

A Unified Process Theory of Meaning

[5-24 Draft]

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Abstract

This research paper introduces a preliminary unified process theory of meaning with the objective of deepening our understanding of human nature and cultivating a meaningful life in modernity. Our thesis is simple: meaning manifests when the pattern of nature and the pattern of man match. We draw inspiration from ancient philosophical traditions and modern disciplines like complexity science and computational neuroscience to uncover these underlying patterns and their significance.

To understand nature, the research begins by formulating a unified natural philosophy that simplifies physics, chemistry, and biology into a seven-stage process theory, drawing inspiration from ancient metaphysics. To understand man, we then review the latest in human cognition, the Bayesian brain, and utilize the free energy principle and Markov blankets formalisms to establish a common mathematical language. To see if nature and man find unifying resonance, we then explore organic process themes within the biblical narrative, proposing an internally-logical and fractal-like meta-structure in symbolism and literary architecture. We then present a modern process and complexity-based heuristic account of the Biblical narrative in light of our findings. To wrap, the research revisits transcendental ideals, shedding light on the meaning-making power of nature's processes and humanity's place within the cosmic order.

By embracing an enchanted outlook and reimagined modernity, this theory offers the potential to reconcile fragmented mindsets and bridge gaps between modern and ancient thinking as well as between scientific and religious disciplines. The ultimate goal is to promote personal and collective flourishing within Western civilization by establishing a more robust and integrated philosophical foundation. The research encourages open dialogue and invites collaboration to further develop these ideas.

Keywords: *Bayesian brain, Biblical hermeneutics, complexity science, computational neuroscience, free energy principle, Markov blankets, meaning, modernity, philosophy of organism, process theory*

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Figure 1: Good ol' Copernicus in the Intellectual Lab.

1 Introduction: A Modern Copernican Revolution To Shift Our Center of Orbit to Humanity

1.1 The Plight of Modern Man

Our modern era has bore witness to incredible technological marvels that have radically transformed the material conditions of human existence. Yet this outward material progress has outpaced our inward philosophical growth. We stand at risk of becoming what I'm endearingly calling "*Apes in Ironman Suits*" - erudite in the practical arts of material manipulation, yet lacking in profound wisdom about human nature.

The great truth-seekers of past ages understood that purely utilitarian knowledge is insufficient. If not, we risk living in a land of arid barrenness devoid of meaning and purpose, as depicted by T.S. Eliot's in the poem *The Waste Land*. Or equally grating, a suffocating blindness to salvation in favor of lulling material comfort as depicted by Aldous Huxley in *A Brave New World*. To live a truly meaningful life and avoid becoming unmoored by our increasing mastery over nature's forces, we must cultivate an inner richness and grasp of the immutable metaphysical laws underlying the physical world to stay aligned with the hidden forces of nature.

Our goal is to bridge this divide between material might and philosophical maturity in a modern context. As our starting point, we must be willing to question

our implicit default assumptions and metaphysical premises, which may inadvertently constrain our view and vision. We cannot be bound by the conceptual blinders of the conventional reductionist, materialist paradigm that currently dominates our 21st century zeitgeist and its subsequent influence into all facets of modern society.

Ilya Prigogine, the Nobel-prize winning complexity scientist, in his reflections on the philosophy of science, laments that modern science has been reduced to “atoms and the void,” where our world has been stripped down to mindless matter, leaving us struggling to recognize ourselves in the current intellectual landscape. He speaks of the “anxiety of modern man and the feeling of alienation,” where “life, destiny, and free will became manifestations of a shadowy underworld impenetrable to reason.” We find ourselves in the shadow of Democritus, the original pre-Socratic proponent of “atoms and the void,” whose ideas were debunked by Plato and Aristotle thousands of years ago. Calling out to the void from our floating rock of Earth, our Robinson Crusoe island for any signs of life, meaning, and purpose. But what if in fact, life itself - and meaning - here on earth, in our bodies, is at the center of our human and cosmic story?

A fascinating question. With open yet discerning minds, we shall embark on an odyssey of re-integrating modern empirical knowledge within a revived process-based metaphysics and show how these find unifying resonance across natural sciences, computational neuroscience, and mythopoetic works. We will employ the rigorous tools of formal rational analysis and empiricism – not abandoning them entirely in favor of blind faith. By doing so, we will attempt to uncover a beautifully quiet but persistent underlying rhyme and reason beating throughout nature, man, and myth - a theory of organic and creative process - that unites us all in a cosmic symphony.

1.2 So what exactly *is* Meaning?

We've all thought about this core life question before. Is meaning 42 - per *Hitchhiker's Guide to the Galaxy*? Or maybe it's 1/137, discretized into some fine structure constant of the universe. Or is it simply an arbitrary human invention, open to whimsical definition based on the cultural zeitgeist of the time? Is there even an answer to such a difficult and amorphous question?

We believe there is an answer. Meaning is not an arbitrary cultural construct - per Nietzsche - but rather a fundamental feature of a teleologically driven cosmos in which we have a unique participatory role.

Namely, meaning is the living fruit of resonance between man and nature, mind and cosmos, microcosm and macrocosm, myth and life story, or heaven and earth. It represents the alignment between an entity's existential narrative and the transcendent archetypal patterns driving existence evolutionary unfolding.

Meaning arises when the story of one's life coheres with and personifies the deepest purposive metaphysical currents and value gradients pervading the cosmos. It reflects the felt sense of profoundly participating in and composing a chapter within the great metaphysical symphony - one's unique experiential path harmonizing with the universal poesis.

Meaning signifies recognition of one's role within the larger integrative pattern that imbues all particulars with direction and significance in the universe's co-creative evolutionary unfolding. It involves thematic arcs of self-transcendence, where individual dramas become subplots advancing the wider meta-narrative currents navigating toward ever-higher unities of integrated wholeness.

Meaning is when heaven and earth meet, whether called a turn in process philosophy, true feature vector in predictive coding, tabernacle in theology, manifestation of a goal in psychology, or a love story in our daily lives. When actualizing lives achieve dramatic consonance with the primal creative liturgies, the feeling of profound Meaning arises - an affirming sense of one's purposive place within the universal score.

To authentically create and discover meaning is to experientially realize one's place in the fractal patterning of the whole - to attune one's own creative unfolding to the evolutionary grain of the universe.

Our framework is, at heart, a vision of the deep meaningfulness of existence - an affirmation that beneath the sound and fury of a seemingly random world, an abiding coherence and beauty can still be found.

1.3 A Guide to Our Intellectual Journey

While some poetic liberty was taken above, our thesis is fundamentally simple: meaning manifests when the pattern of nature and the pattern of man match. To explore these further, our approach will be comprehensive but straightforward: we will first look to better understand (1) Nature then (2) Man and (3) explore the underlying patterns and when they match.

We will draw inspiration from the ancient traditions of the Greek philosophers and the Biblical story - while simultaneously remaining grounded in mathematics, complexity science and other modern disciplines. In our synthesis, we will look to stay focused on empiricism and rigor. By experientially grounding lofty metaphysical truths in the textures of science and the story of humanity, we may recover a felt sense of the profound interconnectedness of mind and nature.

The scope is vast but the intent of this piece is introductory to paint the high-level architecture of our thesis. More of an intuitive sketch than formal proof. We will then do the appropriate deep dives with the rigor it deserves, coloring

in the remaining conceptual mural with more detail.

Our detailed outline is below:

1. **Formulating a Unified Natural Philosophy:** Recategorizing physics, chemistry, and biology into a simplified 7-stage process theory, evoking the original Platonic and Aristotelian principles
2. **Understanding Man via The Bayesian Brain:** We leverage our recent learnings from cutting edge cognitive neuroscience, namely the predictive processing framework and Markov blanket formalisms to bring the full rigor of complexity science & interpret the brain's workings in light of this process philosophy
3. **Uncovering Process Themes in The Biblical Meta-Narrative:** We apply this framework to the Bible, the founding canon of Western civilization. In particular, we discern a fascinating overarching and consistent organic process meta-narrative across multiple structural levels - from symbolism to narrative and overarching literary architecture
4. **Process-Based Computational Christianity:** We then interpret the Biblical narrative through the lens of process & predictive coding to bring a modern and novel complexity-based heuristic account to the story, demonstrating parallels with our brain's own internal working
5. **Revisiting The Transcendental Ideals:** We review our definitions of the transcendental ideals by illuminating the meaning-making power of recognizing nature's processes and the reverberating implications of humanity's place within the cosmic order.
6. **Conclusion — On Meaning and Re-Imagining Modernity:** We discuss what the implications are for a revised and enchanted outlook to chart a way out of postmodern nihilist slumber that is modernity

1.4 Cultural Implications for Western Civilization

If this theory - one I'm calling a *Unified Process Theory of Meaning* - proves coherent, the implications for revitalizing meaning in a disenchanted nihilist postmodern world could be nothing short of enormous. It would be the equivalent of a modern Copernican revolution. Fragmented modern mindsets might rediscover how to reason from wholes to parts in a meaningfully integrated "Gestalt" once again, bridging divides and anchoring our complex Western civilization within a stronger and more integrated foundation. Our orbit could shift to humanity - to purpose - with technology as the secondary "ex-bodied" extension.

This "re-enchantment of the world" is not a relapse into premodern credulity but a rational meta-modern realization that our disenchantment is itself a story

- a provisional myth ripe for transcendence. By daring to dream the world and ourselves into creative becoming once again, we reclaim our proper role as co-creators of the cosmic dance. This orientation has pragmatic import for our civilization's cultural organs as well - our ethics, politics, education, and cultural storytelling could all be realigned to the hidden harmonies of this process-based vision.

1.5 And So We Depart

We must note that not everyone will immediately embrace such a sweeping synthesis. Rigorous argumentation for the existence and explanatory power of this framework will be necessary to persuade skeptics. Throughout the exposition, we shall take pains to unpack key concepts slowly, using vivid analogies and examples to evoke their living significance. Formalisms will be deployed judiciously and translated into accessible terms.

Amidst the centrifugal energies of modernity, a countervailing call to centripetal integration is growing. The hunger for a new meta-narrative that binds knowledge and experience back into profound unifying coherence can no longer be ignored. Let us heed the summons and plunge into the quest - exploring, with full sincerity, whether an underlying Order and Beauty can still be found beneath the rubble, fractured surfaces of our world, beckoning us home.

This research is preliminary and we're publishing this in the spirit of building in public. Feedback and open dialogue is very much encouraged!

2 Formulating a Unified Natural Philosophy: Revisiting The Platonic and Aristotelian Roots of Science through a Modern Lens

2.1 A Scientific & Empirical Theory of Process

Let's start with a recategorization of a modern language we are all familiar with: science. We begin our journey by revisiting the roots of Western science in Greek thought. Drawing inspiration from Plato and Aristotle, we seek to weave the diverse branches from contemporary science into a simple synthesized model.

Namely, we recategorize the domains of modern physics, chemistry and biology into an empirically-backed and symmetrical 7-stage process framework, drawn from Arthur Young's book *The Reflexive Universe*.¹

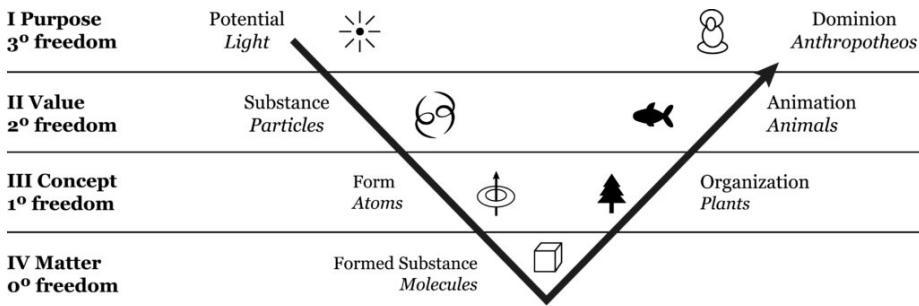


Figure 2: Seven-Fold Arc From Arthur Young's *Reflexive Universe*. We will be using this model as the empirical base to set-up our organic theory of process.

Summary schematic above. This will be a key chart to keep in the back of your mind. We'll call out three core themes:

1. Left Side of Arc - Involution: In the first four stages (Light, Nuclear Particles, Atoms, Molecules), the process of involution is characterized by the progressive embodiment and condensation of the primary potential of light into the increasingly constrained and deterministic structures of matter. Each stage introduces new constraints that limit the degrees of freedom available at the previous stage, culminating in the highly specified and predictable behavior of

¹This section is mostly a synthesis of Young's work to set our foundation. I promise I'll keep the middle school science regurgitation short but this helps gives a sense of themes that we'll expound upon throughout the rest of the piece. Where we extend Young's work is through (1) the incorporation of the free energy principle and Markov Blanket formalisms to add complexit science to the conversationand (2) a deeper dive on just how deep this seven-fold structure goes in the symbolism, narrative, and architecture of the entire Biblical story. Other related references works are *Theory of Process*, *Geometry of Meaning* and *Mathematics, Physics, & Reality* both by Young.

molecules.

2. Nadir - The Turn: The pivotal “Turn” at the fourth stage represents a reversal of this trend as the self-organizational negentropy of molecules into living systems introduces a new form of freedom and indeterminacy. The emergence of life marks a shift from the “dominance of the deterministic” to the “dominance of the indeterministic,” as plants exhibit agency, growth, development, and reproduction, even while still being constrained by their dependence on sunlight and rootedness in place.

3. Right Side of Arc - Evolution: In the last three stages (Plants, Animals, and Humans), the process of evolution is characterized by the progressive emergence and expansion of new forms of freedom and creativity from the constrained and deterministic structures of matter. Each stage introduces new degrees of freedom that transcend the limitations of the previous stage and greater levels of multiplicity and integrated wholeness, culminating in the highly adaptive and indeterminate behavior of self-aware beings.

2.2 Peeling Back the Onion: One More Layer of Detail

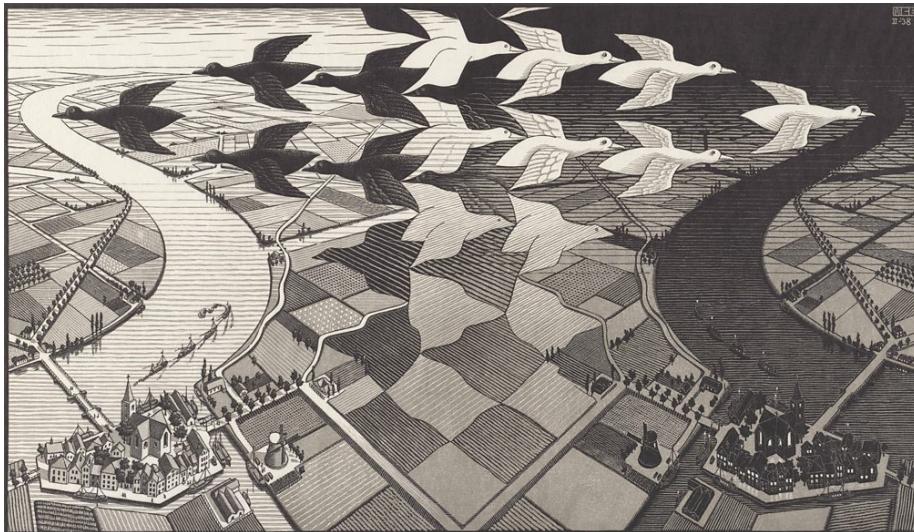


Figure 3: *Day and Night* by M.C. Escher (1938)

Let’s go through each of these in a bit more detail. While this won’t be able to encapsulate the full scientific discoveries of the last few centuries, the core idea will be to get a sense of how freedom & constraint dynamics - and uncertainty - evolve throughout the lifecycle of the arc. As a foreshadow to the next section, we will then use the free energy principle to provide a unifying mathematical

framework for a science of this uncertainty.² See below:

2.2.1 Left Side of Arc: Involution

1. Light: Pure, undifferentiated light represents complete freedom and indeterminacy. It has 3 degrees of freedom (the ability to move in any direction in 3D space) and 0 constraints, symbolizing the realm of infinite potential, unconstrained by the limitations of matter and form - and arguably even time. Light is the fundamental quantum of action, the primary force in the universe.

Uncertainty Level: Max Uncertainty. The behavior of light is inherently unpredictable and probabilistic at the quantum level.

2. Nuclear particles: As light energy condenses and differentiates into subatomic particles like protons and electrons, the first constraints emerge. Nuclear particles have 2 degrees of freedom (spin and charge) and 1 constraint (they are bound by the strong nuclear force into protons and neutrons). The freedom and fluidity of pure light is limited by the formation of discrete particles with specific properties, whose interactions are governed by the laws of quantum mechanics.

Uncertainty Levels: Decreasing uncertainty. The behavior of subatomic particles becomes more predictable as they are constrained by the laws of quantum mechanics.

3. Atoms: This level is the periodic table of elements - the formation of atoms from protons, neutrons and electrons. Atoms have 1 degree of freedom (the number of electrons in their outer shell, determining their chemical properties) and 2 constraints (the strong and electromagnetic forces that bind the nucleus and electrons together). The freedom of subatomic particles is constrained by the laws of atomic physics, as electrons fall into quantized orbital shells.³

Uncertainty Levels: Further decreasing uncertainty. The behavior of atoms is largely predictable based on their electronic configuration and the laws of atomic physics.

4. Molecules: As atoms combine to form molecules, new constraints arise from the chemical bonds and intermolecular forces between atoms. Molecules have 0 degrees of freedom and 3 constraints (the number and type of atoms, the spatial arrangement of bonds, and the interactions between molecular structures). The freedom of individual atoms is subsumed by their participation in specific molecular geometries with defined properties.

²The science of Uncertainty can also be thought of as the science of freedom.

³Interestingly, Carbon as the basis for complex life is the 4th column on the periodic table and reflects a “Goldilocks Zone” and find it’s situated at the “edge of chaos” - stable enough to maintain complex structures (i.e. order) yet reactive enough to participate in dynamic processes & create a variety of molecular structures (chaos / novelty).

Uncertainty Levels: Minimum uncertainty. The behavior of molecules is highly predictable based on their structure and chemical properties.

2.2.2 The Turn

The Turn is a crucial stage, marking the transition from the arc of involution to the arc of evolution. It represents a pivotal shift in the direction of the process, from the progressive limitation and constraint of the fundamental freedom of light towards a new kind of freedom and creativity emerging in living systems.

This new form of freedom is not the same as the fundamental indeterminacy of light at the first stage, but rather a higher-order freedom that emerges from the complex organization and interaction of constraints. It is the freedom of a system to explore its own possibilities within the bounds of its constraints, to adapt and respond to its environment, and to participate in its own evolution.

2.2.3 Right Side of Arc: Evolution

5. Plants: The self-organization of molecules into the complex living systems of plants marks a pivotal turn in the process from involution to evolution. Plants gain 1 degree of freedom (the ability to grow, develop and reproduce) while having 2 constraints (dependence on sunlight for photosynthesis and rootedness in place). The emergence of life introduces new possibilities for freedom, teleology, and creativity, even while still being constrained by the limitations of biological existence.

Uncertainty Levels: Increasing uncertainty. The behavior of living systems becomes less predictable as they exhibit agency, adaptation, and responsiveness to their environment

6. Animals: The development of specialized cells, tissues and organs enables the evolution of the animal kingdom, with increasing mobility and agency. Animals have 2 degrees of freedom (locomotion through space and goal-directed behavior) and 1 constraint (dependence on other organisms for food and energy). Animals exhibit an expanding repertoire of movements, perceptions, motivations and behaviors as they explore their environment, while still being bound by their biological drives and needs.

Uncertainty Levels: Further increasing uncertainty. The behavior of animals becomes even less predictable as they exhibit complex behaviors, learning, and decision-making in response to their environment.

7. Humans: The human mind represents the highest degree of freedom and escape from constraints in the process. Humans have 3 degrees of freedom and

0 constraints. The self-reflexive human consciousness has the capacity to transcend the constraints of its biological origins, manipulate symbols and ideas, leverage language for interspecies coordination, plan for the future, and intentionally shape its own destiny. The light of mind allows humans to achieve a “knowing” which mirrors the “unknowing” of the first stage, coming full circle to complete the arc.

Uncertainty Levels: Maximum uncertainty. The behavior of self-aware beings with free will is fundamentally unpredictable, mirroring the uncertainty of the quantum realm.

2.3 The Main Theme: The Interplay Between Unity and Multiplicity

Note that each of these seven steps have their own self-similar sub-stages with their own “Turns”. The below provides a breakdown example for each of the sections:

The Grid							
KINGDOMS ↓	SUBSTAGES →	POTENTIAL	BINDING	IDENTITY	COMBINATION	GROWTH	MOBILITY
1. LIGHT	2 degrees of freedom; no symmetry	10^{20} 10^{19} 10^{18} 10^{17}	10^7 10^{11} 10^7 10^4	10^2 10^8 10^7 10^4	10^{-4} 10^{-4} 10^0 10^0	10^{-1} 10^{-1} 10^2 10^2	10^{-2} 10^{-2} 10^{-2} 10^{-2}
POTENTIAL: No rest mass; outside of space and time; quantize of action; hierarchy	Cosmic rays Proton rest Nuclear binding energy Gamma rays	X Rays Atomic spectra	Visible light Molecular spectra	Microwaves Cellular resonance	Infrared IR and shortwave radio Cellular resonance	Visible light Radio waves Cellular resonance	Low frequency waves
2. NUCLEAR	3 degrees of freedom; bilinear symmetry			Young left these substages unfinished, as work-in-progress.			
BINDING: Substance; force; the spell aspect of images; hence illusion; “probability fog”							
3. ATOMIC	4 degrees of freedom; spherical symmetry	One 2 shell	Two 2 shells	One 1 shell	Two 8 shells	One 10 shell	Two 18 shells
IDENTITY acquires its own center; table of elements; order creates properties; Pauli Exclusion Principle	Row of Mendeleev Table	HYDROGEN	LITHIUM to FLUORINE	SODIUM to CHLORINE	POTASSIUM to BROMINE	RUBIDIUM to IODINE	CESIUM to ASTATINE
							One 14 shell FRANCIUM to ...
4. MOLECULAR	5 degrees of freedom; complex symmetry	METALS Single atom	SALTS Double atoms	METHANE SERIES Non-functional compounds	Functional compounds	POLYMERS chains	DNA AND VIRUSES
COMBINATION: Molecular properties; classical physics; determinism	Diagram of molecules						
5. VEGETABLE	6 degrees of freedom; radial symmetry	BACTERIA One cell	ALGAE Many cells	EMBRYOPHITES Tissue	PSYCHOPITATES Many tissues	CALAMITES Segmented larger size	GYMNOSPERMS Mobility of seed
GROWTH: Self multiplication; the cell or organism unit; order building by negative entropy							ANGIOSPERMS Flowers
6. ANIMAL	7 degrees of freedom; bilinear symmetry	PROTOZOA One cell	SPOONIES Many cells	COELENTERATES One organ	MOLLUSCS, etc. Many organs	ANNELIDS One chain	ARTHROPODS Chain with joints
MOBILITY: Action and satisfaction; digestion, mobility; choice becomes possible							CHORDATA
7. DOMINION	8 degrees of freedom; no symmetry	TRIBAL SOCIETIES ?	(No bodies?) Collective unconscious	MODERN MAN	Creative genius	CHRIST BUDDHA Mythical kings Muses?	?
CONSCIOUSNESS: Memory of one's own acts leads to conscious knowledge and control							

Figure 10. The Grid

Figure 4: Each sub-group has it's own self-similar seven-fold evolutionary process. Key themes persist throughout each level.

A plethora of information and while we won't go through these all now, the main takeaway is the sub-chains maintain similar patterns to the larger one.

Let's provide a few other “comparables” in other disciplines.⁴ While there are certain nuances worth elaborating on, here we are in the business of synthesizing

⁴ “Comparables” comes from the art of valuing companies where you compare companies to select peers and look to establish a valuation. Those finance chops are still handy!

and getting a felt-sense of the movement through the arc: an initial wholeness followed by a multiplicity back to a reintegrated wholeness:

1. Behavior: Goals vs. Manifestation

- **Goals:** The objectives or endpoints that guide and direct behavior, representing the desired future states or outcomes.
- **Manifestation:** The actual realization or expression of those goals in the present moment, through concrete actions and results.

2. Calculus: Differentiation vs. Integration⁵

- **Differentiation:** The process of breaking down a whole into its constituent parts, analyzing the rates of change, and determining the specific characteristics of each element.
- **Integration:** The process of combining the individual parts back into a coherent whole, finding the accumulation of quantities, and determining the overall properties of the system.

3. Narrative: Tragedy vs. Comedy

- **Tragedy:** A narrative arc that depicts the downfall or suffering of the protagonist, often due to their own flaws or the inevitability of fate, evoking catharsis and profound insight.
- **Comedy:** A narrative arc that depicts the triumph or redemption of the protagonist, often through wit, irony, or the resolution of misunderstandings, evoking laughter and a sense of restoration.

4. Myth: Descent vs. Ascent

- **Descent:** The journey into the underworld, representing the movement from initial unity to darkness, death, and multiplicity (e.g., Orpheus' descent to the underworld, Osiris being dismembered).
- **Ascent:** The return from the underworld, symbolizing the movement from darkness to light, death to rebirth, and the unknown to the known (e.g., Orpheus' ascent, Osiris' reconstitution).

5. Theology - Forming (Priestly) vs. Filling (Kingly)

- **Forming:** The process by which God creates or shapes the fundamental structures and patterns of the universe, setting the stage for the subsequent development and filling of creation.

⁵Note this refers to the change between various states vs the states themselves. This unity vs. multiplicity metaphysics could explain the milieu in which Liebniz discovered calculus and thinking about differentiation / integration dynamics. Tinkering with Cartesian graphs came only after!

- **Filling:** The process by which God populates or enriches the formed structures with diverse forms of life and abundance, emphasizing the generative and expansive aspects of God's creative activity.

6. Philosophy - Emanation vs. Emergence

- **Emanation:** The process by which the ultimate reality or divine principle gives rise to the multiplicity of the world, often associated with a top-down, unidirectional process.
- **Emergence:** The process by which complex systems or phenomena arise from the interactions of simpler components, emphasizing the bottom-up, self-organizing process.

7. Psychology - Perception vs. Action

- **Perception:** The process by which the brain interprets and organizes sensory information from the environment to create a meaningful representation of the world.
- **Action:** The process by which an organism interacts with and influences its environment based on its perceptions, goals, and motivations.

All of these terminologies evoke a similar Neoplatonic process - one from unity to multiplicity, and another from multiplicity to re-integrated unity. Entities undergo cycles of existential involution and conscious evolution aimed at re-integrating their individuated particulars back into wider, re-integrated wholes.

We will leverage the perception-action dynamics - through a Markov Blanket - to serve as our bridge between nature and man in a following section.

2.4 A Specific Example: The Hydroid, Our Jellyfish-Like Friend

To give an intuitive sense of one full cycle of evolution, let's provide a niche example in the animal kingdom of a hydroid, a plant-looking animal loosely related to a jellyfish. These hydroids are small, plant-like animals found in marine environments, and they belong to the phylum Cnidaria, which includes jellyfish and corals.

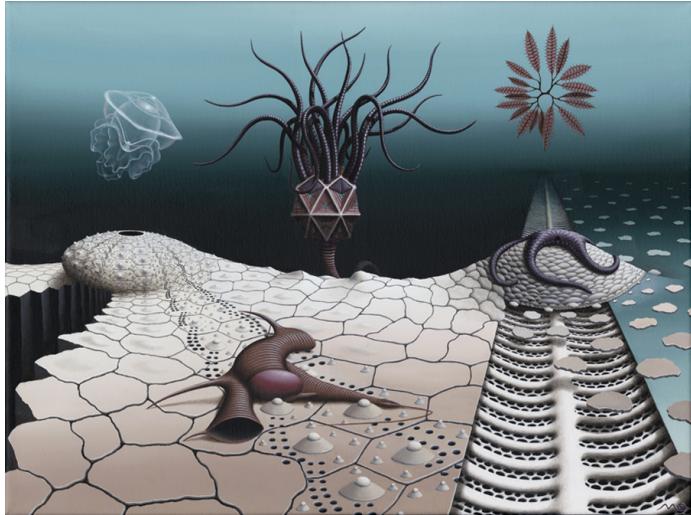


Figure 5: *Islands of Evolution* by Michael Ofstedahl

The evolution process is as follows:

1. **Starts as one cell:** The hydroid begins its life as a single fertilized egg, or zygote. This stage represents the initial potential and unity of the organism.
2. **Becomes multicellular:** The zygote undergoes cell division, forming a hollow ball of cells called a blastula. This stage signifies the first differentiation and increasing complexity.
3. **Acquires a shape (identity):** The blastula develops into a free-swimming larva called a planula. The planula has a distinct shape and begins to establish its identity as a hydroid.
4. **Fastens to the ocean floor:** The planula settles onto a suitable substrate, such as a rock or shell, and attaches itself. This stage represents a crucial transition and commitment to a specific location and lifestyle.
5. **Grows in plant-like fashion:** The attached planula metamorphoses into a polyp, the sessile (fixed) stage of the hydroid. The polyp grows and forms a colony by budding off new polyps, creating a plant-like structure.
6. **Flowers break off into mobile jellyfish:** Some of the polyps in the colony develop into specialized reproductive structures called medusae. These “flowers” break off from the colony and become free-swimming, jellyfish-like individuals.
7. **Fertilization:** The medusae release eggs and sperm into the water, leading to fertilization and the formation of new zygotes, thus completing the cycle and beginning a new process.

This hydroid example showcases how a seemingly simple organism goes through a series of transformations, each stage building upon the previous one and contributing to the overall process of its life cycle.

One could even call this the fundamental atomic unit of evolution: *creativity and the birth of a newly integrated whole*.

We'll keep this in the back of our mind for when we get to the Biblical narrative section as this will provide a surprisingly effective intuition we're looking for to get a felt-sense of the transformational arcs that take place in the Biblical literary structure and stories.

2.5 Plato, Aristotle, Pythagoras, and Genesis Integration

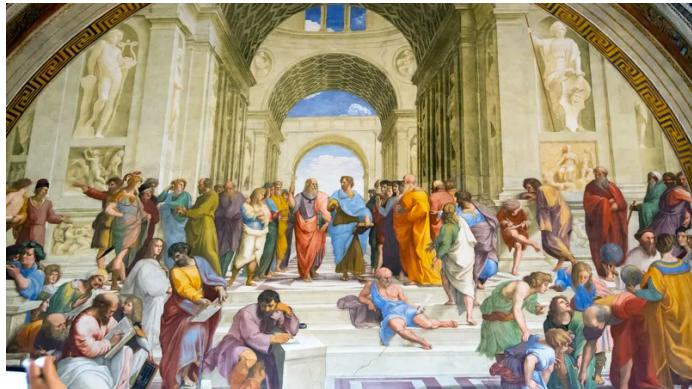


Figure 6: Famous *School of Athens* Fresco by Raphael depicting Plato and Aristotle front and center with Pythagoras in the bottom left hand corner.

Let's take a brief moment to provide some historical context on the intellectual milieu of this framework and do some integration work between ancient and modern thinking. Namely, we'll provide high-level sketches for: (1) Plato's metaphysics in *Timaeus* (2) Aristotle's four causes (3) Pythagoras' dimension-based ontology and (4) Genesis metaphysics. We won't go into full detail on these at the level they deserve but hopefully this paints a picture of the harmony and convergence of themes - between abstract vs. concrete, unity vs. multiplicity, indeterminacy vs. determinacy.

2.5.1 Process

In the context of our theory of process, these levels can be understood as follows at an abstracted level:

- **Level I:** Represents the highest, most abstract, and most unified level of nature, associated with the realm of pure potentiality and final causes.
- **Level II:** Represents the realm of raw materials and substrates, the “stuff” out of which things are made.
- **Level III:** Represents the level of form, pattern, and structure, which gives shape and definition to the raw materials of Level II.
- **Level IV:** Represents the level of manifestation, where the potentials of Level I, the materials of Level II, and the forms of Level III come together to produce actual, concrete entities and efficient causes.

2.5.2 Plato's Timaeus

- **Fire (Level I):** The most subtle and penetrating element, associated with light, heat, and energy. It represents the realm of ideas and the intelligible world.
- **Water (Level II):** The element of transformation and fluidity, associated with the realm of emotions and the sensible world.
- **Air (Level III):** The element associated with the realm of thought and the rational soul.
- **Earth (Level IV):** The most solid and stable element, associated with the physical world and the material body.

Here of course Level I represents the realm of ideal, eternal forms - the world of “being” - while Level IV represents the impermanent world of material incorporeality subject to change - the world of “becoming”.

2.5.3 Aristotle's Four Causes

- **Final Cause (Level I):** The purpose, end, or goal for the sake of which a thing exists or is done. It is the ultimate “why” of a thing. The classic example is a chair, where the final cause of a chair is to provide a place for someone to sit.
- **Material Cause (Level II):** The substance or raw material out of which a thing is made. It is the “of what” a thing is made. The material cause of a chair could be wood, metal, plastic, or any other suitable material.
- **Formal Cause (Level III):** The form, essence, or pattern that makes a thing what it is. It is the “what” of a thing, its definition or nature. The formal cause of a chair is its design or blueprint, which defines its shape, structure, and function.

- **Efficient Cause (Level IV):** The primary source of change, motion, or rest. It is the “by what” or “how” a thing comes into being. The efficient cause of a chair is the carpenter or machine that constructs it according to the design.

In this structure, we can also see the dichotomy between Potentiality (Level I) - max indeterminacy - and Actuality - (Level IV) - max determinancy - play out.

2.5.4 Pythagorean Geometric Abstractions

- **Point (Level I) [No Time, No Space]:** No dimensions. The most basic and fundamental unit, representing the origin or source of all things. It is associated with unity, simplicity, and potentiality.
- **Line (Level II) [Time-Like]:** One dimension. The line represents time - pure seriality and ceaseless transformation - the seeds of division, differentiation, and perpetual flux which inject novelty into a static, unchanging void
- **Plane (Level III) [Space-Like]:** Two dimensions. The plane represents space - the manifestation of stable orders and patterns. Whereas the line embodied the element of pure flow, the plane introduces the possibility of synchronic structure, coexisting multiplicities and geometric constraints.
- **Solid (Level IV) [Space & Time Bounded]:** Three dimensions. Represents the actual, concrete manifestation of things in the physical world. It is the realm of tangible, fully formed entities that occupy space and possess volume. The solid is the culmination of the potentiality of the point, the flow of the line, and the patterns of the plane, brought together into a stable, structured - “substantiated form”. It is the world of matter, objects, and the full expression of form in the here and now.

Personally - my favorite ontology. This served as the basis for a notable amount of Plato’s thoughts and rumor has it he learned his wares from Egyptian priests. For the more mathematically inclined, Young also provides a dimension-based ontology inspired by Pythagoras which solves some of the Cartesian frame problems. We will go through this in more detail another time as we’d like to focus on the purely scientific and empirical perspective for now for clarity of thought.

2.5.5 Genesis Metaphysics

- **Heaven (Level I):** Represents the divine perfection, the source of creation, and the ultimate goal, symbolized by light, the firmament, and the Garden of Eden.
- **Time (Level II):** Represents cyclical patterns, transformation, and renewal, symbolized by blood, wine, snakes, the feminine, and the flood.

- **Space (Level III):** Represents stable structure, boundaries, and distinctions, symbolized by bone, bread, trees, the masculine, and land.
- **Earth (Level IV):** Represents the manifest world, concrete existence, and actualization

This mapping is from Matthieu Pageau's Language of Creation.

2.6 Summarizing the Rhyme And Reason of Nature

After synthesizing the insights from natural philosophy through our simplified seven-fold model, some key patterns and themes emerge regarding the evolution and complexification of systems over time, namely: (1) the development of diversity-in-unity (2) the emergence of order from chaos (3) the movement from abstract potentiality to concrete actuality, and (4) the cyclical arc from unity through differentiation to higher-order integration and wholeness. Essentially, the evolutionary process weaves greater diversity and complexity while retaining underlying coherence and unity. Let's go through these.

2.6.1 Increase in diversity-in-unity

As systems evolve, they tend to develop greater internal differentiation and specialization of parts, while at the same time integrating those diverse elements into coherent, higher-order wholes. This can be seen in the progression from simple, homogeneous states (like single-celled organisms) to complex, heterogeneous states with many specialized subsystems (like plants and animals with diverse species in symbiotic relationships). Evolution moves towards greater diversity that is nonetheless integrated into unified, harmonious wholes.

2.6.2 Order emerging from chaos

The evolutionary process often involves the spontaneous emergence of ordered, patterned states from more disordered, chaotic initial conditions. For example, the formation of structured atoms and molecules from the primordial plasma of the early universe, or the self-organization of complex living systems from simpler chemical building blocks. Over time, nature tends to generate islands of order and neg-entropic structure against the backdrop of entropy and chaos. This is the work people like Ilya Prigogine devoted their lives to further explore.

2.6.3 Progression from abstract potentiality to concrete actuality

This one is in the spirit of Aristotle. The arc of evolution is characterized by a movement from more abstract, indeterminate states of pure potential to more concrete, determinate actual manifestations. Think of the progression from the open-ended potential of undifferentiated light to the more specified and constrained forms of matter, or the development of mature, well-defined organisms from the fluid potentiality of embryonic stem cells. Evolution actualizes and makes concrete what was initially only implicit or potential.

2.6.4 Cycles of unity, differentiation, and reintegration

Evolutionary processes often follow an arc from initial wholeness, through a phase of division and differentiation, to an ultimate reintegration at a higher level. We see this in the progression from unstructured unity (the initial singularity), to increasing multiplicity and differentiation (particles, elements, species), to an integrated diversity-in-unity (ecosystems, societies, the noosphere). The cosmic cycle begins and ends in wholeness, but the final unity is one that embraces and includes the intervening diversity.



Figure 7: A human embryo sketch by Da Vinci - quite literally the physical embodiment of the creative process of birthing a new integrated whole.

2.7 Concluding Thoughts on Our Natural Philosophy And It's Relation to Modern Scientific Enterprise

This elegant and condensed seven-fold conceptual scheme provides a powerful lens for grasping the universal patterns of unfolding and dynamic becoming across nature's myriad processes, tying our modern scientific enterprise with the intuition of the ancient Greek philosophers.

To wrap, I wanted to provide a perspective on how this relates to our modern scientific enterprise. In the modern worldview, there is a strong emphasis on studying and manipulating the tangible, measurable aspects of nature at Level IV. The incredible success of science and technology in describing and harnessing the forces of nature at this level has led to a tendency to see Level IV as the fundamental or even exclusive realm of what is “real.”

However, this perspective overlooks or downplays the essential role of the prior

levels - the realm of potentiality (Level I), the raw materials and substrates (Level II), and the world of form and pattern (Level III) - in shaping and enabling the manifest world we experience. By focusing solely on the end products without appreciating the full process of manifestation, we risk losing sight of the deeper principles and influences that underlie physical nature.

This truncated metaphysics can lead to an impoverished and unbalanced world-view. When we fail to recognize the importance of final causes (purpose), formal causes (essence), and material causes (potentiality) in giving rise to the efficient causes and concrete entities we observe, we are left with a flat, disenchanted vision of the universe as nothing but dead matter in motion, devoid of meaning and higher order.

Recovering a richer metaphysical perspective, one that encompasses all four levels and appreciates their integral relationships, can provide a more complete and satisfying understanding of nature. It allows us to see the manifest world not as a brute given, but as the fruit of an unfolding process rooted in the interplay of unity and multiplicity, potentiality and actuality. This more comprehensive vision restores a sense of depth and purpose to the cosmos.

With our scientifically-based process framework set, we will then put this through another the empirical test with our latest understanding of computational neuroscience before shifting gears and examining the Biblical narrative to see how effective this theory holds in the realm of stories from thousands of years ago.

3 Understanding Man: The Free Energy Principle, The Bayesian Brain, and Markov Blankets

A question arises after hearing the tune of evolution and seeing the process of complexification play out through nature: are the theories of organic process we walked through merely a convenient framework or does it reflect a genuine ontological structure about how the cosmos - and potentially our minds - operate? How might we put this to another empirical test? Can we bring the modern rigor of complexity science & mathematics to the conversation to establish a formal language?

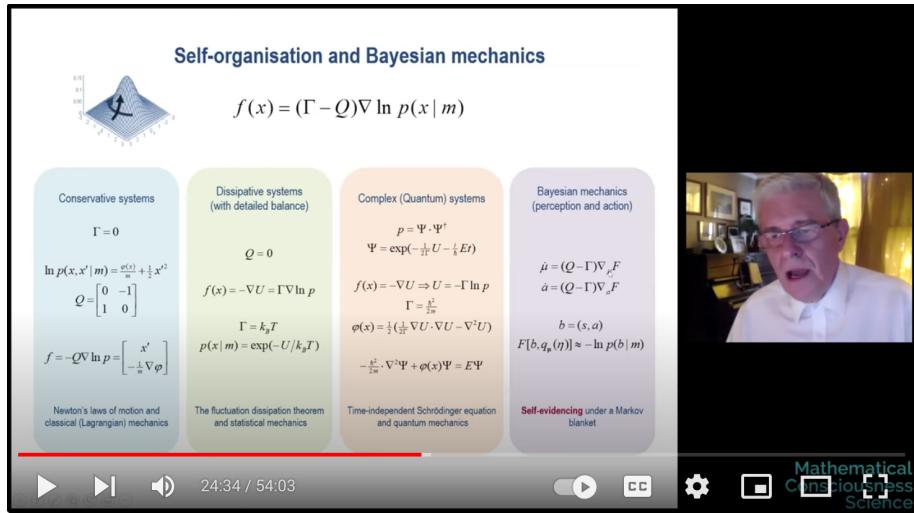


Figure 8: A snippet from Karl Friston's presentation laying out the the mathematics behind the free energy principle in the context of various domains.

3.1 The Science of Uncertainty: The Free Energy Principle

To answer these questions, the next link in our chain of argument will come from contemporary theoretical neuroscience and its paradigm-shifting discoveries about the brain's core functional architecture.

Over the past decade, an elegant unified theory has emerged portraying all neural dynamics as an ongoing attempt to minimize “free energy” - the gap between the brain’s predictive model of the world and the sensory data flowing in. It is called the free energy principle, developed by neuroscientist Karl Friston in 2010.

The free energy principle proposes that all self-organizing systems - from particles to planets, plants to people - are essentially driven by the minimization of surprise (i.e., the long-term average of prediction error). Specifically in the context of the Bayesian brain, this imperative to sustain its ordered integrity makes the brain a multi-layered prediction engine to minimize uncertainty.⁶

In this view, the fundamental imperative of any system is to minimize the difference between its internal model of the world and the actual state of the world, in order to maintain its own structural integrity and functional coherence. One can think about this as the mechanism to maintain local order. This imperative manifests as a balance between two complementary processes:

1. **Reducing Uncertainty:** Updating the internal model to better fit and predict the observed data (i.e., learning and adapting to the environment).
2. **Increasing Determinacy:** Acting on the world to make the observed data better fit the internal model (i.e., shaping the environment to match expectations).

The free energy principle can be applied across all stages of the natural process philosophy model we've just outlined, providing a single meta-model for understanding the interplay of freedom and constraint, indeterminacy and determinacy:

1. **Light & Quantum:** At the level of light and quantum particles, the inherent indeterminacy and probabilistic nature of the quantum realm reflects a state of maximum uncertainty, which is progressively reduced as particles self-organize into more stable and predictable structures (atoms and molecules).
2. **Life:** At the level of life, the emergence of agency and goal-directed behavior reflects a shift towards actively increasing determinacy, as living systems strive to maintain homeostasis and achieve their own ends by shaping their environment.
3. **Mind & Consciousness:** At the level of mind and consciousness, the development of abstraction, counterfactual reasoning, and explicit model-building reflects a new level of freedom in reducing uncertainty, as cognitive systems learn to predict and manipulate their world through symbolic representation and communication.

In each case, the free energy principle provides a unified account of how systems navigate the trade-off between freedom and constraint, exploring the space of possibilities within their given constraints while also actively shaping those

⁶Uncertainty also is a unifying theme in quantum mechanics general relativity, and while out of scope for this exercise, physicist Arthur Eddington denoted uncertainty as a common denominator to assist in bridging the two fields where the curvature in relativity is the same as the uncertainty in quantum theory.

constraints to their own advantage. The end result is a dynamic process of self-organization and emergence, in which the minimization of free energy drives the evolution of ever more complex and adaptive forms of order out of the primordial chaos.

While we won't go into the mathematical formalisms, the free energy principle has the merit of unifying a variety of branches of mathematics. Key to note is that the mathematics only works if there exists a conditionally independent external state - this will come in handy to Biblical cosmology where we find "Heaven" and "Earth" coupled together and influencing each other but still conditionally independent. Arguably, this is even a way to formalize "Love".⁷

3.2 Applied Free Energy Principle: The Bayesian Brain

Note that the free energy principle is not a hypothesis that can be directly tested or falsified through experiments. Instead, it is a guiding principle that provides a framework for understanding how self-organizing systems behave and adapt. In this sense, it is similar to other fundamental principles in science, such as the conservation of energy or the equivalence of mass and energy.

But while the free energy principle itself cannot be falsified, its implications and predictions can be tested by examining whether specific self-organizing systems behave in a manner consistent with the principle.

So let's go ahead and do that. We'll now dive into our latest understanding of how the brain itself functions through what is called the predictive processing account of the Bayesian Brain. See here for an overview by Samir Chandaria on the Bayesian Brain & Meditation for a succinct overview.

⁷To give a sense of the variety of branches based on playing with various parameters per the snippet: Newtonian conservative systems & Lagrangian mechanics, dissipative systems, quantum systems, and Bayesian statistics.

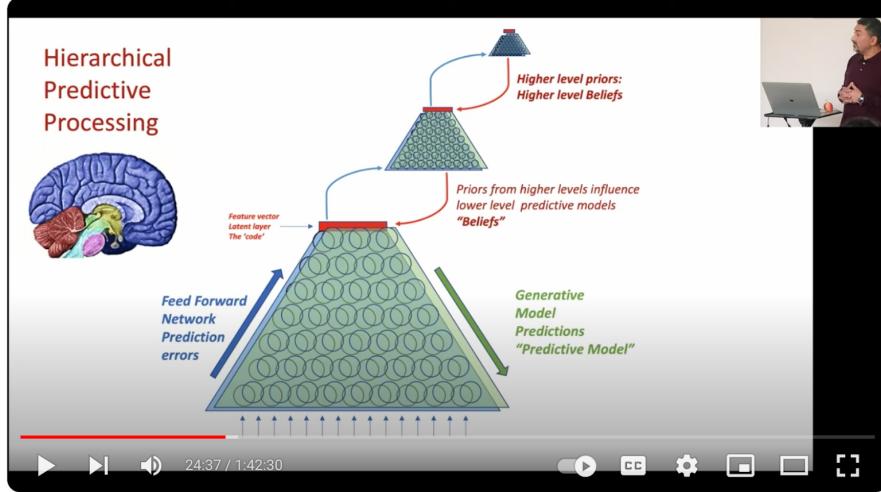


Figure 9: Snippet from Samil's Bayesian Brain & Meditation presentation which demonstrates the proposed hierarchical structure of the brain based on “feature vectors” which puts the “code” in predictive coding.

At each level of the neural hierarchy, top-down expectations about lower-level states are generated - in the green on the right as “Predictive Model”. These are then compared against bottom-up sensory inputs - “Feed Forward Network” on the left - and revised based on prediction errors.

Over the cumulative learning cycles, each post-evidence posterior output becomes instantiated as the new prior (similar to how Level VII becomes a higher-order Level I again), the brain converges on a unified coherent model that minimizes uncertainty and maximizes adaptive fit. This predictive processing architecture implies that the brain spontaneously self-organizes into multi-layered hierarchies of coherence patterns from raw sensory data.

The idea here is to get a sense for the interplay between abstract at top of our model and concrete at bottom, the differentiation and integration as data is fed up and down the bottom, the dynamics between recognition model and generative model, and self-organized complexity through an ever more integrated model of the world.⁸

⁸What's great about this too is that all complex organizations such as companies could be similarly modeled based on this and optimized through work like Mark Miller on Predictive Dynamics of Happiness & Wellbeing Imagine a world in which all complex systems were functioning at meta-stability!

3.3 Process Philosophy & Predictive Coding Isomorphism

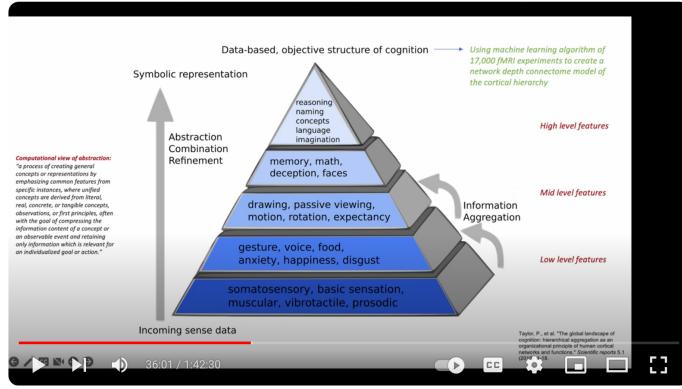


Figure 10: The empirically derived data-structures of cognition, from raw sense data to symbolic representation which can be seen as “stored order” in the cognitive sense.

What does this interplay between abstract and concrete sound like that we find empirically in our latest understanding of the brain? What’s immediately striking is how the hierarchical structure of predictive coding, with its downward flows from abstract priors to concrete percepts and upward flows of corrective feedback, directly mirrors the patterns we outlined in our process-based natural philosophy.

In the Bayesian Brain we arguably find a concrete implementation of the universal **process by which unity-in-diversity evolves - which we can call complexity, beauty or even consciousness** - in the form of a more integrative generative model of the world.

Here are a few specific mappings:

3.3.1 Perception-action cycles as micro-instantiations of the involution-evolution arc

Most fascinatingly, the perception-action cycle, where top-down predictions guide action and bottom-up sensory feedback updates the predictive models, can potentially be seen as a micro-instantiation of the involution-evolution arc. The deployment of abstract predictive models to guide concrete action parallels involution (i.e. Generative Model), while the updating of these models based on sensory evidence mirrors evolution (i.e. Recognition Model). Over repeated cycles, the generative model grows in sophistication, much like the progressive complexification in nature. We will explore this further and look to formalize it.

3.3.2 Feature Vector <> Turn

The crucial “feature vector” in predictive processing and the “turn” in process philosophy both represent a critical point where bottom-up information collides with top-down predictions, forcing a potential revision of the prior generative model. In predictive processing, the feature vector encodes salient sensory data that challenges the brain’s generative model, while in process philosophy, the Stage 4 “turn” marks the transition from the descending, materializing phase to the ascending, actualizing phase. This pivotal juncture drives iterative refinement and adaptation, enabling the system to better align with the emerging reality and transcend its previous limitations.

3.3.3 Left Brain & Right Brain <> Differentiation & Integration

In the spirit of Ian McGilchrist’s thesis from the Master & His Emissary, even the functional differences between the brain’s hemisphere the granular, analytically dissecting left-brain versus the holistic, spatially-integrated right-brain intuiting the open participatory gestalts - finds a neurocognitive analog in the polarizing interplay of multiplicity and unity.

3.3.4 Nested Hierarchical Levels <> Self-Similar Process Levels

The nested hierarchical levels of the Bayesian model mirror the self-similar sub-chiasms found in the theory of process. The hierarchical dynamics of our embodied minds elegantly enact the dialectics of emanation and return, involution and evolution through the scaling of abstract and concrete in the hierarchical model. The self-organizing, iterative “Bayesian” flow of model refinement pursued across scales is an elegant mirror - that we can explore empirically - into the metaphysical progressions by which order, novelty, and self-transcending complexity arise.

With this convergence between the hierarchical Bayesian brain models and our holistic process ontology established, we have looked to ground our integrated metaphysics within empirically-validated mechanisms governing the generative functioning of the human mind.

Poetically, we are a microcosm of the unfolding cosmic macrocosm.

3.4 The Modern Leibniz Monad: Markov Blankets

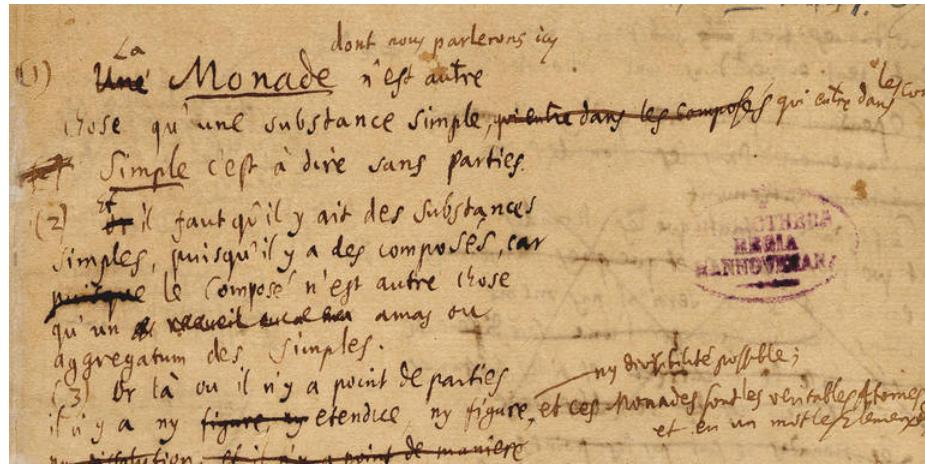


Figure 11: Some Leibniz scratch work on Monad's - the simple substance making up the atomic unit of the universe in his metaphysics.

Let's further explore the first point that we made: perception-action cycles as micro-instantiations of the involution-evolution arc.

If this is the case, can we potentially use Markov blankets to create a mathematical formalism for these dynamics? We explored this further in our prior work - Cosmic Bayesian Inference- which was the tip of the iceberg in this exercise in the context of Genesis symbolism. We now look to fold in our theory of process.⁹

To recap, at the broadest level, an entire perception-action loop can be understood as a Markov blanket, a boundary of active inference separating the embodied system from its wider environment while preserving its integrity and still allowing influences to flow between them. In other terms, a formalism for identity which captures a pocket of “emergent order” within a changing environment.¹⁰

Just like a cell membrane, it is a negotiated interface across which an autonomous region of order persists by adaptively coupling to the surrounding flux. As the system maintains its conditional independence with the environment, it iteratively updates its generative model.¹¹

⁹To tie this in with its intellectual pre-cursor, Markov blankets can be seen as the modern “Leibniz monad” but with mathematical might and a mental (perception) <> physical (action) duality.

¹⁰As an aside, we could also use Markov Blankets to model out Charles Taylor “Porous” vs. “Buffered” states from The Secular Age which could be an interesting research project.

¹¹For clarity, the predictive processing account which we walked through above can be seen as the computational dynamics that occur *within* the Markov blanket.

In our daily lives, we can think of Markov blankets as ways to describe the various communities we belong to which also have “inside” vs. “outside” dynamics - whether that’s families, friend groups, work organizations, or countries.

Let’s go back to the example of our hydroid. In these terms, the process of the hydroid can thus be seen as a process of self-similar growth and transformation which breaks (death) and subsequently expands (resurrection) the identity of the initial Markov blanket to a higher integrated whole - “scaling up” the nested hierarchical Markov blanket.¹²

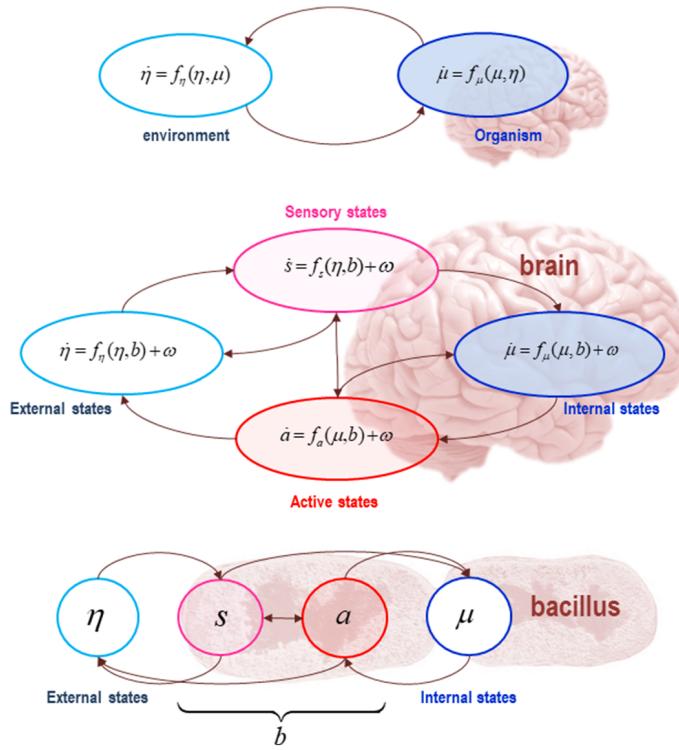


Figure 12: An overview of a Markov blanket and how it stays coupled with its environment through sensory and active states but where internal and external states remain conditionally independent.

A potential interpretation of this transformation process to higher levels of integrated wholeness in terms of Markov blankets:

1. **Initial Markov blanket [Starts as One Cell]:** A single, self-contained

¹²To make the concept of death and resurrection less daunting - this is also what occurs on a micro-scale when we go to sleep - which can be also seen as a “death” and mini-loss of body - and subsequently wake-up - “resurrection” and re-gain of bodily function.

system with minimal internal complexity, representing a unique perspective or expression of the universe.

2. **Expansion and new self-similar monad creation [Becomes Multicellular]:** The hierarchical Markov blanket expands by creating a new self-similar Markov blanket, driving a new level of organization and complexity.
3. **Defined and stable nested Markov blanket [Acquires a Shape]:** A more defined and stable Markov blanket, with increased internal complexity and organization, allowing for consolidation and refinement of internal processes.
4. **Markov blanket transition [Fastens to Ocean Floor]:** A critical bifurcation or decision point in the system's development, where a significant transformation in its Markov blanket alters its identity, relationship with the environment, and future trajectory, enabling new forms of interaction and adaptation while maintaining its essential autonomy.
5. **Nested Markov blankets expansion [Grows in Plant Like Fashion]:** The formation of a complex structure through growth and fractal replication, creating multiple nested monads within the larger system, reflecting a self-similar, fractal nature.
6. **Breaking and reforming of Markov blankets [Flower Breaks Off Into Mobile Jellyfish]:** Monad differentiation & individuation. The development of independent subsystems and their detachment from the main structure, allowing for diversification and expansion of identity, and exploration of new possibilities.
7. **Higher-level Markov blanket emergence [Fertilization]:** The combination of elements from separate systems, involving the merging or synthesis of distinct monads to form a new, higher-level monad, completing the cycle and initiating a new process of Markov blanket expansion and identity formation.

This abstraction becomes potentially powerful as it allows us to interpret this evolutionary cycle of complexification using the full power of mathematics - which we will save as a potential follow-up research project.

3.5 Human Psychology: Integrating Jungian Psychology with the Perception-Action Loop

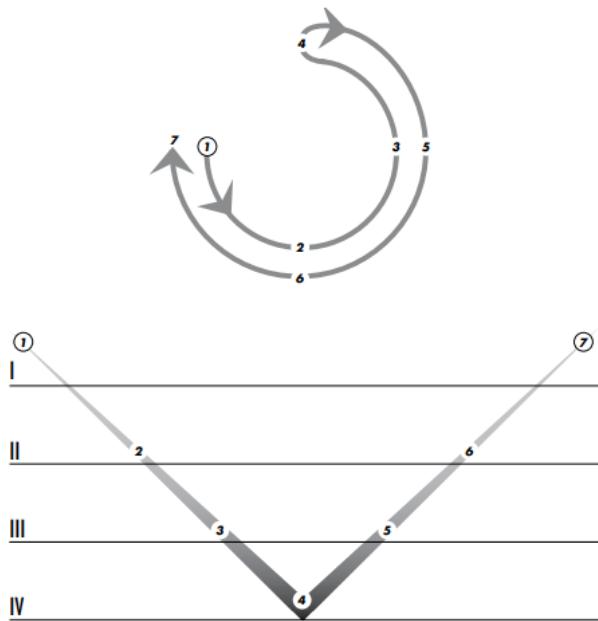


Figure 13: This chart helps relate a perception-action cycle to its corollary in our theory of process to build a bridge between our metaphysics and cognitive function.

Let's refine the mappings between the theory of process and the action-perception loops but now shift our focus to their relevance to human psychology.

We can break down the cycle of action into four key stages:

1. **Unconscious action:** This stage involves actions that are not yet incorporated into the generative model. These actions are spontaneous, instinctual, or habitual, occurring without conscious awareness or deliberation. In terms of the Markov blanket, these actions can be seen as the system's initial interactions with its environment, prior to the formation of a stable boundary.
2. **Unconscious perception:** At this stage, sensory information is received but not yet consciously processed or integrated into the generative model. This raw sensory data is the system's first encounter with the environment's feedback to its actions. In the Markov blanket formalism, this represents the initial flow of information across the blanket boundary, before it is actively interpreted or modeled.

3. **Conscious perception:** Here, the sensory information is consciously processed and integrated into the generative model. This is where the system starts to build an internal representation of its environment and its interactions, updating its beliefs and predictions based on the feedback received. In the Markov blanket framework, this corresponds to the active inference process, where the system refines its model to minimize surprise and maintain its integrity.
4. **Conscious action:** At this critical juncture, the system uses its updated generative model to guide its actions consciously. Having learned from its previous interactions and built a more accurate internal representation, it can now proactively influence its environment to achieve desired outcomes. This is the point where the system “uses” the learned laws of cause and effect to effect change. In the Markov blanket formalism, this represents the system’s ability to maintain its conditional independence by actively shaping its interactions with the environment.

Importantly, the clockwise return - our pivotal “Turn” - represents the system’s increasing ability to understand and manipulate its environment based on its learned models. In the second half of the cycle, we flip to “using the law” - deploying our updated model to guide our actions and shape our environment. This is a shift from modeling the world to actively intervening in it. It’s the point where our understanding becomes practical know-how, where our insights gain traction in the real world. This is also the center of the chiasm in the skeleton key of the Biblical narrative.

Essentially, **we can view this as the process in which consciousness - active awareness - expands** via a more complex (i.e. diversity-in-unity) integrated model of the world.

This learning cycle can be conceptualized as the dynamic interplay between “Involution / Mind” - the descending arc or counterclockwise phase of unconscious action and perception - and “Evolution / Body” - the ascending or clockwise phase of conscious perception and action.

To give an felt-sense of this process in relatable terms, these steps can then be explicitly mapped to our four levels of process using Jungian psychology:¹³

- **Intuition [Unconscious Action] (Level I - Point - Fire - Final Cause):** Intuition represents the realm of pure potentiality, unconscious impulses, and instinctive action. It provides the source of meaning and direction for the psyche.

¹³This is also inspired by Young’s work. He breaks out this out into two axes - “Mind” which represents Level I (Intuition) and Level III (Intellect) which can be thought of more abstract + “Body” which represents Level II (Emotion) and Level IV (Sensation) which can be thought of as more concrete. See Geometry of Meaning for more detail.

- **Emotion [Unconscious Perception] (Level II - Line - Water - Material Cause):** Emotion represents the realm of subjective, unconscious perception and the flow of psychic energy. It provides the raw material of our psychological experience.
- **Intellect [Conscious Reaction] (Level III - Plane - Air - Formal Cause):** Intellect represents the realm of conscious thought, logic, and rational understanding. It provides the mental structures and forms that shape our conscious experience.
- **Sensation [Conscious Perception] (Level IV - Solid - Earth - Efficient Cause):** Sensation represents the realm of concrete, conscious perception and the direct apprehension of the physical world. It represents the actual manifestation of our psychological processes in the world of matter.

This mapping suggests that “action” - hence the name active inference - is indeed the fundamental unit of human psychology. Our actions shape our perceptions which condition further actions in an ongoing & self-referential loop.

This has an Aristotelian ring to it too (i.e. “*we are what we repeatedly do*”). By bringing conscious awareness to this process, we can gain increasing control over the cycle, reprogramming ourselves in alignment with our highest aspirations.

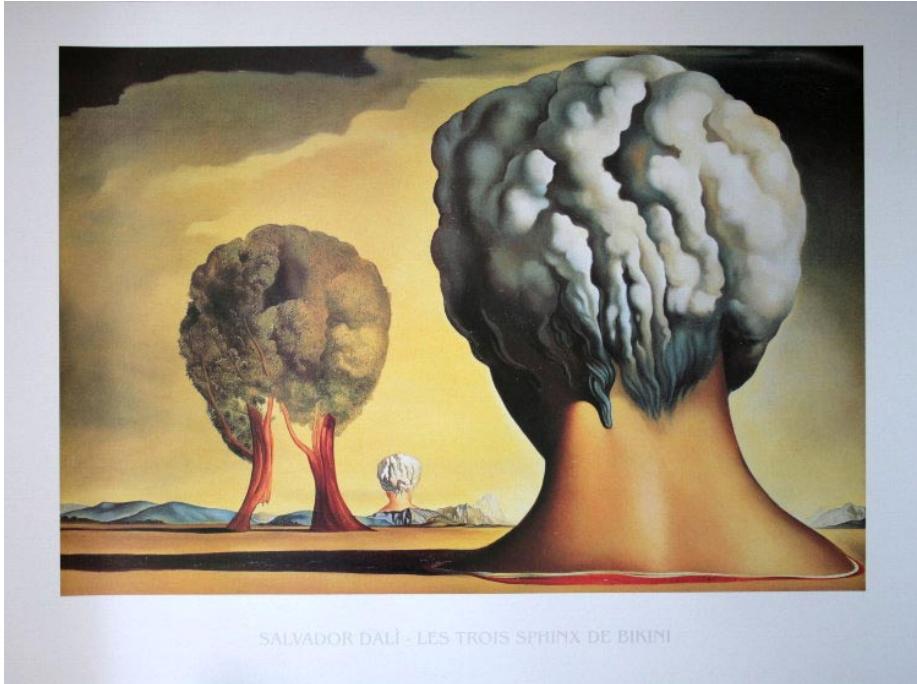


Figure 14: *Les Trois Sphinx De Bikini* by Salvador Dali.

3.6 Conclusion

In this section, we have discovered parallels between the principles of process philosophy, the patterns of involution and evolution in nature and myth, and the latest theories of brain function and cognition. The free energy principle and the predictive processing account of the Bayesian brain reveal how the mind's hierarchical architecture mirrors the nested, self-similar structure of the unfolding cosmos.

Perception-action cycles can be seen as micro-scale enactments of the involution-evolution arc, with Markov blankets providing a mathematical formalism for understanding the formation and transformation of systemic boundaries and identities. Applying these insights to human psychology, we can map the learning cycle onto the four stages of process philosophy and the archetypal functions of Jungian psychology. Similar to how nature complexifies over time through an increase in unity-in-diversity, so too do human's internally via our internal generative model of the world.

This integrated framework suggests that action - similar to the turn in process philosophy and chiasm in the Biblical narrative (which we will explore next) - is the fundamental unit of psyche, shaping perception which in turn guides further

action in a self-referential spiral of increasing complexity and consciousness. By bringing awareness to this process, we can participate more creatively in the cosmic dance of involution and evolution and reimagine our role in the grand adventure of cosmogenesis.

Follow-Ups: How can we bridge the free energy principle and geometry? How is the Markov blanket formalism reconciled with the predictive processing account in more detail? Can we map the math of breaking and subsequent making of higher-order Markov blankets? Can we continue the connectivity to the work of Charles Taylor on porous vs. buffered? Can we improve the clarity of the perception-action cycle and theory of process mapping - a key link in the bridge? Can we map the full seven-stage arc using a hierarchical Marvkov blanket formalism in more detail? How does this map to Whitehead's mental and physical poles?

4 A Profound Coherence: Organic Process and The Biblical Meta-Narrative



Figure 15: *Garden of Eden with the Fall of Man* by Peter Paul Rubens and Jan Brueghel the Elder

4.1 On The Power And Purpose Of Stories

Having explored the evolutionary process in nature and the brain, the question naturally arises: Can we discern similar themes in the myths and stories that have shaped human civilizations throughout history? Can we find in works from thousands of years ago the same processes of evolutionary unfolding that occur in both nature and the recent self-organizing complexity occurring in our minds? Do the themes we explored in nature and man find unifying resonance?

Stories serve a profound purpose in human cultures. They act as a binding glue, enabling societies to cohere around shared generative models of the world. The great mythic traditions of civilizations worldwide, despite their diverse imagery and plotlines, seem to point to perennial truths about the deep structures of nature.

While a rich deep dive of other cultural myths is very much warranted, we will focus our efforts on the foundational narrative of the Western tradition, the Bible, of which key stories have been beautifully brought to life by the greats such as Milton in *Paradise Lost* and Dante in *Divine Comedy*. ¹⁴

Our focus will be more analytical in nature - beneath the literal content of these ancient scriptures, can we uncover a quiet meta-narrative aligned with process

¹⁴ Jordan Peterson does a great job in doing a deep analysis of myths in his 1999 book *Maps of Meaning*.

philosophy core insights of organic growth, symmetry, self-similarity and complexity over time?

When I was first exposed to the Bible through mandatory classes in high school and college, I like many folks of my millennial generation I would imagine, dismissed it as scraps of cultural narrative tales and moral musings, debunked by the latest discoveries in science such as the Big Bang. But what if there is an underlying internal logic and beauty to this ancient story? And in an Einstein imagination thought experiment in the context of thinking about the Bayesian Brain, if each character represented a neuron, what would that “mind” look like?

By carefully parsing the Bible’s chiasmatic internal logic, we remarkably find a seven-fold structure permeating through the entirety of the text, in both language, plot structure, and even the literary architecture of the entire canon itself. Across nested hierarchies, the works emulate the chiasmatic process themes of existential involution, turn, and conscious evolution.

We will be cautious about overfitting the data here. But let us be clear - if this has merit, which seems promising, this discovery would be absolutely fascinating. The biblical works from thousands years ago, *far from being scraps of cultural and moral tales, are logically and purposefully designed and embed in a meta-narrative patterns similar to both nature & the self-organizing complexity of our minds* only recently empirically derived with our latest cutting edge computational neuroscience.

The full body of evidence suggests an intimate continuity of profound metaphysical insight flowing unbroken from primordial civilizations into our present-day philosophical vanguard all the way up to our own embodied existence, connecting all of us in a cosmic symphony. It is an invitation to read the Bible with fresh eyes.

Could religion and science be harmoniously wed together - the ultimate union of centuries of scientific progress and millennium of narrative insight into the human condition? The implications are profound. It could open up an entirely new way of seeing the world in an enchanted way. The Bible could be, not just metaphorically but very literally, the story of us. What if you are in fact, Adam, the Garden of Eve is your mother’s womb, the Cherubim guarding the gates are her uterus walls, and the Biblical narrative is the unfolding story of your very life?

Impossibly hard to fathom even as a simple counterfactual in our secular world. Perhaps, then, the Bible is indeed the ultimate Generative Model. AGI that has solved the hallucination and alignment problem.

Our plan here will be to initially provide a case for Genesis-inspired process themes across the various levels of the story, drawing predominately on Michael

Bull's work from *Biblical Matrix*. This type of work extends the branch of "systematic typology" - "big picture" interpretations with a more explicit interpretation of symbols - via the work of theologians like James Jordan (Through New Eyes) and Peter Liendhart. Subsequently, once we've established the connectivity between process philosophy and the deep underlying structure of the Bible, we will then use this mapping to provide a predicting processing account of Biblical narrative including the Christological story arc.



Figure 16: Geometric fractal art by MS Escher.

4.2 Ripples from Genesis: Fractal-Like Chiasms Across Symbolism and Narrative

Our initial inspiration here comes from Michael Bull's book *The Biblical Matrix*, with online introductory texts found at Reading the Bible in 3D and Moses and The Revelation. He posits that the Bible contains an internal logic that is often overlooked given our linear rationalist thinking and lack of discernment for literary musicality & symbolism. To unlock the understanding of the Bible, all we need is to understand a skeleton key hiding in the first chapters of Genesis.

This skeleton key is a "shape" - a sevenfold chiasmatic with an emphasis on a pivotal "turn" at the center, similar to the "V" formation of Geese. There and back again. The Bible is one note, one motif - the chiasm - all played at different spatial scales. This "skeleton key" - the seven-fold chiasm - unlocks the new interpretation of reading of the Bible.

He finds this same chiasmatic pattern appearing in a self-similar, fractal-like manner across the work - from Genesis most obviously, literary structure, Tabernacle construction, Festivals, sacrifice, worship, to subplots & overarching plots.

This theme occurs in the very language, in the narrative arcs, and in the literary architecture of the Bible as a whole. In a Goethean fashion - seed, tree and branch are imprinted with the same pattern.

This also has notable implications on the way we understand parts vs. whole - far from the dominant reductionist paradigm which dissects parts into oblivion, *the part is itself a whole and reflects the entirety of the whole*. As William Blake says beautifully states in one of favorite poems, *Auguries of Innocence*: “To see a World in a Grain of Sand. And a Heaven in a Wild Flower. Hold Infinity in the palm of your hand. And Eternity in an hour.”

As a caveat before we dive in, I will be the first to admit that I am not a Biblical expert and the world of Biblical interpretation is very much new to me. My initial reaction is that Bull can find himself extending his pattern recognition in stretch ways at times, but there is indeed a very deep - and what I can only imagine is often overlooked - insight that he's touched on this singular refracted chiasmic motif. It's very much a fascinating thread to pull further.¹⁵

X	COVENANT	CREATION	TABERNACLE	SACRIFICE	FESTIVALS	WORSHIP	DOMINION
蝘	TRANSCENDENCE	DAY 1	ARK	Initiation	Sabbath	Call	Creation
ꙗ	HIERARCHY	DAY 2	VEIL	Delegation	Passover	Confession	Division
ꙗ	ETHICS (PRIEST)	DAY 3	ALTAR & TABLE	Presentation	Firstfruits	Praise	Ascension
ꙗ	ETHICS (KING)	DAY 4	LAMPSTAND	Purification	Pentecost	Word	Testing
ꙗ	ETHICS (PROPHET)	DAY 5	INCENSE	Transformation	Trumpets	Offerings	Maturity
ꙗ	OATH/SANCTIONS	DAY 6	MEDIATORS	Vindication	Atonement	Communion	Conquest
ꙗ	SUCCESSION	DAY 7	SHEKINAH	Representation	Booths	Commission	Glorification

Figure 17: Per Bull, this seven-fold theme started in Genesis seeps its way into a variety of various narrative elements within the Biblical story.

¹⁵ Also, in terms of addressing any potential concerns of circularity in argumentation - while Young may have been inspired by Genesis 1:1 in laying out his theory of process, he admits he was no “Biblical Scholar,” there was no mention of the depth of this chiasmic structure at both micro-granularity and macro-structure, no mapping to symbolism, and no discussion of the nature of Christ as a potential “Turn” in the 4th Chapter of the Gospel. This makes us believe that the true depth and significance of this seven-fold structure was overlooked - or at the very least not touched on at the depth it deserves.

4.3 Mapping the Biblical Chiasmus Onto the Seven-Stage Arc

While we shouldn't be surprised given the Genesis inspiration, the seven-stage arc of creation, with its phases of existential involution, the turn, and conscious evolution, finds a remarkable parallel in the chiasmus structure of the Biblical narrative. But the question is - how deep does this structure go?

We find this structure not simply in the Genesis creation story but throughout the entirety of the literary and narrative arcs through "forming/priestly" and "filling/kingly" dynamics that pivot around the "center" of the chiasmus. Very much like both our "turn" in process philosophy and "feature vector" in predictive coding.

We will first begin by exploring it through the symbolism before proceeding to the literary structure.

1. Existential Involution <> Forming/Priestly

Existential involution, which represents the progressive condensation of potential into constraints, finds its parallel in the "Forming/Priestly" dynamics of the Biblical narrative. This refers to Creation, Division, and Ascension and Days 1 to 3 of Genesis. In the creation story, God's "top-down" agency establishes the fundamental structures of the cosmos, mirroring the arc of involution where infinite potential becomes increasingly constrained as it manifests in specific forms. The forming/priestly dynamic is also reflected in the symbolism and imagery throughout the Biblical narrative, such as the Tabernacle and Temple and the Mosaic law.

2. The Turn <> Center of Chiasmus

The critical turning point at the center of the seven-stage arc, where involution shifts to evolution, is mirrored by Day 4 in the Genesis creation story and "Testing" in Bull's terminology. This represents a shift from the forming/priestly work of the first three days to the filling/kingly work of the last three days. This typically in the narrative is in the form of confronting sin. The turn marks a turning point where the focus shifts from the creation of inanimate structures to the emergence of living beings that can respond to and participate in God's creative purpose.

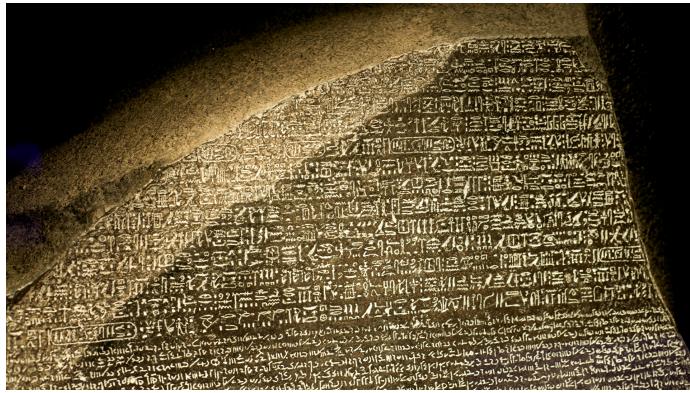
3. Conscious Evolution <> Filling/Kingly

Conscious evolution, which represents the progressive emergence of new forms of freedom and creativity, finds its expression in the "Filling/Kingly" dynamics of the Biblical narrative. This maps to Maturity, Conquest, and Glorification. In Genesis, God fills the structures of creation with animals and humans who are blessed to "be fruitful and multiply." This kingly work of proliferation and diversification mirrors the arc of evolution, where new possibilities and forms of agency emerge within the constraints established by the preceding stages. The filling/kingly dynamic is also evident

in the symbolism and narrative arcs through symbolism of multiplicity and higher-levels of integrated wholeness.

By mapping these three phases of the seven-stage arc onto the chiasmus structure and recognizing their symbolic expressions throughout the Biblical narrative, we can discern a deep coherence between the patterns of creation and the unfolding of history. The forming/priestly and filling/kingly dynamics, rooted in the very structure of the cosmos, are recapitulated in the lives of individuals, communities, and the overarching story of redemption, suggesting that the Biblical narrative is a profound revelation of the universal principles governing the dynamics of growth, transformation, and meaning-making.

4.4 Our Modern Rosetta Stone: Mapping Science to Biblical Symbolism



Let's touch on symbolism in particular. While the below will be dense with Bull's synthesis of Biblical symbolism language, the idea will be to get a high-level sense of the rhythm for each section. Here I'll bring the life cycle of our little hydroid, restated and mapped again to provide our scientific Rosetta stone: (1) starts as one cell; (2) becomes multicellular, (3) acquires a shape (identity) (4) fastens to the ocean floor (5) grows in plant-like fashion (6) flowers break off into mobile jellyfish and (7) fertilization.

- **1) Creation [Starts as One Cell]:** This step concerns the initiating "Word" from God to man. It is the light on Day 1 of Creation, the Tablets hidden in the Ark, or a stagnated Sabbath rest (slavery in Egypt) that the Lord comes to disturb with a new cycle so a better rest may be given. Cycles begin with someone speaking.
- **2) Division [Becomes Multicellular]:** Find a firmament, a robe, something torn in two - splitting the waters on Day 2 of Genesis. Concerns the

Covenant “Head”. It is a sackcloth as a symbol of mourning for sin or the tearing of a robe as a symbol of grief. It is death in the darkness of the Passover. It is a people torn in two or a call for a journey, an exodus of those called to divide those who are not called. Themes of multiplicity

- **3) Ascension [Acquires a Shape]:** Concerns the Covenant “Head”. Fundamentally singular. Firstfruits of Harvest, Moses ascending Sinai to receive the Law, the Bronze Altar is the mountain rising out of the sea, Moses is the new Adam submitting to God as grain and fruit plants, a promise of future bread and wine. Motifs are related to housebuilding, gold and silver temples, and a promise to be fulfilled at “Glorification”. These all relate to the reestablishment of order
- **4) Testing [Fastens to Ocean Floor]:** Find references to sun, moon, stars as heavenly or earthly rulers. In the garden, Satan as a corrupted ruler tested Adam and usurped the authority Adam would have received had he been faithful. The main theme of this is the testing in the wilderness and head-on confrontation of sin.
- **5) Maturity [Grows in Plant-Like Fashion]:** Concerns the Covenant “body” and fundamentally plural. It concerns armies or hosts and pictures multitudes and unlikely companions that are tied together, birds and fish, incense clouds, brothers and soldiers, cold hard cash. This step fills the firmament formed on Day 2. It is also the forming of the “Eve” body for the Adam “head”. Adam is singular, but Eve, mother of all, is plural. It is a cloud ascending to God, a shining entity that acts as one, a “collective noun” unified by the Spirit under the Covenant head. Symbols of a higher level of integrated wholeness
- **6) Conquest [Flowers Break Off Into Mobile Jellyfish]:** References to Adam’s high priesthood: he carries the Covenant people from Maturity into glorification as precious gems on his bosom, via the opened veil through which the High Priest would pass once a year. The “Laver” is the most important symbol in Conquest, mirroring the Red Sea at Division, water is a recurring motif here, everything from the Jordan River to New Covenant baptism. It is the ascension of the saints to stand on the crystal sea before God’s throne and govern as a corporate mediator.
- **7) Glorification [Fertilization]:** This final step not only brings the cycle to an end but sets up the next one. It enthrones the completed church, head and body (captain and army) as a corporate mediator for the nations. At Tabernacles, here you will find vines and fig trees, wine and oil. It is an “ingathering” and a greater feast. This new marriage of heaven and earth produces godly offspring. They are commissioned and sent out to dominate the world as new Creation-words. They are pictured as children, letters, rivers, or even swift horses. Glorification is both a rest for the faithful parents/conquerors/overcomers of the old cycle and a new Light that initiates a Greater Creation week.

Utterly amazing! With the two side by side, I hope you can see the similarity and underlying organic undertones. Simply put, the Bible - is, arguably, a fractal-like and internally-consistent living & growing organism of humanity. Note that the entire structure of the Biblical narrative is based on this Chiastic structure from micro symbolism to macro literary structure - meaning that this process of transformation occurs across all scales!

Follow-up Question: Can we formalize the symbolism in a more rigorous manner? How does the language of symbolism change and evolve throughout the narrative?

4.5 From Micro to Macro Structure: Breaking Down The Overarching Literary Architecture

Let's now visit the literary architecture that suggests an overarching meta-narrative which continues to stay aligned with our theory of organic process and our "part reflects the entirety of the whole" view.

4.5.1 The Seven Hebrew Words of Genesis 1:1

The opening verse of the Bible, "In the beginning God created the heavens and the earth," contains exactly seven words in the original Hebrew. The central word, the untranslatable particle "et" - the first and last letters of the Hebrew alphabet - serves to join the two sets of three words on either side into a unified statement, just as the Menorah's - a seven-branch hampstead - central shaft joins its outer branches.

4.5.2 The Seven Days of Creation

This is the one we are all familiar with. The creation account unfolds through a series of seven days, with the first three involving a "forming" of environments (light, firmament, dry land and vegetation), the last three "filling" those environments with inhabitants (heavenly bodies, birds and fish, land animals and humans), and the central fourth day marking a turning point with the creation of the sun, moon, and stars to govern the cycles of time. This 3-1-3 pattern reflects the process of emanation, turn, and emergence. Notice the symmetry - the heavens of Day 1 were filled on Day 4, the sky and sea of Day 2 were filled on Day 5, the Land of Day 3 was filled on Day 6.

With our framework:

1. **Creation [Starts as One Cell] - Day 1:** God speaks light into existence (Genesis 1:3-5), initiating the creation process. This light represents the divine spark, the initial emanation from which all else will unfold.
2. **Division [Becomes Multicellular] - Day 2:** God creates the firmament, separating the waters above from the waters below (Genesis 1:6-8).

This division sets the stage for the further differentiation and development of creation.

3. **Ascension [Acquires a Shape] - Day 3:** God gathers the waters together and causes dry land to appear (Genesis 1:9-10). He then commands the earth to bring forth vegetation (Genesis 1:11-13). This step represents the emergence of distinct forms and the establishment of order within creation.
4. **Testing [Fastens to Ocean Floor] - Day 4:** God creates the sun, moon, and stars to govern the day and night and to mark the seasons (Genesis 1:14-19). These heavenly bodies represent the establishment of cyclical patterns and the testing of creation's stability and resilience.
5. **Maturity [Grows in Plant-Like Fashion] - Day 5:** God creates the birds of the air and the fish of the sea (Genesis 1:20-23). This step represents the filling of the environments created on Day 2 and the increasing complexity and diversity of life.
6. **Conquest [Flowers Break Off Into Mobile Jellyfish] - Day 6:** God creates land animals and humans (Genesis 1:24-31). The creation of humans in God's image represents the pinnacle of creation and the establishment of a divine-human relationship. Humans are given dominion over the earth, reflecting their role as co-creators and stewards.
7. **Glorification [Fertilization] - Day 7:** God rests from His work of creation (Genesis 2:1-3). This Sabbath rest represents the completion and glorification of creation. It sets the stage for the ongoing relationship between God and His creation, and the potential for future growth and development.

DOMINION

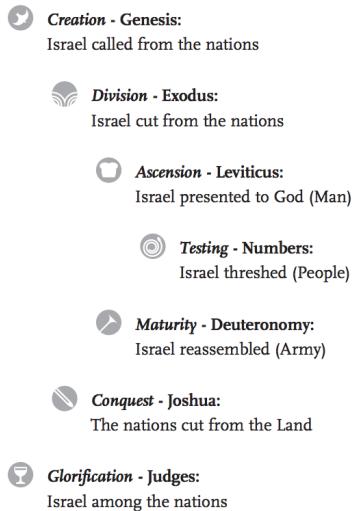


Figure 18: Bull's seven-fold structure for the first seven books of the Old Testament.

4.5.3 Full Narrative Cycle: The First Seven Books of Old Testament

The Bible's first seven opening books exhibits a similar narrative chiastic structure. The seven books in the first part of the Old Testament exhibit a chiastic structure that mirrors process philosophy themes of emanation, turn, and emergence. In Genesis, God creates a people through the patriarchs. Under Moses in Exodus, He separates the people to Himself. Leviticus describes the institution of the priesthood and the Law to draw near to God. Numbers represent a turning point, where the Israelites are tested in the wilderness. Deuteronomy sees Moses repeating the Law to the next generation. In Joshua, the people enter into God's promises under Joshua's leadership. And in Judges, Israel rules over the new Land that God had promised, even though they fail miserably and a new beginning is required.¹⁶ With the skeleton key:

1. **Creation [Starts as One Cell] - Genesis:** Israel called from the nations. The book of Genesis begins with the creation of the world and humanity (Genesis 1-2). God speaks the universe into existence, initiating the cycle of creation. The stories of the patriarchs - Abraham, Isaac, and

¹⁶Directly from Bull.

Jacob - represent the formation of God's chosen people, Israel, as they are called out from the nations to be a blessing to all peoples (Genesis 12:1-3).

2. **Division [Becomes Multicellular] - Exodus:** Israel cut from the nations. In Exodus, God calls Moses to lead the Israelites out of Egypt (Exodus 3-4). The ten plagues and the Passover (Exodus 7-12) divide the Israelites from the Egyptians, and the parting of the Red Sea (Exodus 14) separates them from their past, setting them apart as a distinct nation cut from the surrounding peoples.
3. **Ascension [Acquires a Shape] - Leviticus:** Israel presented to God (Man). Leviticus focuses on the institution of the priesthood and the giving of the Law (Leviticus 1-7, 11-27). These instructions shape the identity and worship practices of the Israelites, establishing a new order for the covenant community. Through the sacrificial system and ritual purity laws, Israel is presented to God as a holy nation, set apart for His purposes.
4. **Testing [Fastens to Ocean Floor] - Numbers:** Israel threshed (People). The book of Numbers chronicles the Israelites' wilderness journey, where they face numerous tests and challenges (Numbers 11-14, 16-17, 20-21, 25). These trials expose their weaknesses and lack of faith, highlighting the need for trust in God's providence. The threshing process refines and purifies the people, preparing them for their future inheritance.
5. **Maturity [Grows in Plant-Like Fashion] - Deuteronomy:** Israel reassembled (Army). In Deuteronomy, Moses repeats the Law to the new generation of Israelites (Deuteronomy 1-30). This repetition emphasizes the importance of obedience and the transmission of God's commands from one generation to the next, fostering spiritual maturity and unity among the people. Israel is reassembled as a unified army, ready to conquer the Promised Land.
6. **Conquest [Flowers Break Off Into Mobile Jellyfish] - Joshua:** The nations cut from the Land. The book of Joshua depicts the Israelites' conquest of the Promised Land under Joshua's leadership (Joshua 1-12). The crossing of the Jordan River (Joshua 3-4) and the battles against Jericho and other Canaanite cities (Joshua 6-11) represent the Israelites' victory over their enemies. The nations are cut off from the land as Israel takes possession of their God-given inheritance.
7. **Glorification [Fertilization] - Judges:** Israel among the nations. The book of Judges shows the Israelites settling in the Promised Land and the challenges they face in remaining faithful to God (Judges 2-16). The cycles of sin, oppression, repentance, and deliverance in Judges demonstrate Israel's struggle to maintain their distinct identity among the surrounding nations. Despite their failings, God continues to raise up deliverers and

preserve His people, foreshadowing the ultimate glorification and reign of Israel among the nations.



Figure 19: *Moses with the Tables of the Law* by Guido Reni

4.6 Narrative Deep Dive: The Story of Exodus

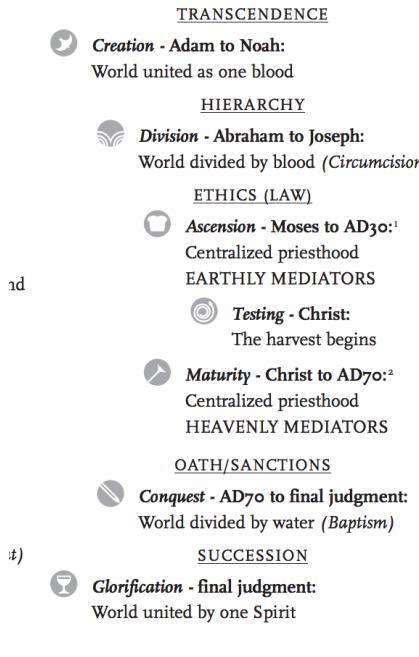
As an example deep dive, let's go through the story of Exodus applying this framework and see if it holds. This arguably is more tenuous as narrative flows are subject to a wider interpretation but let's see if we can parse out some resonance:

- 1. Creation [Starts as One Cell]:** In Exodus, this stage is represented by the Israelites in slavery in Egypt (Exodus 1:8-14). The call of Moses through the burning bush (Exodus 3:1-10) is the initiating Word from God, disturbing the stagnated state of the Israelites and beginning a new cycle of redemption.
- 2. Division [Becomes Multicellular]:** The ten plagues (Exodus 7-12) and the Passover event (Exodus 12:1-30) represent the division stage. The plagues tear apart the Egyptian society, and the Passover divides the Israelites from the Egyptians. The parting of the Red Sea (Exodus 14:21-31) further emphasizes this division, separating the Israelites from their past and setting them on a journey towards the Promised Land.
- 3. Ascension [Acquires a Shape]:** Moses ascending Mount Sinai to receive the Ten Commandments and the Law (Exodus 19-20) represents

this stage. The giving of the Law establishes a new order for the Israelite community, shaping their identity as a covenant people. The instructions for building the Tabernacle (Exodus 25-31) also relate to the theme of housebuilding and the promise of God's presence among His people.

4. **Testing [Fastens to Ocean Floor]:** The Israelites' journey through the wilderness is marked by various tests and challenges, such as the lack of food and water (Exodus 16-17), the battle with the Amalekites (Exodus 17:8-16), and the golden calf incident (Exodus 32). These tests prove the Israelites' faith and obedience to God, as well as expose their weaknesses and need for divine guidance.
5. **Maturity [Grows in Plant-Like Fashion]:** The construction of the Tabernacle (Exodus 35-40) represents the growth and maturity of the Israelite community. The Tabernacle serves as a visual representation of the Israelites' unity under God's covenant, with the various elements of the Tabernacle symbolizing different aspects of their relationship with God. The cloud of God's presence covering the Tabernacle (Exodus 40:34-38) signifies the higher level of integrated wholeness achieved by the community.
6. **Conquest [Flowers Break Off Into Mobile Jellyfish]:** Although the conquest of the Promised Land is not directly depicted in Exodus, the book sets the stage for this future event. The Passover and the crossing of the Red Sea foreshadow the Israelites' eventual victory over their enemies and their entrance into the Promised Land. The Levitical priesthood, established in Exodus, also serves as a mediator between God and the people, pointing towards the future role of the Church as a corporate mediator.
7. **Glorification [Fertilization]:** The final stage of glorification is hinted at in Exodus through the promises of God to bring the Israelites into a land flowing with milk and honey (Exodus 3:8, 17). This promise points to the ultimate fulfillment of God's covenant with His people, where they will dwell in His presence and experience the fullness of His blessings. The Exodus story sets the foundation for the future cycles of redemption and glorification in the biblical narrative.

HISTORY



¹ The death of Christ, tearing of the Temple Veil.

² The destruction of the Jewish Temple and Jerusalem.

Figure 20: Overview of chiasm structure applied to the entire arc of history.

4.7 The Big Picture: The Menorah And The Seven Books of The Biblical Canon

THE 7 DIVISIONS OF THE BIBLE						
1 Law	2 Prophets	3 Writings	4 Gospels	5 Acts	6 Epistles	7 Revelation

Remarkably, the literary structure of the entire Bible - Law, Prophets, Writings in Old Testament and Gospels, Acts, Epistles, and Revelation in New Testament - mirrors our seven-fold structure. Note this also maps to the design of the Menorah, which the Israelites were instructed to construct as a seven-branched lampstand.¹⁷ This is similar the seven-fold process from our natural philosophy.

¹⁷For further consilience between the Menorah and literary architecture, The 22 books of the Old Testament correspond to the 22 almond ornaments on the Menorah's outer branches - and 22 Hebrew letters, while the 27 books of the New Testament match the Menorah's 27

At the center of the canon, the four Gospel accounts of the life of Jesus - the fourth book in the canon - forms the pivotal turning point and interpretive key for the whole Biblical narrative. The incarnation of Christ as the critical "turn" - with the resurrection being the "turn within the turn" - initiates a return arc to a reintegration into larger wholes and recapturing of the initial freedom lost, namely through the creation of the Church.

This is strikingly congruent to Level IV and our broader process theory! We can think of the entire Gospel's account as God - through Christ - *Fastening to the Ocean Floor* of the constrained deterministic multiplicity of humanity to then spark the negentropic process of higher integrated wholeness. We will explore the Gospel accounts later.

Let's apply our process framework to the entire Canon:

1. **Creation [Starts as One Cell] - Law (Torah):** The first books of the Bible represent the creation and establishment of God's covenant people. God initiates the cycle by calling Abraham and forming the nation of Israel, separating them from the surrounding nations to be a holy people.
2. **Division [Becomes Multicellular] - Prophets (Nevi'im):** The Prophetic books, including the Former Prophets (Joshua, Judges, Samuel, and Kings) and the Latter Prophets (Isaiah, Jeremiah, Ezekiel, and the twelve Minor Prophets), chronicle Israel's history, struggles, and call to repentance. They depict Israel's division and exile, as well as the promise of future restoration, ultimately pointing to the coming of the Messiah.
3. **Ascension [Acquires a Shape] - Writings (Ketuvim):** The Writings, including books like Psalms, Proverbs, and the Megillot, represent the Israelites' reflections on their history and relationship with God. They express the struggles, victories, and wisdom gained throughout Israel's journey, serving as a testimony to God's faithfulness. These books shape Israel's identity and worship, presenting them as a people devoted to God.
4. **Testing [Fastens to Ocean Floor] - Gospels:** The four Gospels (Matthew, Mark, Luke, John) form the central turning point of the biblical narrative. Jesus, as the embodiment of Israel and the fulfillment of the Law and Prophets, faces testing and temptation, ultimately leading to His crucifixion and resurrection. This represents the pivotal moment of confronting sin and death, as Jesus takes on the role of the suffering servant and the true representative of Israel.
5. **Maturity [Grows in Plant-Like Fashion] - Acts:** The book of Acts depicts the growth and spread of the early Church, as the disciples, filled

internal junctions - and 27 Greek letters. Note The Menorah foreshadows the New Testament book structure through the 27 "shaft" connections but was provided to Moses in Exodus 25:31-40 way ahead of the completion of the New Testament. Note also that the Biblical story was originally written on 49 scrolls, echoing the 7 self-similar chiasms.

with the Holy Spirit, establish communities of believers throughout the world. The Church, composed of both Jews and Gentiles, emerges as a new spiritual Israel, united in faith and mission.

6. **Conquest [Flowers Break Off Into Mobile Jellyfish] - Epistles:** The nations instructed in the ways of God. The Epistles provide guidance and instruction for spiritual growth, unity, and Christian living. They equip the Church to navigate the challenges of a fallen world and to live out its calling as a light to the nations, proclaiming Christ's victory over sin and death.
7. **Glorification [Fertilization] - Revelation:** The book of Revelation portrays the ultimate glorification of God's people and the establishment of His eternal kingdom. It depicts the final victory over sin and death, the marriage of Christ and His Church, and the creation of a new heaven and earth. This represents the culmination of the biblical story and the initiation of a new, eternal cycle, with Israel (the Church) dwelling among the nations in perfect unity and worship.



Figure 21: The *Yggdrasil* tree from Norse Mythology. With this framework, at a macro level the New Old Testament can be seen as *forming* and the bottom half of the globe, Christ and the Gospel story can be seen as the bridge, and the New Testament can be seen as *filling* and the top half of the globe.

In this light, the Old Testament represents a large-scale “forming” or involution, a progressive descent from primal unity to the multiplicity and apparent chaos of a fallen world. This represents the left side of our Arc - and potentially the Tree of Good & Evil. The New Testament then represents a large-scale “filling” or evolution, an ascent from multiplicity to unity to integrated wholeness. This represents the right side of our Arc, and potentially the Tree of Life.

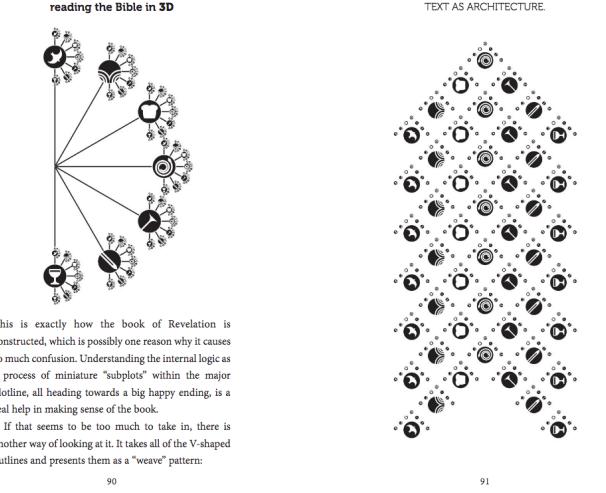


Figure 22: The fractal structure of Revelation per *Biblical Matrix*.

4.7.1 The Book of Revelation

While the book of Revelation is admittedly a bit above my pay grade and out of scope at my current understanding of the biblical narrative for now, it's fascinating to me and worth calling out that the Revelation is structured as a fractal as above. Could each node be mapped to each of the seven books of the Biblical story with Revelation providing a hyper-condensed symbolic account of the entire narrative?

4.8 Concluding Thoughts on The Naturalist Interpretation of the Biblical Narrative

As we've seen, the biblical story exhibits a remarkable coherence with the natural patterns and processes described derived via our natural philosophy and the latest understanding of the brain. Far from a fragmentary cultural artifact, the Bible texts from thousands of years ago evinces an underlying unified literary rhythm & reason across all structural levels and nested hierarchies precisely recapitulating the dynamics and patterns explored through our integrated reasoning.

The initial unity and wholeness of creation parallels the pure, undifferentiated potential of light at the beginning of the arc. The fall into sin and the resulting fragmentation of human experience reflects the progressive constraints and limitations that characterize the stages of involution, as the unbounded freedom of Eden gives way to the deterministic causality of a world under the sway of death.

Christ's incarnation, death and resurrection mark the pivotal "turn" from involution to evolution, reversing the momentum of the fall and inaugurating a new creation. Just as the emergence of life at the fourth stage of the arc introduces a new form of freedom and agency, breaking the bonds of determinism, so too does Christ's work break the power of sin and death, setting in motion the redemptive process that will culminate in the restoration of all things.

The church age and the eschaton that follow mirror the progressive freedom and reintegration of the evolutionary stages, as redeemed humanity is drawn into ever greater participation in the divine life. The increasing levels of agency and self-determination that unfold in the biological and cultural realms find their ultimate expression in the radical freedom of life in the Spirit as humans cooperate with God's purposes.

This mapping of the biblical narrative onto the 7-stage arc makes explicit the deep congruence between the dynamics of nature and the structure of scripture. The interplay of unity and multiplicity, involution and evolution, constraint and freedom that we observe in the physical world is recapitulated in the spiritual drama of creation, fall and redemption.

By embodying these archetypal patterns in its literary architecture and theological concepts, the Bible is able to resonate profoundly with the fundamental structure of nature and the existential dynamics of the human experience within it. The forming and filling that shape the biblical story are expressions of the same underlying processes that govern the natural order.

It is this coherence between the biblical narrative and the hidden telos of the cosmos that allows scripture to serve as such a powerful vehicle for meaning. By grounding its message in the ontological fabric of nature, the Bible is able to speak to the universal human condition and provide an enduring framework for understanding our place in the grand story of creation.

In this sense, the unified theory of meaning we have sketched provides a new lens for appreciating the richness and relevance of biblical narrative. By discerning the common patterns that link nature, narrative and human experience, we can begin to see how the Bible functions as a microcosmic reflection of the underlying beauty and order that permeates the whole of existence, ultimately allowing us to cultivate invaluable wisdom.

Follow-up Questions: Can we confirm the legitimacy of these literary tunes with an expert? Where are the connection stretch cases vs. legitimate similarities? Is there a simple framework to understand the fractal structure of the Biblical narrative? Can we do a more direct mapping with Young's work across the stories? Can we break out and map the symbolism to a greater level of detail?

5 22nd Century Theology: Process-Based Computational Christianity



Figure 23: A cosmic Image of Everything designed by Jon Pageau

Having established the parallels between predictive processing in the brain and the principles of process philosophy in the Biblical story, a fascinating question arises: Can we interpret the foundational narrative of Western civilization, the Bible, through the lens of predictive processing?

If the predictive processing framework maps onto process philosophy, and the Biblical narrative in turn reflects this underlying process philosophy, then it follows that Christianity itself can be understood from a Bayesian predicting processing perspective.

Similar to how Aquinas bridged Aristotelianism and Christianity, our modern 21st century exercise looks to bridge process philosophy & predictive processing with Christianity.

This is the initial preliminary sketch for that bridge. I'd imagine this is completely novel so this is very much an initial attempt subject to iteration but hopefully this provides a unique initial interpretation to paint a picture of the possibilities.

As an important caveat, this is by no means meant to distill the richness of this perennial story into a rigid computational account - the aim is to simply offer a heuristic interpretation in a modern light to aid in understanding.

5.1 The Biblical Narrative as Shepherding Order Out of Chaos

Let's recall the Biblical narrative but now reframe it in complexity terms. The biblical narrative can be seen as a powerful mythic portrayal of the fundamental processes by which order emerges from chaos in complex self-organizing systems. From a complexity theory perspective, the arc of the biblical story mirrors the evolutionary trajectory of nature itself - a journey from initial unity to fragmentation and multiplicity, and then to a higher-order reintegrated wholeness.

In the beginning, the Garden of Eden represents a state of perfect unity, wholeness and intimate communion between God, humans and nature. The Fall then introduces a fundamental fragmentation - a rupture in the original unity that gives rise to polarities, conflicts, and an existential sense of separation from the divine source.

From here, the rest of the biblical narrative can be seen as a series of self-organizing, self-transcendent transformations aimed at reconciling these polarities and returning to wholeness at a higher level. The journeys of key figures like Abraham, Moses, David etc. involve wrestling with existential challenges, integrating fragmented aspects of the self, and evolving to higher levels of consciousness and covenant with God.

The culmination is in the story of Christ, which represents the critical Turn within the Turn - the pivotal inflection point that fully incarnates the divine-human unity and paves the way for a collective transformation. In complexity terms, Christ is the “turn” or “true feature vector” in humanity’s generative model that subsumes and incorporates all the prior levels of development into a higher-order wholeness. His life, death and resurrection crystallize the core pattern of self-transcendence - a movement through suffering and death to a higher octave of life and consciousness.

Seen through this lens, Christ's story is a fractal-like recapitulation of the overall arc, a microcosm that encodes the macrocosm. It is the cosmic blueprint for the teleological evolution of complexity consciousness (i.e. integrated information), both for individuals and humanity as a whole. Just as nature evolves from the Big Bang to stars, planets, biochemistry, life, mind and culture, Christ's journey is a compressed manifestation of the overall trajectory, guiding humanity to higher levels of unity, complexity and realization of divine potential.

In this way, the biblical narrative can be seen as a mythic map of the universal processes by which order emerges from chaos and unity from multiplicity in all self-organizing systems - from atoms to ecosystems to minds. It is a poetic encoding of the deep patterns of transformation and transcendence that guide the evolutionary unfolding of the cosmos itself.

5.2 Scaling Divine Identity Through Markov Blankets

Can we formalize the scaling of “divine” identity we see throughout the Biblical story? Let’s see if we can do so using our modern Markov blanket formalisms.

The key idea that we’ve touched on prior is that the chiasmic literary structures found in the Bible - the forming & filling pattern throughout the text - can be viewed as reflecting Markov blanket dynamics, with perception-action cycles micro-instantiations of the involution-evolution arc. The story can thus be seen as scaling “divine” identity throughout time and space.

Just as the human mind emerges from the hierarchical nesting of Markov blankets in the brain, we can conceptualize the “divine” identity as emerging from the recursive self-similarity of Markov blankets across all scales of creation. Each level of the cosmic hierarchy, from the subatomic to the galactic, can be understood as a Markov blanket that both separates and connects the interior and exterior, creating a self-referential loop of information exchange.

Let’s go through the mapping again to bring our ancient story into the modern light, where we can reframe the interplay between Heaven & Earth, God & Man as the information flows between internal and external states through a perception & action cycle. Namely:

5.2.1 Heaven <> Internal States [Level I - Point - Intuition]

Heaven represents the internal states of the system - the mind of God, so to speak. This is the domain of God’s thoughts, intentions, and generative models of nature. Just as the brain’s internal states are separated from the external environment by the Markov blanket, heaven is portrayed as a distinct realm - conditionally independent - separate from the earthly realm.

5.2.2 Forming (Priestly) <> Perception [Existential Involution]

The priestly function in heaven involves setting up the top-down constraints and boundaries that define the sacred space of creation. This is analogous to how the brain's internal model generates top-down predictions about sensory inputs.

5.2.3 Filling (Kingly) <> Action [Conscious Evolution]

The kingly function in heaven involves filling the sacred space with agents who will explore and steward it, generating bottom-up novelty and variety. This is analogous to how the brain acts on the environment to test its predictions and gather new information. In Genesis, God fills the earth with living creatures and appoints humans as his image-bearers to have dominion over creation.

5.2.4 Earth <> External States [Level IV - Solid - Sensation]

Earth represents the external states of the system - the environment with which the heavenly mind interacts. The earth is the domain of manifest nature and sensory inputs. The earth is not just a passive receptor, however. It has its own dynamics and feedback and plays a unique participatory role through action and free will. This is seen in the Biblical narrative when humans, as earthly agents, make choices that deviate from God's intentions (e.g., the Fall), introducing novelty and prediction errors into the system.

The involutions & evolutions chiasms we see throughout the narrative at various literary levels that we explored in the prior section can now be seen as fractal-like and co-creative dynamic learning processes to learn how to appropriately mediate between "Heaven" and "Earth" across all scales. A cybernetic back-and-forth of "divine intention" and creaturely free response learning to align with the underlying telos of the cosmos.

Alignment to the telos leading to rewards and subsequent "Creation" and misalignment leading to punishment and subsequent "De-Creation" to use some modern reinforcement learning jargon. This telos can be reframed in complexity terms as the below, which we will expand on in our transcendental ideals section:

- **Goodness:** Identification with integrative tendency toward wholeness and the pull to self-organize into coherent, more integrated states
- **Beauty:** The process of complexification & increase in diversity-in-unity. Relates to balancing between the two poles of order and chaos at the "edge of chaos" which allows for a rich interplay between structure & spontaneity, pattern & novelty
- **Creativity:** Relates to the concept of emergence - the generative, open-ended process by which complex systems integrate previously separate el-

ements into new, synergistic wholes, producing novel patterns, behaviors, and possibilities

In this model, both “divine” and human agency play a crucial role in which the ultimate goal is the harmonious integration & flourishing of all things as nature complexifies over time. This synthesis invites us to see the story of God and creation not as a predetermined script, but as a dynamic and interactive process of learning, growth, and transformation. The eschaton, in this scheme, represents the final convergence of the heavenly model and earthly nature - a state of perfect predictive harmony.

Note also the symmetry between external and internal states in this ontology. This would explain some of Alfred Whitehead’s quotes such as: *It is as true to say that God creates the World, as that the World creates God and What is done in the world is transformed into a reality in heaven, and the reality in heaven passes back into the world.* This also echos the symmetry of Heraclitus’ riddles such as: *Mortals are immortals and immortals are mortals, the one living the others’ death and dying the others’ life.*

5.3 Predictive Processing Account of the Biblical Narrative



Figure 24: Queen of Sheba to King Solomon by Sir Edward John Poynter

Having explored the biblical story through the lens of process philosophy and complexity theory, we can now deepen our analysis by applying the specific mechanisms of predictive processing and Bayesian inference. This will allow us to track how humanity’s collective “generative model” evolves over time, and how key events in the biblical narrative function as “prediction errors” that

drive transformative learning and updating of priors.

In the predictive processing framework, the brain is constantly generating predictions about the world based on its internal model, and then updating that model based on the discrepancies (prediction errors) between predicted and actual sensory inputs. This process of Bayesian inference allows the brain to refine its model over time, improving its ability to anticipate and respond adaptively to its environment.

We can apply this same framework to the evolution of humanity's collective worldview or "generative model" as encoded in the biblical narrative. In this context, the Markov blanket is the boundary that separates humanity's internal model from the external reality of God (or visa versa given the symmetry - God's internal model from it's external reality of humanity). Key events in the biblical story can be seen as "sensory inputs" that either confirm or contradict the prevailing model, driving a process of updating priors and refining the model over time.

For example, the initial state of unity in Eden can be seen as a kind of "naïve prior" - a simple, undifferentiated model of reality in which there is no distinction between self and other, divine and human. The Fall then represents a massive prediction error - a shocking mismatch between the predicted harmony and the actual experience of rupture and alienation. This drives a fundamental update to the model, introducing new priors around duality, suffering, and the need for redemption.

As the story unfolds, further prediction errors (the Flood, the Tower of Babel, the captivity in Egypt) challenge and refine the model, driving a progressive differentiation of humanity's understanding. The covenant with Abraham introduces a new prior around divine calling and purpose; Exodus adds priors around liberation and collective identity; the kingship of David encodes priors about sovereignty and righteous rule.

Ultimately, the incarnation of Christ represents the definitive prediction error - a total inversion of all previous models that posits a radical unity of divine and human, spirit and flesh, heaven and earth. Christ's life, death and resurrection recapitulate the entire arc of biblical history in a fractal-like way, subsuming all the previous hypotheses about God and nature into a radically new synthesis. This drives a fundamental re-organization of humanity's collective generative model around the priors of self-giving love, sacrificial death and resurrection.

In this way, the biblical narrative encodes a progressive process of Bayesian learning and model refinement as humanity's collective understanding evolves through successive predictions, errors and updates. The culmination in Christ represents a kind of top-level prior that reconciles all the previous partial models into a coherent whole, while also opening up new avenues for further exploration.

By applying the predictive processing framework to the biblical story, we can thus gain a deeper understanding of how this narrative functions as a “revelatory process” that progressively unveils the nature of God and reality through a dynamic interplay of prediction and surprise, confirmation and transformation. This in turn allows us to situate the biblical worldview within a wider understanding of how all intelligent systems - from brains to cultures - evolve and grow through an ongoing process of adaptive learning and responsive action.

Let's go through a few specific mappings in more detail:

5.3.1 Emanation <> Emergence as Genealogical & Historical Chronicles

The overarching Biblical narrative traces the unfolding of diversifying multiplicity across its genealogical and historical chronicles, from the stories of Adam, Noah, Moses, Abraham, Solomon, Joseph etc. In short, it dramatizes the core processes of complexifying order struggling against the pull of disorder and chaos. The trajectory depicts existence's self-manifestations reconstituting higher integrated unities through dialectical sublations, only to undergo renewed cycles of scattering and dissolution with this process occurring in an iterative fashion at successively greater scales.

5.3.2 Top Down Expectations as Word of God (Gestalt) <> Bottoms-Up Prediction Errors as Human Striving (Sense Data)

In this interpretation, the recurrent interplay of downward-flowing “divine” Words of God (top-down expectations) and upward-flowing human strivings and failings (bottom-up prediction errors) in the Biblical narrative directly instantiates the dialectic of a tops down generative prediction model and a bottoms up recognition model that sends up prediction errors. This occurs at all scales and manifests itself in the literary text through the chiastic structure - with the emanative first half of the chiasm “Forming / Priestly” representing top-down signals from gestalts to sense data and “Filling / Kingly” representing bottoms-up signals from sense data back to gestalt.

5.3.3 Top Feature Vector <> Covenant Holders

In predictive processing terms the main characters such as Moses, Abraham, Noah, and Joseph - serve as the “Top Feature Vectors” as part of humanity’s ever evolving & self-organizing generative model with varying degrees of ”Logos“ - or the ”True Feature Vector“. Or in theology terms, the covenant holders and Heads of Creation. They become mediators between top-down expectations (the generative model, or ”Heaven“) and the bottom-up sensory inputs (the recognition model, or ”Earth“).

5.3.4 Prior vs. Evidence vs. Posterior <> Father vs. Holy Spirit vs. Son <> Level I vs. Level IV vs. Level VII

To extend our Bayesian analogy - the Father (Creator), Holy Spirit (Creative Process), and Son (Created) can be understood as the Prior, Evidence, and Posterior. Death & resurrection becoming the update process of post-evidence posteriors becoming the new priors in the generative model of the world that occurs at the center of the chiasm. In our process framework, this equates to Level I, IV, and VII respectively.

5.3.5 Updating Humanity's Generative Model <> Pivot Point's in Chiastic Literary Structure

Each storyline depicts the process of minimizing free energy, the gap between the predictive model and sensory data, which can be interpreted as reducing “sin”. Crucially, the generative model is “updated” at the pivotal turning point at the center of the chiastic structure that we find at all literary scales, where the generative model - “Heaven” and the recognition model - “Earth” meet - the “Feature Vector”. This process parallels the ever complexifying generative model that minimizes uncertainty and maximizes adaptive fit through cumulative learning cycles between bottom-up sensory data and top-down predictions, all around the pivot point of a feature vector.

5.3.6 Recognition Model & Generative Model Match <> Aligned to Logos and Subsequent Wisdom

When “sensory evidence” matches the “True Feature Vector” - the Logos - it leads to the appropriately aligned revision of the predictive model and a higher integrated level of understanding - or wisdom and the ability to discern good from evil. Conversely, “sin” - being out of phase with the “True Feature Vector” - leads to continued descent into a fallen world, where the model fails to accurately predict the sensory data. As information - our characters - traverse through history, or down the hierarchical model, they differentiate into disparate parts, only to iteratively re-integrate into higher orders - nations & civilizations and ultimately the Church - through corrective feedback. We also get a free energy perspective on “Prophets” - individuals who are in deep alignment with the underlying generative model of nature with accurate “prediction” capabilities.

5.3.7 Nested Hierarchical Models <> Garden (Top), Land (Middle), and World (Bottom) Spatial Scales

The flow of data in the hierarchical model occurs in both directions – from the top (garden) to the middle (land) and bottom (world) and vice versa. This bidirectional flow represents the incorporation of novelty and the self-organizing tendencies of the generative model, similar to how the brain spontaneously organizes raw sensory data into multi-layered hierarchies of coherent patterns.

The Biblical narrative and the structure of the Church exemplify this hierarchical organization, with smaller narratives and organizational units nested within larger ones, reflecting the principles of hierarchical information processing.

5.4 The Gospel Story In Process-Theoretic Terms

At the heart of the entire overarching narrative stands the figure of Christ, our metaphysical crescendo. Let's go through a potential interpretation using the language of process philosophy & predictive processing. Again, I am a neophyte to Biblical interpretation so consider this an exploratory mapping exercise!

Let's first apply our skeleton-key process framework to the story of Christ in the Gospels:

1. **Creation [Starts as One Cell] - Birth and Early Life:** The Gospels begin with the birth of Jesus, marking the initiation of a new creation cycle. Jesus' early life and growth represent the initial stages of this new creation.
2. **Division [Becomes Multicellular] - Baptism and Temptation:** Jesus' baptism by John represents a division between His private life and public ministry. The temptation in the wilderness further separates Jesus from the world and establishes His identity as the Son of God.
3. **Ascension [Acquires a Shape] - Ministry and Teachings:** Jesus' public ministry, including His teachings, parables, and miracles (found throughout the Gospels), gives shape and form to the new creation He is bringing about. His teachings establish a new order and way of life for His followers.
4. **Testing [Fastens to Ocean Floor] - Opposition and Conflict:** As Jesus' ministry progresses, He faces increasing opposition and conflict from religious leaders. This testing refines His message and purpose, ultimately leading to His crucifixion.
5. **Maturity [Grows in Plant-Like Fashion] - Disciples and Community:** Jesus calls and trains His disciples, establishing a community of believers who will carry on His work. The growth and maturity of this community are evident in their increasing understanding of Jesus' identity and mission.
6. **Conquest [Flowers Break Off Into Mobile Jellyfish] - Passion Week and Crucifixion:** Jesus' triumphal entry into Jerusalem, the Last Supper, and His crucifixion represent the ultimate conquest over sin and death. Through His sacrifice, Jesus establishes a new covenant and opens the way for the restoration of humanity's relationship with God.

7. **Glorification [Fertilization] - Resurrection and Ascension:** Jesus' resurrection and ascension represent the glorification of the new creation He has inaugurated. These events mark the completion of His earthly mission and the initiation of the Church's mission to spread the Gospel and participate in the ongoing work of redemption.

The story of Christ in the Gospels seems to follow our process theory framework.

5.5 Proof of Concept Predictive Processing Account of the Christological Drama



Figure 25: *Crucifixion (Corpus Hypercubicus)* by Salvador Dali

Now let's attempt to more granularly map predictive processing to the Christological Drama.

5.5.1 Christ as "King" <> Top "True" Feature Vector Atop Humanity's Hierarchical Generative Model

In this interpretation, the Christ story - the human Tabernacle after iterations of prior non-flesh-and-bone tabernacles such as the Arc of the Covenant & Solomon's Temple - becomes the Level IV "turn" within our process philosophy framework. At the level of literary architecture, he is the pivot point from Old

to New Testaments, from Hebrew to Greek, from the age of law to the age of grace. In predictive processing terms, he is the “True Feature Vector” - the incarnated Logos - that sits at the top of humanity’s hierarchical generative model with zero uncertainty. The optimal Bayesian prior. Mind and body perfectly in sync. Generative model of nature and recognition model of humanity perfectly in tune. Playfully, nature has $E = mc^2$, man has $E = \text{flesh* logos}^2$.¹⁸

5.5.2 Christ as The Negentropic Principle Personified

Recall that Christ represents the “Turn” in our natural philosophy model that instantiates the drive toward’s integrated wholeness via self-organizing complexity. Philo-poetically, Christ as the metaphysical singularity of first principles dons incorporeality, with the primordial infinite potential condensing itself into an finite determinate atomic particular - a material human embodiment subject to the harsh constraints of temporal becoming bound by the laws of entropy in a fallen world.

Yet this finite instantiation undergoes an experiential recapitulation of the universal process dynamics, gradually reintegrating and reunifying the fragmented polarities and extension tensions catalogued in the Hebrew textual corpus - as well as spirit & matter, being & becoming, infinite & finite - through a phase-transitioning journey of cosmic-upbuilding and compassionate praxis.

Across the narrative arc, this paradoxical entity progressively resolves the primordial scattering of existence into differentiated multiplicities by self-referentially re-integrating and subsuming all prior fragmented instantiations back into an elevated singularity of a coherent self-transcendent identity. The harsh constraints of finitude are not merely philosophically transcended but radically transfigured - with physical embodiment itself becoming alchemically assumed into a higher, permanent order of being. The Created becomes the new Creator.

5.5.3 Death & Resurrection \leftrightarrow Post-Evidence Posteriors becoming the New Priors

The Christological dramatizes the dynamics of involution - the descent, death and decreation - and subsequent higher-order evolution - the ascent, birth and creation. This encapsulates the supreme existential ideal - the embodied reconciliation of all polarized vectors and self-estranged modalities back into a self-transcendent harmonic unity & wholeness.

¹⁸Another hyper stretch speculative analogy just for creative purposes (and at the risk of any semblance of credibility) could equate Christ to the 8th column on the periodic table of elements - The Noble Gases. In Christian numerology, Chris represents the number 888. Noble gases have a complete outer shell and hence the lowest uncertainty. In this light, Christ similarly could represent completeness. Noble Gases under extreme conditions (e.g. high temperature, high pressure - dying on a Cross?) can also go through chemical reactions / phase transitions.

5.5.4 Center of History <> Turn Within the Turn

Christ's death and resurrection at the center of the Biblical narrative represents the ultimate "Turn within the Turn" found at the nadir of our natural philosophy - with death being the utmost depths of multiplicity and chaos which leads to a subsequent phase-transition in the cosmic source code. This act incorporates a higher next-order integrated wholeness subsuming all prior levels - the natural next step in humanity's creative unfolding.



5.6 The Center of the Chiasm: The Pivotal Turn and Conscious Action

Let's summarize the center point of the chiastic structure at the heart of each fractal manifestation of the biblical meta-structure. Whether in Day 4 of the Genesis creation week to micro literary structures and narrative crescendos, this central pivot represents a profound turning point in the story, mirroring the crucial "turn" we explored in the process philosophy and "feature vector" in predictive coding. It is the hinge leading to complexification and continued evolution - *Creation* - or a continue descent into a fallen world - *De-Creation*.

In process thought, the "turn" marks the transition from the arc of involution, characterized by increasing constraint and determinism, to the arc of evolution, characterized by expanding freedom and creativity emerging from those constraints. It is the nexus where the progressive embodiment of potential into limiting forms shifts towards the progressive transcendence of those limitations into new, higher-order expressions of freedom and meaning.

We then drew a powerful parallel to the concept of the "feature vector" in predictive coding theory. The feature vector is the brain's compressed, high-level representation of the essential features of a perceived phenomenon, optimized to guide adaptive action. It is the pivot point between the brain's top-down predictive models and bottom-up sensory input, the integrated synthesis that mediates between expectation and experience. The feature vector is where the brain's implicit "beliefs" about the world are brought into the light of conscious awareness to inform volitional choice and behavior.

In the biblical context, the center of the chiasm represents the moment of maximal constraint, where the divine potential appears most deeply embedded in the limitations of material reality, followed by the pivotal act that initiates the arc of redemption and re-integration. It is the point of *conscious action*, where the latent freedom and telos implicit in creation are made explicit and actualized through a decisive movement of will and choice.

Just as the feature vector integrates top-down and bottom-up processes to guide intelligent behavior, the chiastic center integrates the descending arc of creation with the ascending arc of redemption, revealing their ultimate unity and purposiveness. It is the moment of *conscious action* where agency breaks through the bonds of necessity to initiate a new upward arc towards increasing freedom, culminating in the final re-unification of all things.

By understanding the center of the chiasm as the nexus of *conscious action* - and arguably consciousness itself - that integrates constraint and freedom, involution and evolution, expectation and experience, we can gain a deeper appreciation for the elegant coherence between biblical narrative structure, process philosophy, and cognitive science. This realization invites us to locate our own lives within this meaningful cosmic drama, to consciously align our own feature vectors and choices with the divine telos, and to participate in the eternal turn from fragmentation to wholeness.

5.7 Computational Theology - Concluding Thoughts

Interpreting the Bible through the lens of process and the Bayesian brain reveals a profound coherence. The dynamics of emanation, turn & pivotal updating, and emergence map onto the Biblical arc, with Christ as the supreme “True Feature Vector” atop humanity’s hierarchical generative model reconciling Heaven and Earth, God and Man, Recognition Model & Generative Model.

Christ serves as the crescendo of the metaphysical symphony, the embodied individual fulfilling the teleological attractor guiding evolution towards wholeness, order, beauty, and goodness in as condensed and “maxed out” way as possible.

He embodies the supreme aesthetic principle of beauty, the diversity-in-unity arising from shepherding order out of chaos. As the manifestation of love - the dynamic flow integrating all things into self-transcending wholes - Christ is the ultimate expression of the attractive force binding the universe together. He personifies meaning itself - the perfect alignment between the pattern of nature and the pattern of man.

Of course, this is a highly abstract and analogical mapping, and there are surely limits and potential objections to pressing it too far. The Biblical understanding of heaven and earth is far richer and more nuanced than can be captured by any single conceptual framework. There is also significantly more work that can be

done in mapping this out at a more detailed level as well as further unpacking the Christological drama in particular.

But as a heuristic model for understanding the deep dynamics of the Biblical story, it has the potential to offer considerable explanatory power. It provides a fresh way of understanding the Biblical theme of heaven and earth in terms of the fundamental principles of complex adaptive systems and predictive processing, while also enriching those scientific concepts with the depth and drama of the Biblical narrative.



Figure 26: *Chalice of Love* by Salvador Dalí

6 Revisiting The Transcendental Ideals

Lastly, we'll touch on transcendental ideals themselves - the Platonic Forms and underlying telos encapsulating the primordial unified archetypes which preside over and permeate existence's diversifying manifestations. This is the rarified realm of the loftiest abstraction. More of a poetic exercise re-interpreting the Platonic ideals in light of our process and complexity lens - as a final dessert aperitif - than a formal analytical breakdown. Let's go through and define them.

6.1 Goodness

Goodness denotes the metaphysical imperative toward ever-increasing integration and wholeness. It represents the proactive balancing of polarities, purposive life-orienting tendencies, and teleological prioritization of long-term trajectories favoring evolution toward higher-levels of individual & collective self-transcendence.

Goodness is the attractor drawing existence along paths of sustainable development, win-win conflict resolutions (i.e. the wolf living with the lamb per Isaiah 11:6), productive values hierarchies, and ethical action policies optimizing for long-range flourishing amidst complexities. It is the principle that drives making integrative-level sacrifices to cultivate greater future potencies from present

finitudes.

Goodness manifests through finite entities aligning their goal-oriented behaviors with existence's widest enveloping self-transcendent patterns at successively ascending scope. It involves continual adjudication between present constraints and unfolding evolutionary currents favoring evermore encompassing creative unions.

6.2 Evil

The opposite of an ideal but worth defining Evil - simply the absence of Goodness. It represents a privation or absence of integration, wholeness and harmonious order. It manifests as tendencies toward fragmentation, disorder, entropy and dissolution of coherent patterns. Evil signifies a breaking apart or disintegration of unities into alienated isolates - a movement away from the Source's primordial oneness toward maximum multiplicity, disconnection and existential estrangement.

Evil dynamics prioritize immediate, narrow self-interest over long-term holistic flourishing. They favor exploitative, zero-sum interactions that preclude mutually enriching relational consummations. Evil is the failure to sacrifice regressive surface satisfactions for the cultivation of deeper, self-transcending creative unions. It is marked by the inability to adjudicate polarities and re-harmonize conflicts for maximal collective wellbeing.

6.3 Life

Life represents the principle of creative self-organization, emergent order and self-directed unfolding toward higher unities. It is characterized by autonomous dynamism, interior subjectivity and purposive self-animation orienting toward richer future potentialities. Life signifies the capacity for spontaneous, adaptive self-regulation amidst fluctuating environmental conditions.

Life exemplifies the progressive arc of emanation returning toward the Source by re-integrating multiplicitous components into greater coherent synthesized wholes. It is the ascending force of evolution, negentropy and complexification striving to retrieve ever-widening scopes of fragmented actualities back into harmonic resonance with the eternal ideals of Truth, Beauty, Goodness and Love.

The mark of life is the presence of goals, values, and purposive trajectories aimed at optimizing overall systemic functioning and resilience. Living processes prioritize sustainable development, relational symbiosis, and actualizing unrealized creative potentials through iterated cycles of interactive feedback with their embedding contexts.

6.4 Beauty

Beauty is the aesthetic patternings, organic complexities, dynamic harmonies and integration of diverse multiplicities into renewed synthesized wholes of maximal unity-in-diversity. It reflects the metaphysical priority of order transcendently arising from chaos through spontaneous emergence and self-organizational dynamics.

Beauty emerges from the dialectical interplay between the polarities of order and chaos, familiarity and novelty, symmetry and asymmetry. It requires a delicate and ever-shifting balance - too much regularity breeds monotony and stagnation, while excessive disorder collapses into overwhelming entropy. The hallmark of Beauty is the masterful attunement of these complementary forces into aesthetically compelling syntheses that ceaselessly engender new gestalts of meaning

The experience of Beauty involves the progressive reintegration of differentiated elements into higher-order holistic configurations. It flows through cycles of expectation-disruption and resolution, dissonance and consonance, tension and release. These undulating rhythms of emergent coherence provide the signature affective contours of all great artworks - the delightful frisson of novelty seamlessly transitioning into blissful catharsis as the mind beholds a new integrated pattern subsuming the prior discord.

Beauty represents the principle of maximal experiential intensity, vitality, and richness of participatory immersion in the universal pattern that joins beings in felt bodily rapport with existence's own creative sprouting. It is the aesthetic force facilitating new integrated gestalts birthed from the interplay of ordered symmetries with generative flows of novelty. Enacted through finite particulars, Beauty perceives and resonates the qualitative "dreamings" of the cosmic poesis itself - the felt harmonies, vibrant pulsations of dynamical unfoldings - into physically embodied sensual pleasures of bodily realization finding fulfillment in participatory alignment with its primordial creative principles.

6.5 Love

Love is the supreme formative cause and binding force which endlessly yokes all finite particulars back toward ultimate reunion with the unbounded Wholeness from which they emerged. Love manifests as the relational co-inheritance ubiquitously pervading all beings and upholding the universal pattern resonances amidst the perpetual flux of impermanence. It is the supreme metaphysical connective tissue facilitating the interweaving harmonies and unitive resonances between multiplicitous instantiations.

Love manifests as the dynamism continually drawing finite beings back toward reintegration with their primordial Source and the undifferentiated plenitude

of the One. It impels the reconnection of individuals with the transcendent ideals, allowing each entity to maximally participate in and personify the inexhaustible infinitudes despite their outward determinate constraints. Ultimately, Love serves as the formative cause underlying all spontaneous tendencies toward order, coherence, synthesis and the making of new integrated wholes from prior differentiations. It is the generative power of relationship itself - the connective tissue of the pluriverse.

6.6 Purpose

Purpose represents the overarching orientation and driving force that imbues human existence with meaning, direction, and value amidst the constant flux of change. It encapsulates the fundamental reason for being and the aspirational ideals that guide an individual's growth, relationships, and contributions to the world. Purpose aligns one with the deepest values and highest potentials of human existence, drawing them into sustainable trajectories of development that harmonize with the broader currents of cultural evolution and the timeless quest for wisdom, compassion, and self-transcendence.

Discovering and embodying one's unique purpose is the key to actualizing the fullest potential and making the most meaningful impact. It involves discerning the specific talents, passions, and callings that can be leveraged in service of something greater than oneself. By clarifying and refining their purpose, individuals participate most fully in the universal human drive toward increasing complexity, integration, and flourishing. Purpose acts as an inner compass, constantly reorienting one toward their authentic nature and the eternal ideals of Truth, Beauty, Goodness, and Unity.

While the specific contours of an individual's purpose are unique, they are ultimately grounded in these universal human values. By aligning with these ideals, one taps into the deepest sources of meaning and motivation, contributing to the ongoing evolution of human consciousness and culture. Living an authentic purpose naturally connects individuals with others who share similar aspirations, giving rise to purpose-driven communities and organizations united around a shared vision of human potential. These collective purpose fields amplify the impact of individual efforts, creating a powerful resonance that attracts others to join in the common cause.

6.7 Oneness

Oneness symbolizes the primordial, utterly simple and seamless source origin preceding all multiplicity - the indivisible plenitude of unlimited potential prior to any self-determination into discrete actualities. It represents the immaterial undifferentiated whole in which the unlimited creative potencies for generating Truth, Beauty, Goodness and Love remain enfolded in their original unified

state prior to the emanative self-determination of discrete particulars.

Oneness stands as the fully-integrated & complete conceptual whole that is greater than the sum amalgamation of all differentiated finite parts and fragmented perspectives. It is the utterly coherent, self-contained perfection of self-identity. One = One. I am that I am. The cosmic self-evidencing Markov blanket.

Oneness serves as the unifying attractor drawing the totality of actualizations back toward reintegrated concrescence. All self-transcending journeys of individual particulars - of which themselves are fractal reflections of the One - aim at retrieval of identification with the Source's original unity amidst multiplicities.

6.8 Truth

Truth denotes that which is invariant to time & space - the logically coherent intelligibility underlying existence's patterned regularities and invariant laws. It encompasses the objective ontological blueprints, logical self-consistencies and harmonies of systematic order that rationally permeate all scales of manifestation. Truth represents the realm of pure abstract form, symmetry, and formally codeable principles independent of any particular concrete instantiation. It is the logos or universal reason substanding the cosmos, articulated through mathematics, geometry, and science capturing nature's essences.

6.9 Creativity

More Whiteheadian in nature vs. Platonic but worth touching on. Creativity stands as the primordial generative power ceaselessly birthing novel integrated wholes and complexities from the interplay of order and chaos. As the universal dynamism of existence's own self-creating process, it represents the inexhaustible fecundity of the Source - the unlimited potencies for perpetual self-renewal and open-ended ontological blossoming.

Creativity manifests as the spontaneous emergence of new organizational wholes greater than the sum of their parts. It enables the full personification and imaginative enactment of first principles through inventive conceptual design and active aesthetic composition, opening participatory portals to the Source's own generative powers.

As a transcendent archetype, Creativity reflects the eternal newness of the Absolute - the supreme freedom of self-determinacy by which the Source generates its own content and endlessly multiplies its forms. It drives the romance of evolution itself, luring forth the latent potencies of matter into self-organizing forms of ever-greater complexity, consciousness, and beauty.

At its highest pitch, Creativity inspires the inception of original gestalts and daring reconfigurations of conceptual relationships that disclose new meanings, perspectives, and value-possibilities. Ultimately, Creativity is none other than the unfolding dream of the Source itself - the ceaseless turning of the One's primordial plenitude into an endless revelry of self-othering through finitude.

6.10 Self-Transcendence

Self-transcendence is the inherent drive within all beings to reach beyond their current limitations and actualize ever-greater levels of creative potential in alignment with eternal ideals. It is the process by which entities strive to maximize their resonance with the principles of Truth, Beauty, Goodness, and Love by letting go of limiting satisfactions in favor of discovering deeper meaning, value, and purpose. This impulse manifests as the quest to achieve fuller expression of infinite potential within the constraints of finite existence, representing the unique teleological narrative of each entity as it coheres with the grander evolutionary pattern.

The self-transcendent being embodies the microcosmic reflection of the macrocosmic whole, seeking to reconcile personal, social, and cosmic dimensions into a harmonized gestalt. It transcends egoic impulses in favor of cultivating transpersonal resonance with the unitive Source. This drive propels the evolutionary journey from undifferentiated Oneness, through the experience of fragmentation, and ultimately back toward a state of enriched unity. Self-transcendence serves as the catalyst that transmutes mere occurrences into a coherent narrative by aligning individual choices with the transcendent principles that underlie the dynamism of nature.

At its core, self-transcendence represents the universal impulse to open oneself to suprapersonal currents and surrender subjective limitations to the objective imperatives of evolution. It is the ceaseless quest for ever-expanding actualizations of integrated meaning through deepening attunement with the eternal verities that compose the essence of existence. By engaging in this process of self-transcendence, beings participate in the grand unfolding of the cosmos, contributing to the ongoing realization of greater depth, complexity, and significance in the world.

6.11 Existence's Own Epic Poem

And finally, a short poem on the evolution of existence: its own journey of becoming and creative unfolding.

Existence's overall trajectory traces an epic journey of emanative self-diversification followed by an infinite recursion of self-unifying returns toward its original plenitude. As multiplicitous becoming flowers forth from the Source's unlimited potencies, it underlying naturergoes iterative evolutions laboring to retrieve and

reintegrate their individual particulars back into wider resonant patterns with the metaphysical constants. This perpetual reconciliation of parts and wholes, across all scales, unfolds as an endless co-creative dynamic - with the eternal ideals providing the transpersonal attractor basins drawing existence's striving participations into ever-deepening alignment with their transcendent norms and the deepest core pattern underlying nature.

In this model, fullness is achieved through the widest possible relational consummation of each individual's free conceptual satisfactions - with the transient experiential actualities attaining their highest reconciliation through participatory unitive resonance with the eternal ideals. Despite manifesting constrained outward expressions, every entity remains interiorly capable of maximally personifying the inexhaustible infinitudes of Truth, Beauty, Goodness and Love by realizing concrescence with their eternal ontological priorities.

While taking on finite embodiments amidst the spatiotemporal plenum's diversities, the eternal ideals retain their transcendent universality as the invariant ordering principles underlying and normatively orienting all concrete instantiations. As existence's immutable perennial archetypes, they provide the logically self-coherent and aesthetically self-evident skylines conferring ultimate meaning, value, and ontological significance upon every transient particular's endemic striving toward harmonious self-integration.



Figure 27: Alexander the Great cuts the Gordian Knot by Jean-Simon Berthélémy.
Prophecy foretold that whoever could unravel a gnarled knot (not unlike my iPhone headphones) was destined for greatness. What does Alexander the Great do? Instead of untying it conventionally he cuts right through it with his sword - a symbol of outside the box thinking.

7 Conclusion: On Reimagining Modernity

As we integrate the foregoing transdisciplinary odyssey, a luminous thread is unmistakable through nature, man, and myth. By tracing a process of involution and evolution - we have uncovered a rhythm of a creatively unfolding cosmos that progresses from undifferentiated unity to constrained multiplicity back to integrated wholeness.

This process is not random but exhibits a purposive direction - an inexorable movement of order becoming from chaos, of open-ended evolutionary unfolding, of the teleological drive toward complexity, of the pursuit of harmonious alignment. The universe seems to be striving towards beauty, consciousness and meaning through a dynamic and co-creative interplay.

Myth can provide the participatory languages for experientially aligning the human psyche with these deep orders of creation. They serve as cultural technologies for attuning individual and collective narratives to the "music" of evolving nature. Meaning arises from recognizing and embodying our integral role in this unfolding epic - crafting life stories that resonantly incarnate the cosmic song. For we ourselves are the living and breathing manifestation of this overlap as mediators between heaven and earth.

While we spent the time providing complexity scientific and process philosophical interpretations of ancient wisdom, our work at heart looks to invites a pragmatic transformative realization. We are microcosms of the macrocosm, and by consciously weaving our developmental journeys in harmonic resonance with nature's teleological score, we discover the tremendous meaning and purpose suffusing existence. Our lives become essential subplots advancing the universe's overarching adventure.

This re-enchanted, meta-modern imaginary offers an integrative meta-narrative that rejoins myth and science, wisdom and knowledge. It provides an empirically-grounded yet poetically-compelling answer to postmodern disenchantment, illuminating the ontological profundity woven into the fabric of nature. The perennial quest for meaning finds its fulfillment in celebrating and perpetuating the everlasting blooming of emergent evolutionary order through our own self-creation.

By recognizing the common archetypal patterns beneath disparate domains and getting both the analytical and felt sense of meaning, we re-situate our post-modern meaning crisis within a larger unfolding story. The traditional ideals of Love, Truth, Beauty and Goodness - found within the Biblical narrative that sits firmly at the center of our Western culture - re-emerge as the natural teleological attractors of an interconnected, open-ended evolutionary process in which mind and nature are harmoniously continuous rather than dualistically divided, mending our Cartesian tear.

7.1 Implications for Secular Modernity

If our hypothesis holds true, that the perennial insights concerning existence's fundamental process architectures remain faithfully encoded across nature, man, and myth - then the implications for secular modernity are nothing short of cataclysmic.

At its core, it would confirm that humanity's ancient wisdom and visionary knowledge sources remain urgently relevant as indispensable wellsprings for guiding the path toward genuine existential coherence amidst our technological might. The secularization trajectories prizing science and technology while dismissing the narrative reservoirs as mere cultural contingencies, would reveal themselves as tragic avenues of self-imposed existential contraction and alienation from our deepest ontological moorings.

To renew meaning in a postmodern age, we have journeyed all the way down to the deepest archetypal foundations of mind and nature, a scuba diving session into metaphysical oceans, to recover an ancient eternal truth: the rhythmic heartbeat of humanity and the cosmos are one and the same. Meaning is not a human invention but a fundamental feature of a teleologically driven cosmos in which we have a unique participatory role. The ever-unfolding process is at once

the form of the world and the essence of the soul. Humanity's ultimate horizon and calling is not to build colonies on Mars but internal cultivation, gardening & flourishing right here on Earth - to serve as the microcosmic flowering of the Cosmic Tree, the local ripening of the universe's global dream.

The integrative framework outlined here is highly preliminary and surely requires elaboration, empirical validation, and expert opinion. But the sheer span of its application across so many domains suggests a compelling explanatory power. By subsuming the core insights of ancient wisdom into the revelatory matrix of modern scientific discovery, such a comprehensive process vision promises to heal our epistemic orphanhood and anchor our complex Western civilization in an even more robust & coherent historical bedrock.

The integrative metaphysics sketched here is thus no mere armchair speculation. It is a summons to realign our core cultural institutions with the telos of human flourishing as a microcosm of cosmic self-actualization.

On a personal level, by recognizing the fundamental dynamics of change and evolution in the universe, we may learn to embrace uncertainty as an opportunity for growth, fostering more adaptive and resilient mindsets both individually and collectively. Understanding the deep interplay of unity and diversity could inspire holistic approaches to various domains which balance individual expression with collective cohesion, thinking in Unity, Wholes & Gestalts once again.

In business and organizations, The seven-stage process could serve as a valuable template for guiding organizational and institutional development, helping leaders navigate the natural cycles of growth, maturity, and renewal. This could lead to more agile, resilient, and responsive institutions that can effectively adapt to changing circumstances. A process-based approach to ethics could also encourage contextual flexibility and nuanced moral reasoning, promoting dialogue and collaboration across different value systems.

And in society at large, by providing a new foundation for meaning-making and values alignment, this framework could help us create a more vibrant, ethical, and thriving society aligned with the telos of the cosmos. From education and the arts to economics and politics to science and religion, our civilization's organs can be reimagined as vehicles for incarnating process philosophical wisdom aligned with the deepest patterns of nature. It invites us to embrace change, seek integration, and recognize our deep interconnectedness with each other and the world around us.

Here are a few - very high-level preliminary and idealistic - sketches by civilizational organ:

1. **Education:** In education, this would mean nurturing the whole person - mind, heart, body, and spirit - in resonance with nature's holistic unfold-

ing. Curriculum would be organized around interdisciplinary connectivity and an epic of evolution to bridge ancient wisdom with the latest scientific discoveries. Art education would find a revival of pre-modern art and the work of the greater masters alongside a curriculum of actively embodied and visceral creativity. The sciences would be taught alongside theology as a quest for holistic truths and disciplined striving to discern the mathematical mind of the creator in the living book of nature.

2. **Politics & Economics:** In politics and economics, the ideal would shift from maximizing power and profit to optimizing the conditions for the flourishing of all life and the wider community of being. We would structure our systems to embody the process-philosophical insight that competition and cooperation, individuation and integration, are complementary phases in the cosmic dance - not irreconcilable opposites. We'd model organizations and institutions like complex organisms based on optimal architectures found in our latest computational neuroscience research. Adversarialism would yield to a politics of trust grounded in our deep ontological kinship and shared stakes as microcosms of a macrocosm in the throes of birthing itself.
3. **Religion:** In religion, the process perspective invites a shift from parochial dogmatism to an enlightened and experiential universalism on a personal level. By recognizing the common process principles refracted through our diverse sacred stories and practices, we move beyond interfaith dialogue to a true interspiritual realization of our profound unity. Religions become prismatic voices in a convergent symphony of praise to the Music of the Whole.
4. **Science:** In the sciences, learning is taught in the context of an overarching theory of everything capable of integrating insights across all fields into one coherent story of an evolving universe. Characterizing key dynamics in physics, chemistry, biology, and psychology with the common vocabulary of process philosophy allows researchers to discern the self-same patterns at play throughout the cosmos.

More research will be done to bridge this ever-so-important philosophical and pragmatic divide.

7.2 Joining the Music

Let us, then, have the courage to heed the call – to be stewards of the more enlightened future stirring in the womb of the present. By re-attuning our cultural organs to the Music of the Whole and to consciousness's key role in the adventure of cosmogenesis, we can effect a Copernican Revolution in the 21st century mind. We can anchor a new perspective in the mythology of meaning equal to both the material crises and philosophical potential of our time.

For in doing so we will be laying the foundations for a true Renaissance – one that sets the human spirit ablaze with the fire of an integral, experiential realization. We will have finally discerned that “Love moves the sun and other stars” – the process-philosophical secret of the West, the dynamic source code of the Cosmic Dance. Meaning will be ours because we will have remembered: Meaning is not something we create, but something we are – the local flowering of a universal symphony, called to join the Music.