sequence schema. What Sheehan apparently does not understand, but I do, is the source framework of the Worldviews in terms of logic and mathematics.

This chapter is perhaps awkwardly placed because, due to its broad scope, it could have been located in several Parts of this *Cosmogony* book. It sorta fits in Part II, “Modern Day Spiritual Teachings”, and it kinda fits in Part V, “Developmental Psychology”. Even though it is not a perfect fit in this Part either, I chose to put it here in Part VI, “Stages of Enlightenment”, because Sheehan understands that his worldviews present something like of a “spiritual” path to political “enlightenment”. Let’s just say that Sheehan’s “Worldviews”

are an instantiation of the Natural Sequence that covers one of the realms of human experience that is not addressed as well elsewhere in this book.

② Biography

As usual, I turn to Wikipedia for a brief biography of the person and the ideas that are the subject of the chapter:

Daniel Peter Sheehan (born April 9, 1945) is a constitutional and public interest lawyer, public speaker, political activist, and educator. Over his career, Sheehan has participated in numerous legal cases of public interest, including the Pentagon Papers case, the Watergate Break-In case, the Silkwood case, the Greensboro massacre case, the La Penca bombing case, and others. He established the Christic Institute and the Romero Institute, two non-profit public policy centers. Since 2015 Sheehan has lectured on American history, politics and the assassination of John F. Kennedy at the University of California, Santa Cruz. Sheehan is currently Chief Counsel of the Romero Institute, where his focus is the Lakota People's Law Project. Sheehan and The Lakota People's Law Project participated in legal cases related to the Dakota Access Pipeline protests. In 2013 Sheehan published *Daniel Sheehan: The People's Advocate*, a memoir, through Counterpoint Publishing. At one time, Sheehan was legal counsel to the Jesuit US national headquarters in Washington, DC. Sheehan has spoken publicly about UFOs and alien visitation, and has served as counsel for Harvard University psychiatrist John E. Mack as well as Steven Greer's Disclosure Project. He represents Luis Elizondo, the former director of the Advanced Aerospace Threat Identification Program in a case against the US Department of Defense.

[>[https://en.wikipedia.org/wiki/Daniel_Sheehan_\(attorney\)<](https://en.wikipedia.org/wiki/Daniel_Sheehan_(attorney)<) — retrieved 08 January 2024]

After reading this, it should be no surprise that Sheehan, a lawyer, is particularly interested in the differing legal and political perspectives that are provided by people and institutions and cultures that have different Worldviews. As a political activist, he advocates that legislated public policy be aligned with higher-later Worldviews for the benefit of the evolving human society and its cultures and its political institutions. If you know what you are looking at, when you view his talks, you might discern that he has a higher-later Worldview.

② Introduction to Sheehan's Worldviews

Sheehan has posted some YouTube videos that provide an introduction to his Worldviews. He has also provided an extensive written document about them on the internet, which can be found at this website: ><https://www.scribd.com/document/313807825/Daniel-Sheehan-Implications-of-Extraterrestrial-Contact-New-Paradigm-Institute<>. It is this document that I quote from and comment on here in this chapter. The document is almost the length of a book, so may I suggest that if my brief quotations pique your interest, by all means read the document in its entirety on that website. For an encyclopedic introduction to the concept, see: ><https://www.projectworldview.org/worldviews.htm<>. Sheehan provided a PDF of the history of the concept of worldview on his website written by the philosopher David Naugle: ><https://www.danielsheehan.com/wp-content/uploads/2019/02/Worldview-DavidNaugle.pdf<>. Notes that Sheehan made in the margins of his copy of the book provide some clues about how Sheehan arrived at his Worldview schema.

If the reader would like to supplement their reading by watching a video presentation about Sheehan's worldviews by the man himself, then they are invited to check these out:

- ><https://www.danielsheehan.com/ucsc-2015-trajectory-of-justice/<>
- ><https://www.youtube.com/watch?v=mPWYsfj5cOg<>.

For your convenience as you read subsequent descriptions, I have provided a table that correlates Sheehan's Worldviews with my Worldviews that are described in previous Parts and Chapters in this *Cosmogony* book, and my other books:

Table VI-6a — WORLDVIEWS per WITTMAYER and SHEEHAN								
A T T R I B U T E S	RANK	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
	DIALECTIC	– ORDINAL – (objective space/time)			= NEUTRAL =	+ CARDINAL + (subjective time/space)		
	AXIAL	ACTION	INSPIRATION	EXPRESSION	ASSIMILATION	EXPRESSION	INSPIRATION	ACTION
	DIMENSION	–1-D–	–2-D–	–3-D–	=P-D=	+3-D+	+2-D+	+1-D+
	MOTION	TRANSLATION	VIBRATION	ROTATION	SCALAR	ROTATION	VIBRATION	TRANSLATION
	DIRECTION	BACKWARD	DOWNWARD	OUTWARD	COMPLEX	INWARD	UPWARD	FORWARD
	PROCESS → ASPECT ↓	TERMINATION	INVOLUTION	ANALYSIS	COMBINATION	SYNTHESIS	EVOLUTION	ORIGINATION
N E T U R A L	WITTMAYER WORLDVIEW	+Preservation PRIMITIVISM –Security	+Propriety TRADITION'SM –Conformity	+Production MATERIALISM –Exploitation	+Consensus COLLECTIVISM –Ambiguity	+Wisdom HOLISM –Speculation	+Liberation TRANSPERSON –Catharsis	+Revolution MESSIANISM –Provocation
	REALM OF INTEREST	ECONOMICS	SOCIOLOGY	PSYCHOLOGY	EDUCATION	PHILOSOPHY	SPIRITUALITY	GOVERNANCE
	CULTURE	Hunter and Gatherer	Agricultural- Pastoral	Technological Civilization	Science and Information	Philosophy and the Arts	Spirituality and Theology	Utopia and Cosmology
	SHEEHAN WORLDVIEW	FIRST AUTHORITARIAN	SECOND REACTIONARY	THIRD CONSERVATIVE	FOURTH MODERATE	FIFTH LIBERAL	SIXTH PROGRESSIVE	SEVENTH UTOPIAN

My comments on this table are as follows:

- **ATTRIBUTES:** The first six rows show the Attributes of the Natural Sequence schema as described and explained in numerous locations of this *Cosmogony* book, but especially in Part One. These Attributes apply to all of the columns in which they are found.
- **PROCESS:** The seventh row show my names for the seven fundamental Processes in the Cosmos, “processes” being defined as changes that occur in time. One premise of the Natural Sequence schema is that all changing phenomena can be reduced to, or understood in terms of, these Processes or combinations thereof. The Processes are also explained in numerous locations in this book.
- **ASPECT:** The Natural Sequence schema, which is abstract, has numerous instantiations or manifestations or Aspects that are found in Nature; this *Cosmogony* book is an attempt to discover and catalog and describe them and explain them in terms of logic, mathematics, and physics.
- **WITTMAYER WORLDVIEW:** The eighth row shows my names for the seven basic Worldviews as I understand them, plus their Positive and Negative Poles.
- **REALM OF INTEREST:** Both Sheehan and Wittmeyer claim that a person’s Worldview affects their behaviors, values, and beliefs, in various realms of their lives. The ninth row shows my names for those realms, and Sheehan made numerous correlations as shown in Table VI-6b further on.
- **CULTURE:** Both Sheehan and Wittmeyer claim that human culture, during pre-history and history, evolves according to the same pattern as the Worldviews. The tenth row shows my names for those cultures, but Sheehan did not make an explicit correlation as I have done anywhere that I have seen.
- **SHEEHAN WORLDVIEW:** The ninth row shows Sheehan’s names for the seven basic Worldviews as he understands them. Look them over and you will see that these words are typically applied to political ideologies on a spectrum from ‘right’ to ‘left’, just as they are depicted in this table from right to left. Notice that the Moderate Worldview (with the Neutral Attribute of =P-D= Assimilation) is in the middle of the spectrum, then the Conservative Worldview versus Liberal Worldview (with Expression Attributes of –3-D– and +3-D+ respectively) are on each side of the Moderate Worldview, then the

Reactionary (aka Regressive) Worldview versus the Progressive Worldview (with Inspiration Attributes of -2-D- and +2-D+ respectively) are on each side of the Expression Worldviews, then the Authoritarian Worldview versus the Utopian Worldview (with Action Attributes of -1-D- and +1-D+ respectively) are on each side of the Inspiration Worldviews. (Libertarians will tell you that their Worldview should be contrasted with the Authoritarian Worldview on the Action Axis, and I would agree that Libertarianism equates somewhat with Utopianism.) Even without knowing the descriptions of Sheehan's Worldviews that follow, that arrangement should all makes sense to the reader, because Sheehan's Worldview schema is obviously yet another instantiation of the Natural Sequence schema, which has been described and explained in hundreds of previous pages of this *Cosmogony* book.

Wittmeyer's Worldviews are based on work by others, and Sheehan's Worldviews are not entirely his own invention either. In the documents linked above and quoted below, Sheehan identifies several sources of information and inspiration: Dr. Talcott Parsons, Dr. Ralph Potter, and Pierre Teilhard de Chardin; these people and their ideas can be researched on the internet.

In the following quotations of Sheehan's document, the underlined words and phrases are my emphasis, intended to alert the reader to my commentary inserted between blocks of quoted material. Sometimes I insert explanatory words in [brackets]. I have also normalized some of the annoying and distracting idiosyncrasies in the way that Sheehan writes, such as the use of CAPITALIZATION, ellipses ... and "quotation marks" for emphasis.

Note that I am beginning my quotation after several pages of introductory material in the document found on the linked website:

It is our further belief that: The deductive structural conclusions of the sociological studies undertaken by Harvard University's long-time Chairman of its Department of Sociology, Dr. Talcott Parsons, and his student Dr. Ralph Potter, the long-time Chairman of The Department of Comparative Ethics at Harvard University — as these conclusions have been explained and supplemented by Daniel Peter Sheehan in his 2005 work entitled: *Paradigm Politics: The Clash of Worldviews and The Remaking of The American Political Order at The End of The Cold War* — are in fact correct.

I was only able to find Part Two of the *Paradigm Politics* document on the internet, available as a PDF here: ><https://www.danielpsheehan.com/wp-content/uploads/2019/02/PARADIGMPOLITICS73-114.pdf><. Unfortunately for my purposes, this is not the Part that describes the Worldviews, so I must resume quoting from the linked website:

Specifically, this means that it is our further belief that:

8) There exist eight distinct human Worldviews pursuant to which adherents to each of these distinct Worldviews hold a distinctly integrated set of beliefs pertaining to: Cosmology; Teleology; Ontology; Epistemology, and a resultant Philosophy: which, in turn, generate a specific: Political Philosophy; Theory of Human Psychology; Mode of Ethical Reasoning; Mode of Spiritual Expression, and Social Form.

In my discussion of Worldviews in my book, *The Tao of Personality*, I describe them in terms of seven categories: Economics, Sociology, Psychology, Education, Philosophy, Spirituality, and Governance, as shown in Table VI-6a above. Compare those with Sheehan's categories and you will see that our categories have considerable overlap with each other. However, my seven categories are explicitly correlated with my seven Worldviews, whereas I do not see that correlation in Sheehan's categories.

9) These eight distinct human Worldviews derive directly from the fact that members of our human species possess, as an integral function of our human anatomy (within the specific octave range of vibrational frequency within which our solar system/galaxy arises) eight distinct biological energy centers [chakras] within and immediately above our human body, that, in turn, generate eight distinct energy fields which surround our physical bodies, each of a different vibrational frequency (each energy field of which vibrates in sympathetic resonance with the specific vibrational frequency of the corresponding energy center from which this energy field originates).

Sheehan is obviously referring to the seven so-called "chakras" of the human body, but he extrapolates the meaning of the chakras to the division of the entire Cosmos into a septenary. This is common practice in esoteric lore: refer to Part Two, Chapter II-9, "The Seven Chakras", for the documentation. Sheehan would also seem to subscribe to what is said in Chapter II-10 in Part Two, "Subtle Bodies", with regard to auras (aka energy fields).

The term “octaves” refers to the quantity “8”, but in an octave, the eighth item in a sequence is the first item in the following octave. This is a hint about what Sheehan says further on, that septenaries such as chakras and auras and Worldviews have septenaries that are lower–earlier and higher–later, per what I call the Fractality Principle.

10) Each individual human being directly experiences Reality prism-ed through the distinct complex of the eight contiguous differing energy fields which surround his or her body. It is our further belief that: The subjective structural conclusions of Pierre Teilhard de Chardin, the 20th Century Jesuit paleontologist are also factually correct.

Whereas my understanding of Worldviews is that they are innate to the personality that one is born with and that one keeps for an entire lifetime, Sheehan proposes that the ‘color’ of the ‘aura’ determines one’s Worldview, and this type of Worldview can change during a lifetime. This is a semantic issue: one name is used by two people for two phenomena. And both are correct, or at least they are both helpful ways to understand the differences between people, regardless of the conjectured cause and the proposed duration. As we will see further on, Sheehan describes what I refer to in this Part as “Stages of Enlightenment”, which one can ‘ascend’ during their lifetime, and which are different from what I refer to as Life-Stages that one also ‘ascends’ during a lifetime. In other words, Sheehan correlates several instantiations of his septenarian cosmology into his Worldview framework, just as I do with my Natural Sequence schema, and there is much overlap in our models of the Cosmos.

Refer to >https://en.wikipedia.org/wiki/Pierre_Teilhard_de_Chardin< for more information about him. Basically and briefly, “Pierre Teilhard de Chardin ... 01 May 1881 – 10 April 1955) was a French Jesuit priest, scientist, paleontologist, theologian, philosopher, and teacher. He was Darwinian in outlook and the author of several influential theological and philosophical books.” — retrieved 10 January 2024.

11) Specifically, this means that: There exists objectively a biologically pre-determined ideal: a) frequency at which each of the eight human biological energy centers [chakras] in the human body should vibrate; b) rate of rotation at which each of these eight distinct energy centers within each human body should rotate; and c) angle to the ecliptic at which each of these eight distinct energy centers within each human body should incline; which, we believe, would result in each such human being, within whom each of these three ideal conditions obtained, being an ideal human being who would be able to experience Reality in an entirely objective [rather than subjective] manner.

This mention of a notion of an “ideal” is Sheehan’s first hint that his Worldviews are a spectrum of maturity that applies to all of the domains mentioned previously: psychology, ethics, politics, and so on. Teilhard referred to this mature human ideal as the “Omega” point of the evolution of the Cosmos and of Nature and of humanity. When a person is functioning at each stage less than this ultimate ideal, they are said to be subjectively conscious of that stage, but when they advance to the next stage, the lower–earlier stages become objective to them. When they are fully realized in the final stage, they are objectively conscious of all of “Reality”. More will be said about this further on.

At various places in his document, Sheehan relates his notion of Worldviews to various phenomena of physics. So do I, in various places in my book. Consequently, I can correlate Sheehan’s: a) “frequency of vibration” with two-dimensional motion in objective space/time and subjective time/space; b) “rate of rotation” with three-dimensional motion in objective space/time and subjective time/space; c) “angle” or “inclination” or vector with one-dimensional translation motion in objective space/time and subjective time/space. (I wonder if Sheehan understood these three dimensions or types of motion the same way I do, but there it is.) These three basic types of motion are shown in the fifth row of Table VI-6a above and explained in Part One of this *Cosmogony* book. Sheehan describes Worldviews, and he seems to understand that objective physics and subjective psyche correlate with each other, but he does not understand, as I do, that the Attributes actually explain the Worldviews in terms of logic, mathematics, and physics. My suggestion is that Sheehan could refine his understanding of physics and psyche and his Worldviews by making these correlations.

12) However, we believe further that: Our human species is presently at a point [stage in cultural evolution] at which virtually every human being presently dwelling on our Earth is in a state of only partial evolution toward an ideal omega point of human evolution at which each of we human beings will have fully evolved eight distinct physical senses (one correlating to each of our eight distinct human energy centers [chakras]) by means of which eight distinct human physical senses each of us will be able to fully experience Reality as it objectively is.

When I read that paragraph, I am reminded of the “eight-circuit model of consciousness” proposed by Timothy Leary, and reviewed in Part Four, in [Chapter IV-x](#). It seems unlikely that Sheehan would not have known of Leary, also a Harvard alumnae in the same era, but Sheehan does not credit him with the belief expressed in that paragraph. Besides that, Leary’s model has also been correlated with the chakras.

This paragraph and others like it — which seem to refer to enlightenment as Sheehan understands it — are the reason that I placed this chapter in this Part about “Stages of Enlightenment”. In this chapter it is claimed that individual humans can achieve the “omega point”, but herein also it is claimed by Sheehan and Teilhard that humanity as a whole will eventually achieve the omega point. I refer to this as socio-cultural evolution into stages of the Natural Sequence schema well beyond where humanity is now, and I discuss these at length in Part Four, [Chapter IV-X](#).

Table VI-6b below shows the names of those senses and their correlation with Sheehan’s Worldviews.

13) [We believe] That there exists co-terminus the physical confines of our Universe a functioning holographic phenomenon which is naturally drawing up into Holographic Harmony with The Master Hologram of The Universe each and every sub-structure of this Hologram (of which we, as human beings, are one such sub-structure.)

The so-called holographic principle spoken of by modern-day physicists is the notion that geometric dimensionality (aka perpendicularity and orthogonality and the right angle) is one of the fundamental features of the Cosmos. We have all seen holographic images that look three-dimensional but are actually two-dimensional. What Sheehan refers to as the “Master Hologram” I refer to as the “Tao’s Template” ontology. In the Tao’s Template ontology, the Unity Principle is the first derivative of Tao, the Duality Principle is the second derivative of Tao, and the Triality Principle is the third derivative of Tao — these three Principles are perpendicular or orthogonal or at right angles to each other according to the holographic principle.

Besides the holographic principle, that paragraph, and several others, indicates that Sheehan subscribes to what I refer to as the Fractality Principle. Basically and briefly, that is the notion that each instantiation of Natural Sequence schema is nested within septenaries that are higher-later and lower-earlier in the objective space/time septenaries and in the subjective time/space septenaries.

14) We, therefore, believe, further, that: There is a natural evolutionary teleology functioning entirely physically within our physical Universe pursuant to which we, as a physical species, will inevitably and progressively evolve toward that Omega Point at which each and every individual human being will be perfected — so long as we do not physically destroy ourselves and our planet before we naturally reach this “Perusia”.

“Perusia” should have been spelled “parousia”, which is a Greek word used in the New Testament Bible referring to the prophesied final judgment of humans at the second coming of Christ. That word and the concept of the “Omega Point” are an allusion to a thesis of Teilhard, namely that humanity has a part to play in the Cosmos, meaning that they share a teleological (goal-directed, purposive) destiny, the “omega” destiny — omega being the last letter of the Greek alphabet, that being a reference to the statement that Christ is the “alpha and the omega”, the beginning and the end, in the first chapter of the book of Revelation in the New Testament canon.

15) However: There are a number of specific physical exercises and physical practices which can be consciously undertaken by individual human beings during their natural lifetimes which, if assiduously practiced can — and will — accelerate that individual’s otherwise entirely natural biophysical state so that one (a) increases one’s Sixth Sense of “Intuition” (“Pure Reason”), (b) gives one access *de novo* to one’s seventh faculty of direct experiential access to the infinite and eternal sea of undifferentiated consciousness from which our physical Universe emanated, and (c) gains one direct access to one’s eighth faculty, by means of which one begins to experience life as *homo divinis* [*Christ-like human divinity*].

That paragraph, as others, encapsulates the reason that I placed Sheehan’s Worldviews in the Part of this book that discusses “Stages of Enlightenment”, rather than placing it in one of the Parts that does not discuss transcendence. His work as described in his document on Worldview does not elaborate on the exercises and practices, but other chapters here in my book in this Part do.

16) We believe, further, that: We, as human beings, are distinguished from previous stages of biological evolution on our planet, by our evolution of a sixth physical sense (over and above all of our five traditional physical senses of: touch, taste, smell, hearing, and seeing), this being *intellectus* (or self-conscious linear thought). But we believe that there have existed, in the past — and presently exist among us — individual human beings who are biological harbingers of a new seventh physical sense — which is a biological physical sense by means of which

these extra-ordinary individual human beings are able to directly physically experience the holographic bonding phenomenon which constitutes the matrix of the physical Universe, thus providing these individuals direct access to non-local knowledge (both spacial and temporal) of the full contours of reality. These beings we call “prophets”, and their insights and pronouncements (and their extraordinary physical deeds) are the basis of the Seven Major Human Modes of Spiritual Expression.

Apparently, there have always been a few people who have had paranormal senses and abilities, but if Sheehan is correct, we are living in a transformative age for humanity as a whole, such that an increasing number of people will be thus gifted. Some of these people will develop these capacities via spiritual practices, others will be endowed with them via the increasing legal use of psychedelics, and others will be gifted with them via spontaneous spiritually transformative experiences. This phenomenon goes by different names, such as “awakening”, “ascension”, “liberation”, and “enlightenment”.

17) We believe that: The bio-physically-based Worldview that entails the knowledge of this reality is the sixth paradigm worldview, which is the Worldview of intuition. We believe that: Which miracles are also the product of the fact that all eight of their energy centers [chakras] are functioning at their perfected [2-D] vibrational frequency, [3-D] rate of physical rotation, and [1-D] angle of inclination.

Enlightenment is partly physiological in terms of the chakras discussed in various places in this *Cosmogony* book, and partly psychological in terms of the Centers described in the Michaelian teachings, and partly spiritual in terms of changes on the higher planes, which Sheehan does not mention but which are discussed in Part Two, “Modern Day Spiritual Teachings” and in Part Three, “Ancient Religions and Philosophies”.

It may be that as understanding of physics phenomena extends into the realm of metaphysical phenomena — aka the expansion of “nature” into the “super-natural” or psychic or paranormal realm — will itself open more humans up to the acceptance of paranormal abilities that have heretofore been neglected or dismissed or repressed as illegitimate or taboo.

18) There exist two additional potential human senses or faculties [beyond intuition], these being: A new biological faculty by means of which each individual human being can potentially directly experientially access union with the infinite and eternal sea of undifferentiated consciousness out of which our physical Universe emanated, and one other new biological faculty — the nature of which we do [not?] yet know, because this experience is the experience of a new faculty that is the first faculty of the next species into which we are evolving after we reach perfection [full maturity] as members of the species *homo sapien sapien*, a species which we identify as *homo divinis* which exists in another octave of harmonic vibrational frequency one full octave higher than the octave within which our reality physically manifests.

Those statements remind me of the work of transpersonal psychologists who investigate and report on the paranormal abilities that some people have. My conjecture is that this last or highest faculty is a reference to the alleged eighth chakra, which is said to be above the seventh chakra, the Crown Chakra, at the top of the head.

② Table of Worldviews and Correlations

After a few more pages of discourse that are not relevant to my book, Sheehan provided a table of correspondences between his Worldviews and various aspects or instantiations or attributes, which I have redrawn below as Table VI-6b.

In redrawing the table provided by Sheehan, I reversed the left-right sequence of the columns. His rationale was to put three right-leaning political Worldviews in the three right-hand columns and the three left-leaning political Worldviews in the three left-hand columns, but that procedure reversed the depiction of the progression of the stages of the Natural Sequence that I have used in other tables throughout this *Cosmogony* book. Thus, the left-most column shows the lowest-earliest Worldviews and the right-most column shows the highest-latest Worldview.

As for the rows, I deleted some of the rows that Sheehan showed, and arranged them in an order that made more sense for my purposes. Readers will see that Sheehan’s Worldviews and his correlations are not unfamiliar if they have read the previous Parts and Chapters of this *Cosmogony* book.

Table VI-6b — SHEEHAN’S WORLDVIEWS and CORRELATIONS							
PARADIGM	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
POLITICAL STYLE	Totalitarian	Reactionary	Conservative	Moderate	Liberal	Progressive	Utopian
POLITICAL THEORY	Thomas Hobbes	Adam Smith, Karl Marx	Republicans	Democrats	Social Democrats	Stoics Natural Law	Theocracy
SOCIAL ORDER	Fascism	State Capitalism, Communism	Secular Monarchism	Representative Bicameral, Parliament, Democracy	Senatorial, Alexandrian Philosopher-King	Progressive	Utopian, Medieval Royalism
SCOPE	Tribal	Racial	Nationalistic	Continental	Planetary	Interplanetary	Galactic
PHILOSOPHY	Materialism	Dialectical Materialism	Existentialism	Aristotelianism	Platonism	Monism	Deism
WORLD RELIGION	Animism	Taoism	Judaism	Christianity	Islam	Monism	Mysticism
RELIGIOUS MANIFESTATION	Animist Shamanism Pan-Psychism, Tribal Voodooism	Shaolian Taoism, State Calvinism	Kabbalism, British Anglicanism	Medieval Scholastic Catholicism, Trinitarian Christianity, Scientific Positivism	Pythagorean Platonism, Sufism	Occult Theosophy, Anthroposophy	Mystical Deism, Medieval Catholicism
VERB	Act	Feel	Think	Love	Communicate	Will	Am [Be]
CHAKRA	Root	Sacral	Plexus	Heart	Throat	Brow	Crown
FUNCTION	Survival	Procreation	Power [ego] Assertion	Love	Communication	Intuition	Being
BODY	Physical	Astral	Mental	Buddhic	Atmic	Monadic	Divine

My comments on this table are as follows:

- PARADIGM: One synonym for Worldview is “Paradigm”, which Sheehan used, along with the Rank of the Paradigm/Worldview.
- POLITICAL STYLE: The second row shows the one-word names that Sheehan gave to his Worldviews. These words are commonly applied to political styles by people who do not realize that they form the spectrum from lower–earlier to higher–later that is shown here.
- POLITICAL THEORY: Readers might need to brush up on their history and sociology to appreciate the third row.
- SOCIAL ORDER: Likewise with history and sociology lessons if the reader wants to understand the fourth row.
- SCOPE: This name for the fifth row is apt for the ‘size’ of a Worldview, because the higher–later the Worldview, the wider the scope or focus of the person or group that functions in that Worldview.
- PHILOSOPHY: Here again, readers who have some philosophical sophistication can more easily appreciate the words in the sixth row. Elsewhere in this *Cosmogony* book, I correlate formalized philosophies with the Attitudes of the Process/Aspect System matrix. From first to seventh, these are Cynic > Stoic > Skeptic > Pragmatist > Idealist > Spiritualist > Realist. In my view, Sheehan’s work could be improved in this category.
- WORLD RELIGION: The seventh row somewhat reflects the notion of “progressive revelation”, which is the idea that later religions, in terms of their historical appearance, have been “better” than earlier religions in terms of wider scope and accuracy of conceptualization.

- RELIGIOUS MANIFESTATION: Sheehan has a University degree from Harvard Divinity School, so we can understand why he would correlate religions with the other items in this list.
- VERB: The ninth row closely correlates with the Centers of the Process/Aspect System matrix. From first to seventh, they are Motion > Emotion > Intellect > Impulse > Concept > Sympathy > Excitation. The Centers are discussed in Part Two, in [Chapter II-3](#), “The Gurdjieffian Teachings”, and in [Chapter II-4](#), “The Michaelian Teachings”.
- CHAKRA: The tenth row shows the names of the chakras as they are commonly named, based on their location on the human physical body. These are discussed in Part Two, in Chapter II-9, “The Seven Chakras”. In esoteric circles, the chakras have been commonly-used as a framework or organizing system or pattern for numerous instantiations of the Natural Sequence schema.
- FUNCTION: The eleventh row shows the functions that are commonly ascribed to the chakras shown in the tenth row. If I were in charge of this row, I would switch Love and Intuition, but this suggested change is partly a semantic quibble.
- BODY: The twelfth row shows the names of the seven Planes as given in Theosophy; refer to Chapter [II-6](#), “The Seven Planes” in Part Two. The reason Sheehan labeled this row “Body” rather “Plane” is because the seven bodies are named after the seven planes that they correlate with; refer to Chapter [II-10](#), “Subtle Bodies” in Part Two.

With that introduction in mind, we are ready to read what Sheehan had to say about his version of Worldviews.

② The Octave of Worldviews

In the following subsections, I first provide the name that Sheehan gave to his Worldview, and then I provide the name that I gave to the same Worldview. Below the subsection title, I provide the names of the personality traits in the Process/Aspect System matrix that correlate with that Worldview.

First Paradigm = “Authoritarian” = “Primitivism” (Ordinal Action)

Submission Goal, Martyrdom Shadow, Cynic Attitude, Motion Center, Warrior Role, Perseverance Mode.

Since each individual has nothing more than his or her own five physical senses by means of which to physically perceive Reality, and only his or her own personal degree of intellectual acuity by means of which to organize into some strictly relative pattern of meaning these otherwise disparate pieces of purely physical data, each individual will perceive Reality itself in accordance with his or her own best selfish interests.

Obviously, to focus only on one’s own physical well-being is a very small, local, Worldview.

Ultimately, the only meaningful comparable ethical referent is the degree to which each individual person is able to maximize his or her own personal pleasure and to minimize his or her own physical pain.

The names that philosophers give to this pain/pleasure dialectic is “hedonism”. If a person has no other behavior, value, or belief system than hedonism, then it is likely that they are in the Authoritarian aka Primitivism Worldview.

[In this Worldview,] There is no absolute or objective truth. There is no right. There is no wrong. There is simply the exercise of raw power the power to declare what ought to be considered to be “the facts” in any given situation. And it is perfectly understandable — indeed right — that each individual person attempt to physically or intellectually compel every other individual to recognize his or her Reality, the Reality that identifies his or her Maximum Physical Pleasure and his or her Minimum Physical Pain, as the Paramount value in the entire Universe. Therefore: When faced with a given public policy or community problem, it is perfectly predictable — and, indeed, right — that each individual person would — and should — attempt to exploit that particular public problem to maximize his or her own personal physical pleasure and to minimize his or her own personal physical pain.

Therefore, when confronted with a range of alternative choices that might be made as to what one ought do to in response to a given “Public Policy Problem,” one merely selects that specific choice that one believes (based upon one’s own best physical data processed through one’s own intelligence) generates the greatest degree of short-term physical pleasure to one’s own self and that generates the least degree of short-term physical pain to one’s own self (or, by simple physical extension, the choice that generates the greatest degree of physical pleasure and the least possible degree of physical pain to one’s own immediate biological family members.)

The adoption of this specific Mode of Ethical Reasoning is the straight-forward rational product of there being no other referent for right or wrong that we, as rational human beings, are capable of physically experiencing through our only five physical senses.

And, of course, one's experience is expressly limited to one's biological or physical experiences that place an absolute limit on the efficacy of attempting to rally individual human beings to some more abstract, non-physical ethical referent. There simply is no other such referent. There is certainly no Cosmic referent by means of which any individual human being is personally capable of directly physically experiencing The Cosmos itself.

Since nothing holds reality together in any predictable, reliable system in accordance with which one can reliably say that any act is either Right or Wrong, I will get mine and I will seek to generate an immediate sense of physical security around ME and around my immediate biological extensions. This is the only true referent for "Right" and "Wrong" that I can directly experience through my five senses.

Thus only "Might makes Right". Indeed, Might makes reality itself. For there IS no other reality on which we can depend.

The Authoritarian Worldview is simplistic. Per the Natural Sequence schema, it is One-dimensional. The next Worldview adds a second dimension to a person's perceptions.

Second Paradigm = "Reactionary" = "Traditionalism" (Ordinal Inspiration)

Reduction Goal, Lowliness Shadow, Stoic Attitude, Emotion Center, Server Role, Repression Mode.

As a result of this specific Epistemological Belief on the part of Adherents to The Second Paradigm Worldview, Adherents to this Second Paradigm Worldview believe that, while every person is capable of articulating his or her own thesis as to what is Real and what is True and is, therefore, capable of asserting his or her thesis as to what The Facts are pertaining to any given matter, this thesis will then take its place in the marketplace of ideas — and, since this thesis is only relative, other persons (having a different perspective based upon their different life experiences and different location in relationship to the facts) will generate an anti-thesis (asserting that The Facts are different than those asserted by the proponent of the thesis). As a result of the dynamic generated by the bi-polar expanding and contracting of the physical Universe, this thesis and this anti-thesis will struggle in contention with one another in the marketplace of ideas — and, consisting only of relative truth, each will burn away that portion of the other's thesis which is not true, generating a syn-thesis made up of the more truthful portion of each thesis. This synthesis will then become the new operative thesis which will take the field in the market place of ideas asserting its contention as to what The Facts are pertaining to the matter at hand. It must be understood that truth will never be known to any degree of absolute certainty by simple human beings. However, through this dialectical process of struggle between sequential thesis and anti-thesis and then into synthesis and a new Thesis and new Anti-thesis, our human family will struggle toward the truth concerning The Facts.

The above-described dialectical process characterized by struggle between a relative thesis and an opposing relative Anti-thesis is The Mode of Ethical Reasoning through which human beings will progress toward the Right. Right is not to be obtained through the mere imposition of an arbitrary assertion of "Fact" by the most powerful (as occurs pursuant to the First Paradigm Worldview) but, rather, through legitimate struggle, pursuant to which the strictly relatively superior thesis will prevail, leading our human family toward relative truth. This Mode of Ethical Reasoning is the utilization of The Dialectical Method. Thus, given the perpetual Oscillating Cosmology of the physical Universe and the strictly Pre-Determined Teleology of the physical Universe, the only realistic Mode of Ethical Reasoning that could logically be adopted by an Adherent to The Second Paradigm Dialectical Worldview would be to yield to the physical tropism of jumping on board one side or the other side of whatever dialectic one is physically cast into by the physical Universe or which is physically presented to one by the physical Universe. Thus Adherents to The Second Paradigm Worldview are intensely Fatalistic [Stoic]. That is, they accept, indeed actively and enthusiastically embrace, whatever the local dialectic happens to be into which he or she is born. Indeed, they utterly internalize the *bona fides* of their local community's dialectic and become champions of the specific "side" on to which they were born. This is, indeed, the very mechanism of their "Mode of Ethical Reasoning." Thus, any and all choices are governed by the simple principle of "Which action best 'serves' my side in the dialectical struggle in which my family, my community or my tribe is engaged with 'The Ultimate other'?"

The last half of the second paragraph is precisely the description that I give to my understanding of the Traditionalism Worldview.

Third Paradigm = "Conservative" = "Materialism" (Ordinal Expression)

Rejection Goal, Renunciation Shadow, Skeptic Attitude, Intellect Center, Artisan Role, Caution Mode.

Because of this unique Epistemological Belief on the part of Adherents to The Third Paradigm Worldview, Adherents to this Worldview employ an equally unique "Mode of Ethical Reasoning". The Mode of Ethical Reasoning employed by Adherents to The Second Paradigm Worldview is a rigidly dialectical Mode of Ethical Reasoning and from the Mode of Ethical Reasoning of Adherents to The First Paradigm Worldview who employ a consistent Mode of Ethical Reasoning which, when faced with a number of alternative action choices by means of which to respond to a given problem, will always choose that action which merely maximizes that person's personal degree of short-term physical pleasure and/or minimizes that person's personal degree of immediate physical pain. This unique "Mode of Ethical Reasoning" employed by the Adherents to The Third Paradigm "Right Middle-Marginalist" Worldview is this: Adherents to The Third Paradigm "Right Middle-Marginalist" Worldview, when confronted with a number of optional actions from among which to choose by means of which to respond to a given problem will first: Choose which "reality" they can rationaly project out into the future to be probable and potentially true and they then choose to engage in, or choose to endorse as "better," that particular action which will maximize that reality (which he or she has chosen to make "real") as though that "Reality" were real. This is an "Existential" Mode of Ethical Reasoning, or a Mode of Ethical Reasoning which is directed toward making The World into The World which the Adherent to The Third Paradigm Worldview can rationally "project" as being potentially existent.

The underlined words fit best with the Skeptic Attitude and the Intellect Center of the Process/Aspect System matrix.

Fourth Paradigm = "Moderate" = "Collectivism" (Neutral Assimilation)

Equilibrium Goal, Stubbornness Shadow, Pragmatist Attitude, Impulse Center, Scholar Role, Observation Mode.

When faced with a number of alternative "choices" from among which to select, an Adherent to the Middle-Marginalist position will always select that choice which generates "the greatest good for the greatest number", the classical "Utilitarian" choice. They are ... not ideological; they are pragmatic, almost mathematical in their ethical decision-making. They do not attach metaphysical values to data. They are strictly "rational." They are the "Mentants" of Frank Herbert's *Dune*. They are the "Mr. Spocks" of Gene Rodenberry's *Star Trek*.

The underlined words best fit with Scholar Role and the Pragmatist Attitude of the Process/Aspect System matrix.

Fifth Paradigm = "Liberal" = "Holism" (Cardinal Expression)

Acceptance Goal, Greed Shadow, Idealist Attitude, Concept Center, Sage Role, Power Mode.

Adherents to The Fifth Paradigm Worldview exercise all of the purely scientific criteria of Adherents to The Fourth Paradigm Worldview in gathering their data, but, since they hold the Epistemological Belief that we, as human beings, have direct experiential access to the very real "Realm of The Ideal Forms," Adherents to The Fifth Paradigm Worldview supplement their data derived from their exercise of Scientific Logical Positivism with an exercise of Intuition... causing them to modify their otherwise purely Majoritarian Utilitarian Mode of Ethical Reasoning with an Intuitive supplement. This "Intuitive supplement" causes Adherents to The Fifth Paradigm Worldview to select options which, while these choices do generate "the greatest good for the greatest number" these choices also at the same time generate "at least something for the very least well off. This Fifth Paradigm "Liberal" Mode of Ethical Reasoning is discussed, in detail, by Professor John Rawls in his famous work entitled *A Theory of Justice* published, in 1972, by Harvard University Press.

Professor Rawls attributes the adoption of this specific "Mode of Ethical Reasoning" by Adherents to The Fifth Paradigm "Liberal" Worldview to the influence upon otherwise rigid Adherents to The Fourth Paradigm Worldview of The Sixth Paradigm "Intuitionist" Worldview. However, the adoption of the Fifth Paradigm Mode of Ethical Reasoning which attributes merely a supplemental importance to the data obtained via the human Intuitive faculty is the product of an entirely distinct "Cosmology", "Teleology", "Ontology", and "Epistemology" on the part of Adherents to The Fifth Paradigm Worldview. They attribute a merely supplemental role to this data not as a merely Utilitarian judgment, but, instead, experience the human "Faculty of Intuition" as merely supplemental to their otherwise strictly Intellectual Faculty. This is because their ontological Belief informs Adherents to The Fifth Paradigm Worldview that we, as human beings, are capable only of imitating the "Ideal" Consciousness of The Cosmos, not of Being at one with the Consciousness of The Cosmos. For this reason,

Adherents to The Fifth Paradigm are willing to place only a supplemental degree of reliance upon the data obtained via this imitation of "Ideal" Consciousness. One will recall that Plato, the ultimate Philosopher of The Fifth Paradigm, places the "Ideal" human observer in the position, in his "Allegory of The Cave" (in his *Republic*), only in-between the Fire and the real "Players", thereby being uniquely capable of recognizing that the "Shadows" cast by the Fire upon the wall of the cave are only shadows. But even this "Ideal" observer is not the real Player. Therefore, pursuant to the Ontology of The Fifth Paradigm, even the "Ideal" human observer is only capable of "imitating" the conduct of the real Player. So, such an "Ideal" participant in Reality is only an imitator (an "Actor") and is not entitled to have the absolute confidence in his judgments which a "real player" would have. He is only somewhere in-between a shadow and a "Real Player." So, he should act "in moderation" on the basis of his perception of "The Ideal." Thus, for the Adherent to The Fifth Paradigm Worldview, the Intuitionist experience functions, properly, solely as a supplement to his otherwise entirely reason-based scientific judgments... not because an Adherent to The Fifth Paradigm Worldview is nothing more than a more practical utilitarian (as Professor Parsons' asserts) but because he holds a profound Ontological Belief that his Faculty of Reason holds him forever separate and apart from the fully-engulfing Intuitive Experience which would allow (or compel) him to give to this Intuitive Experience the truly Central role in his or her decision-making process. Functioning as true Utilitarians, Professor Rawls argues, in "A Theory of Justice," that some Adherents to the Fourth Paradigm Scientific Logical Positivist Worldview take into full account the potential bone fides of the Sixth Paradigm Intuitionists assertions that they, as human beings, are capable of directly experiencing an other dimension of Reality which generate *bona fide* data and, therefore, according to Professor Rawls, some Adherents to The Fourth Paradigm Worldview simply add in the data obtained by the Adherents to The Sixth Paradigm Worldview to the data obtained from their strictly "Scientific Logical Positivist" sources as Fourth Paradigm Adherents generating a "Hybrid" (as distinct from a genuinely generic) Fifth, "Liberal" Worldview. However, according to Professor Rawls, Adherents to The Fifth Paradigm Worldview do not attribute central importance to this Sixth Paradigm Intuitive data. They treat this Sixth Paradigm data as simply supplemental to the data they have garnered via their Scientific Logical Positivist Epistemology.

In that description, one can easily discern Process/Aspect System matrix traits such as the Sage Role and the Idealist Attitude and the Concept Center.

Sixth Paradigm = "Progressive" = "Transpersonalism" (Cardinal Inspiration)

Growth Goal, Arrogance Shadow, Spiritualist Attitude, Sympathy Center, Priest Role, Passion Mode.

The distinctive aspect of the Mode of Ethical Reasoning of the Sixth Paradigm "Radical Monist" Worldview is that they believe that this faculty of intuition (experienced through the Seventh Chakra) should play a central role in each individual human being's "Normative decision-making" or as their "Mode of Ethical Reasoning."

Substantively, Adherents to the Left-Marginalist Worldview believe that, when faced with a range of choices to address a given public policy problem, one should choose the form of human conduct which is most harmonious with the natural law of the physical Universe. The method(s) which one goes about determining what form of human conduct is, or is not "harmonious with" natural law (and what forms of conduct are expressly "dis-harmonious" to natural law) are determined by the utilization of the various Methods of Determining "The Facts." However, the central means which should be employed in making this specific decision is to resort to one's own personal Intuition.

However, once this factual determination has been made by each individual who is a member of the community which will be directly effected by the public policy choice chosen, adherents to the Left-Marginalist Worldview insist that a specific procedural process must then be employed by means of which the community ought to determine which choice among the several available will be chosen. And the utilization of this specific procedure by means of which to make such an inherently community choice is integral to the Mode of Ethical Reasoning which is advocated by Left-Marginalists. The procedure is this: Every person who is going to be directly or indirectly effected by the public policy choice which is being made on behalf of the Community must be informed concerning all of the component elements pertaining to the decision, then be afforded an adequate time period prior to his or her having to render this decision to educate himself or herself as to what he or she will need to know to make a fully-prepared choice concerning the matter. Thirdly, every such person must be given a fair opportunity to express his or her views on the matter and to attempt to persuade others that his or her view should be adopted by the community. And then, finally, every such person who is going to be directly effected by the decision made must be given the opportunity to vote on which specific public policy choice is going to be chosen by the community.

This is referred to as a social democratic decision-making process. (This process does not require that all such votes be unanimous. Such votes may fairly be determined by a specific, previously-agreed-upon percentage of the total votes cast or of the total eligible voting members of the community. This may be a simple majority of one-half plus one; a plurality; a two-thirds majority, a three-fourths majority — or whatever percentage is deemed fair by a prior agreement reached by the community prior to the undertaking of this vote). The need to undertake this process for every major public policy choice effecting each member of the community is the product of a substantive natural law principle. So, to Adherents of the Left-Marginalist Worldview, the utilization of this process is a Natural Law substantive value in and of itself. In effect, this value dictates that there are instances in which it is ethically preferable to have NO decision made to address a given public policy problem which will be enforced upon the individuals in the community (if no single alternative choice available generates the support of a specific percentage of the community members) rather than to have a clear choice made which might well solve that specific public policy problem at issue, but which is actively opposed by (or is not affirmatively accepted by) a high percentage of the members of the community effected. Thus, there are two equally-important aspects of the distinctive Mode of Ethical Reasoning which is believed in by Adherents to The Sixth Paradigm Worldview. The first, which is substantive, is that a “Natural Law Ethic” be employed (and that each individual utilize, as the central means by which he or she determines whether a given option is harmonious or dis-harmonious with Natural Law, the Faculty of intuition.) The second, which is procedural, is that the procedure employed by the community to make its collective decision be Social Democratic (as defined above).

In that description, one can easily discern Process/Aspect System matrix traits such as the Priest Role and the Spiritualist Attitude and the Sympathy Center.

Seventh Paradigm = “Utopian” = “Messianism” (Cardinal Action)

Dominance Goal, Impatience Shadow, realist Attitude, Excitation Center, King Role, Aggression Mode.

Every decision made by a systematic Adherent to the Left-Systematist Worldview is made pursuant to an adherent’s effort to discern the will of god pertaining to that decision — that is: to determine (through an exercise of all of the “methods of determining the facts” (including one of, or both of, the modalities of “prayer” identified therein)) what particular choice, from among those which are available to the adherent, is most consistent with the will of The Infinite and Eternal Sea of Undifferentiated Consciousness which enfolded into being the entire physical Universe, which entirely pervades every micro-milli-meter of this material Universe at every moment, and to which each such adherent owes his or her very continuing life at that very moment — so as to comport his “perfecting” of the Human Family, and which It has intended since the micro-milli-second at which It “enfolded into being” this physical Universe.

Eighth Paradigm

The basic idea of the eighth paradigm is as expressed in the Fractalicity Principle, namely that there is another septenary above and beyond whatever septenary is being discussed.

Adherents to The Eight Paradigm Worldview believe that, once one has “perfected” the vibrational frequency of each of all eight of the human Chakras which are located within one’s own physical body, one should direct one’s physical body (and all of one’s material and non-material vibrational fields) to the task of “maintaining”...or to “re-integrating” into “symphonic harmony” with one another all of the “disparate” (but would be “integrated”) “multiples” of consciousness which one finds occurring within the specific time period of the physically — incarnated life into which one finds oneself “born” into this physical Universe. These “multiples” of consciousness are supposed to be vibrating “in symphonic harmony” with one another as “stepped” whole-number multiples within one octave of the one fundamental “wavelength” of the consciousness of our Cosmos which is occurring within our physical Universe. Therefore, Adherents to The Eighth Paradigm Worldview believe that the only truly ethical human conduct is conduct which is directed to the task of either bringing into perfect “symphonic harmony” all Eight of the Chakras within one’s own human body or (that having been already achieved) directing all of one’s conscious attention to the task of “maintaining” or “re-integrating” into “symphonic harmony” with one another all of the disparate “multiples” of Consciousness which one finds occurring in one’s world during one’s lifetime. The Eighth Paradigm Cosmology necessarily implies that our physical Universe is filled with Intelligent, Sentient Life. The Latin root of the word “Intelligence” is “*intellectus*,” the ability to distinguish the difference between. Intrinsic to The Eighth Paradigm Cosmology, “Intelligent” Life exists within each different (i.e. “differentiated”) band of vibrational frequencies, indeed, such “Intelligent Life” is the Conscious “organizer” of “experience” within each such “band” of vibrational frequencies. Thus, there being other Sentient Intelligent Life Forms within our galaxy which have developed technological means of entering the

“band” of vibrational frequencies in which WE abide is entirely foreseeable, indeed likely. Therefore, the fact that we, as human beings, have been encountering “other” mysterious Life Forms, which seem to come into our World from somewhere else is entirely compatible with the Cosmological assumptions of The Eighth Paradigm. And it is also entirely compatible with the Cosmological assumptions of The Eighth Paradigm that these other Beings would display abilities significantly different from the physical abilities which we human beings are physically capable of performing, trapped as we are within the simple three(or four) dimensions of our limited physical experience.

Summary and Concluding Comments





PART VII — CONCLUSIONS



Chapter VII-x

CONCLUSION TO THE BOOK

To quote a saying from the Highlander movie and television series, “There can be only one!” So, the immortals went around chopping the heads off of other immortals in sword fight duels. Well, there can be only one true theory of how the universe works from top to bottom and back again, or at least provide the structural framework for the Cosmos as a whole. Can Tao’s Template, and its subset the Process/Aspect System, and its subset the Natural Sequence, chop the heads off of other proposed “theories of everything”? I suspect that it might be a start.

Before the Natural Sequence schema was explicated in this *Cosmogony* book, the many instantiations of it that are reviewed herein was ambiguous and/or incomplete and/or garbled. For the first time, they are clarified and/or completed and/or disentangled.

What is the evidence that would stand up in a court of law? If this book were to be submitted to a criminal court, then the case would need to be proven “beyond a reasonable doubt”. I do not believe we are there yet. If this book were to be submitted to a civil court, then the case would need to be proven according to the “preponderance of evidence”. Maybe that is where we are with the Tao’s Template ontology, the Natural Sequence schema, and the Process/Aspect System matrix.

Is there some other theory that makes as much sense as this one? I have yet to see it.

Tabulation of Exoteric and Esoteric Septenaries

[[Complete this tabulation and commentary to show all septenaries explicated in previous Parts.]]

Basically, my assertion is that the sequence of seven fundamental archetypes is: 1=Warrior, 2=Server, 3=Artisan, 4=Scholar, 5=Sage, 6=Priest, and 7=King. I call this the Natural Sequence. This differs from the prevailing orthodoxy, which says the sequence is 1=Server, 2=Artisan, 3=Warrior, and the remaining four the same. I call this the “Michael Math Sequence” (MMS) because it first appeared in the *Michael Math* chapter of *More Messages From Michael*. This is significant to me because I believe the Ages, Levels, Internal Monads and other instances of *development* follow the Natural Sequence, as shown in the table below. Below that is another table showing the various septenaries explicated in Part Two of this manuscript.

Table Xa : SUMMARY of SEPTENARIES							
LEVEL	First	Second	Third	Fourth	Fifth	Sixth	Seventh
SOUL AGE	Infant	Baby	Young	Mature	Senior	Old	Ancient

ROLE	Warrior	Server	Artisan	Scholar	Sage	Priest	King
CENTER	Kinetic	Emotional	Intellectual	Systemic	Conceptual	Impression'l	Energetic
PLANE	Physical	Astral	Causal	Akashic	Mental	Messianic	Buddhaic

	1-D ACTION	2-D INSPIR.	3-D EXPRES.	P-D ASSIM.	3-D EXPRES.	2-D INSPIR.	1-D ACTION
Tielhard de Chardan	Cosmos Matter	Biosphere Life	Noosphere Mind	---	---	---	---
TRIUNE BRAIN THEORY	“Reptile” archipallium behavioral	“Mammal” limbic syst. social-emot.	“Human” neo-cortex thinking	---	---	---	---
HINDUISM'S “WAYS”	Karma (action)	Bhakti (devotion)	Jnana (knowledge)	---	---	---	---
SUBTLE BODIES	Physical-Material	Astral-Emotional	Mental-Intellectual	Spiritual-Divine	---	---	---
JEWISH MYSTICISM	“Nephesh & Assiya” action	“Ruach & Yetzirah” feelings	“Neshemah & Beriah” thoughts	“Chayah” intuition, spirit	“Yechidah” oneness	---	---
TAITTIIRIYA UPANISHAD	“Anna” food	“Prana” vital breath	“Mana” mind	“Vijnana” consciousness		“Ananda” bliss	“Chit” will
SOCIO-CULTURAL	Hunter-gatherer	Agricultural-pastoral	Civilization Age	Information Age	Philosophic Age	Spiritual Age	
GURDJIEF'S SEVEN MEN	Moving Centered	Emotional Centered	Intellectual Centered	Balanced Man	Subjectively conscious	Objectively Conscious	Totally Realized
MASLOW'S HIERARCHY	Survival & Security	Belonging & Love	Esteem & recognition	Cognitive (knowledge)	Aesthetic (beauty)	Self-actualization	Self-transcendence
TIMOTHY LEARY	Bio-survival Circuit	Emotional Circuit	Symbolic Circuit	Domestic Circuit	Neurosomatic Circuit	Neuroelectric Circuit	Neurogenetic Circuit
DA AVOD-HOOTA	Vital-Physical	Emotional-Sexual	Mental-Intentional	Heart-Awakening	Mystical Spirituality	Conditional Realization	God-Realization
THEOSOPHY SEVEN RAYS	“Ceremonial Order”	“Devotion & Idealism”	“Concrete Knowledge”	“Harmony via Conflict”	“Active Intelligence”	“Love-Wisdom”	“Power and Will”
THEOSOPHY PLANES	Physical	Astral	Mental (Concrete)	Causal (Abstract)	Buddhic	Atmic	Monadic
ROSICRUC'N WORLDS	Physical World	Desire World	Thought World	Life Spirit World	Divine Spirit World	Virgin Spirit World	God World
REFLEXIVE UNIVERSE	Potential	Binding	Identity	Combination	Growth	Mobility	Dominion

BASHAR MANIFEST	negative event	negative feelings	negative thoughts	choose to reinterpret	positive thoughts	positive feelings	positive actions
AUROBINDO COSMOLOGY	Physical (material)	Life-Vital (emotional)	Mental	Overmind (intuition)	Truth consciousness	Bliss consciousness	Will consciousness

My comments on this table are as follows:

- The first row applies to Internal Monads a.k.a. Life-Stages as well as the Levels within each Age I listed it first because it shows the numerical sequence that is followed in all the lower rows.
- The second row expands the Old Soul Age into three Ages and eliminates the Transcendental and Infinite categories. This is another pet heresy of mine, and is based on the channeling of Laeh Maggie Garfield in her book *How the Universe Works*. I won't explain this other than to refer you to Shepherd Hoodwin's book, *Journey of Your Soul*, p.211
-
- An Internet search on the Triune Brain theory will provide you with lots of info
- It is convenient and consistent to order the various septenaries per the same pattern (and this document shows the merit of these instances). If you do not do this, in my opinion there needs to be a compelling rationale for it. Better to retain the Natural Sequence indicated by the order of the Planes in all subset septenaries unless there is a good reason to do otherwise. That way, one can use the stages of one septenary to more fully understand the stages of another septenary rather than confuse the stages by mixing the sequences.

[Should this go here?] This book is considered by me to be a first draft of a somewhat new understanding of how the Cosmos is structured in time. I would like to see others, of an academic persuasion, who are more intelligent, more knowledgeable, and more talented than I am, take the TT/NS/PAS framework and build something on it that is better than I am capable of producing. Of course, I would rather they further my project than diss and dismiss my work. Although acutely aware of my own shortcomings, I did the best that I could. This work is worthy, not because the messenger is worthy, but because the message is worthy of dissemination, even in this crude form. Yes, my work is defective and deficient, but that means to me that it is worthy of improvement by people who are better at this sort of thing than I am.

If there are any readers who have been diverted from seeing the Natural Sequence here and there in their spiritual journey by the unwarranted extension or extrapolation of the Michael Math Sequence into realms beyond its proper place, then please take note of what you find in the remainder of this book.



Stuff to be Integrated or Deleted

Tony Stubbs & Serapis

<http://ascension.net/articles.asp?Category=5&Article=72>

<http://www.heall.com/soul/chakrasauras.html>

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we can't comprehend much about them with our ordinary consciousness, except to some small extent we can grasp them conceptually by analogy with emotion and thought and spontaneous intuition. If one has ever had a full-blown mystical union/beauty experience I believe that is an experience of the Higher Intellectual Center and maybe a taste of the fifth plane. If one has ever had a full-blown spiritual love/bliss/gratitude experience I believe that is an experience of the Higher Emotional Center and maybe a taste of the sixth plane. In a later post I will briefly cover some of the work of Timothy Leary, who experimented with altered states of consciousness, drug-induced usually. Apparently some mystics have been able to meditate themselves to states of consciousness that resemble what it is like on planes beyond the Astral. I am not yet willing to do the practices, drugs or meditation, that would lead to those kinds of experiences. I have had some tastes of them with chakra energy exchanges with girlfriends, as indicated in a previous post. I believe transcendent consciousness experiences produced some of the information about the planes in Hindu and Buddhist traditions and more modern teachings. There are significant differences in these traditions, and some of this might be due to the individuality of these types of experiences.

Linda: Maybe somewhat the Astral as it is the closest, but from what I've read about the Astral it is huge and many faceted and tricky...

Phil: Near death experiences apparently bring back reports of what it is like at the entrance to the Astral Plane. Millions of people have had these experiences (I have known several such people personally). This seems like good evidence for the alleged "emotional" nature of the Astral Plane, because they say they feel embraced by a most wonderful pervasive yet personal loving ambiance suffusing their consciousness.

Linda: ..So my attitude is why worry? We'll find it all out eventually and meanwhile there's lots to be getting on with while we are here...Maybe Michael quite deliberately doesn't tell us about the Causal as they think it's not relevant to us now... Not to dismiss Phil's interest...Just my personal opinion...Linda.

Phil: I think you make good points here, and I have hinted at the same things myself in previous posts. There is that structured cosmology component of the Michaelian teachings — and I really groove on it because of the way my own personality is structured — but the Michaels do not emphasize it or dwell on it or elaborate on it. For the most part for most people it is quite irrelevant, unless like myself you are curious/fascinated how this whole shebang (Assimilation) works, from top to bottom (Inspiration), inside and out (Expression), and beginning to end (Action). The vast majority of Michael students are properly focused on the down-to-earth "spirituality" of getting along well with themselves and their neighbors and solving their mundane day-to-day problems in a graceful way. The info about planes is about as irrelevant to your daily lives as it gets. However, I am gradually moving toward more relevant information, namely soul Age and the Internal Monads and the Centers. I believe it is mildly beneficial to have the understanding that these follow the Natural Sequence rather than the Michael Math Sequence. For instance, I delivered a post on the Triune Brain Theory. You all carry within your craniums some of the very best evidence for the Natural Sequence, and you all deal with it your entire waking lives. You know of this as the lower triad of Centers: Moving, Emotional, and Intellectual. If you understand this per the NS, you might get a new perspective on how to deal with them, for your own good and those who have to deal with you. In my research I have found that the Triune Brain Theory has been adopted by psychologists and educators and probably other disciplines because they have found it so useful.

I was planning to at some point show you how this knowledge of the NS might be useful, if you choose to apply the info. I also propose to show that, because the Ordinal Roles have been improperly correlated with the lower triad of soul Ages, you probably misunderstand some things about both those Roles and those Ages. There is also the matter of childhood development, the first three Internal Monads, although it is probably too late to be really useful info. I know that a lot of what I have posted so far is irrelevant to most of you in your daily lives, but please be patient, read carefully and thoughtfully what I have to say, and you might have

some neat little eureka moments along the way, sooner or later. The plan is for my future presentations to cover an amazing amount of the Michaelian teachings, mundane as well as cosmic, in a new way.

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Three Learning Domains: Cognitive, Affective, Psychomotor – Benjamin Bloom's Taxonomy
<http://knowledgejump.com/index.html>

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For those not familiar, Monroe and others started what they called the Gateway Program to explore and research OOB's and other spiritual phenomena with volunteers they called Explorers. Monroe says "In hundreds of hours of Explorer communication to date, about one-third consists of those instances where, with the Explorer's permission, their friendly entities take on their physical bodies and speak using the Explorer's vocal cords." Below is part of what one of these friendly entities said.

And then once a person or a consciousness — we are talking about consciousness — reaches level twenty-eight, the bridge is crossed and from that point on for a consciousness to evolve higher, it would not again assume human form of any kind, not even as a learning experience. I will never incarnate again as a human — as another form of life, yes, but not as a human. The words are very hard because your plane of existence is not the same. Perhaps I can explain it by asking you to image seven of the circles, which would give you the forty-nine levels. The first three circles are physical matter as you know physical matter. They are your plants, your animals, your humans. The fourth circle is your bridge, your realm, your center for that overall plane. It is the time in which a consciousness can choose whether to go back into the lower levels or to transcend into the higher levels, and many consciousnesses do choose to go back into the lower levels in physical form. The upper three circles are the realm that in your consciousness is called the spiritual realm and here much of the work is done. I could not help someone who was not on the eighteenth level very much because my plane, my vibrational rate, would be different. This is why it is hard for me to help you with specific problems. I can give you ideas, but I cannot give you the direct guidance I could if you were on level eighteen. Our planes do touch since yours is an ascending spiral — an ascending, what is your word for that? It is an ellipse. It is an ascending ellipse, and therefore I can cross and communicate with you, but not as directly. Once I reach level forty-nine, which I will, I then leave all of this realm of existence. It does not mean I have reached the highest point by any means. It simply means I have left this group of seven, this overall group of seven. Imagine, if you will, the seven circles enclosed in an even larger circle upon which seven more circles are stacked, which is in turn enclosed in even a greater circle. Then you can have some idea of what infinity is. It does not ever stop. [Robert Monroe, *Far Journeys*, p. 51]