

# The Biological Framework for a Mathematical Universe

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**Abstract.** The mathematical universe hypothesis is a theory that the physical universe is not merely *described by* mathematics, but *is* mathematics, specifically a mathematical structure. Our research provides scientific and historical evidence that this mathematical structure of the universe is biological in nature, and; all things within the universe contain biological patterns which can be revealed and understood through mapping correspondences to the physiological patterns of living organisms. Living organisms are a result of this biological universe and culminate the universe's biological patterns. Our paper illustrates the relationship between biology's patterns and the nature of the universe by exploring various analogies—structurally mapping a red blood cell to a coffee cup; proteins produced from ribosomes to music produced from instruments; a beating heart to the melting and freezing of Antarctica; the order and properties of cellular society to the order and properties of human society and; phenomena in cellular mitosis to phenomena in the universe, such as black holes, dark matter, dark energy, and the structure of the universe. Expanding on the notion of perennial wisdom, our research presents evidence that the concept of a biological universe was conveyed in ancient religious and philosophical text. However, it was mistakenly misinterpreted by the general population as they did not have an understanding of biology, physics, and the cosmos. As a result of this misinterpretation, metaphorical and spiritual understandings overshadowed the original scientific context of the biological universe's connection to its patterns in the human body. The implications of this theory are immense as it offers a holistic understanding of the interconnectedness between physics, science, religion, philosophy, law, economics, politics, and engineering; It serves as a comprehensive and unifying theory for all areas of knowledge. This theory is supported by meta-analyses of scientific, historical, and religious literature, as well as observations and first principles logic.

## 1. Introduction

Throughout history, humans have sought knowledge and understanding of the world around them. This quest for knowledge has led to the emergence of various disciplines and fields of study, each focusing on a specific aspect of human existence. However, the separation and isolation of this knowledge has impeded our ability to develop a holistic understanding of the universe, the world and our place in it.

Furthermore, the problem associated with today's Information Age is the overwhelming amount of information available coupled with the challenge of determining its accuracy and relevance. In today's digital era, the internet has become a breeding ground for an abundance of information, often contradictory or misleading. As a result, individuals are faced with the onerous task of sifting through this vast sea of data to find reliable sources. This is not only particularly problematic in the field of research, where incorrect or unreliable information can lead to flawed conclusions or misinformed decisions, but also within society, where people interpret the information differently leading to various points of view that can lead to misunderstanding between communities. Moreover, the rapid pace of technological advancements, deep fakes, and artificial intelligence intensifies these problems. With a constant influx of new information, it becomes challenging to stay up to date and maintain accurate knowledge, and to determine the appropriate course of action based on this information. As a result, while the Information Age has provided us unprecedented access to information, it has also presented us with the challenge of verifying its accuracy and validity. \*

Human society is missing research that establishes a common framework from which all knowledge and information can be understood. In the Information Age, where data and information are abundant and easily accessible, it has become imperative to establish a common frame of reference to understand and make sense of the vast amount of information gathered. Its importance lies in its ability to provide a foundation for effective communication, collaboration, and decision-making. Without a common understanding of key concepts, terms, and principles, information can easily be misinterpreted or misunderstood, leading to confusion and inefficiencies in research, education and public policy at all levels.

Similar to how the cellular society composing the human body is dependent upon a common frame of reference from which to define, measure and understand their reality so to effectively communicate, collaborate, make decisions and carry-out actions that enable their society to develop, survive, stay resilient, achieve their goals and reach their potential, so too does human society need a common framework to understand the world around them and all the knowledge and information in it.

The theory of a biological framework for a mathematical universe establishes such a common frame of reference which will revolutionizes education, research, engineering, socioeconomics, geo-politics, science, mathematics, religion, philosophy, and many other areas of knowledge. It facilitates a more comprehensive and interconnected understanding across disciplines, enabling educators to teach subjects more effectively, researchers to identify novel connections, economists to develop accurate models, policymakers to make informed decisions, and the general public to have transparency and understanding of the rapid influx of events, knowledge and information that happen in the world around them. Embracing this theory's potential benefits will undoubtedly contribute to societal progress, innovation, and holistic problem-solving, ultimately shaping a more harmonious and sustainable future.

The universe, vast and enigmatic, is governed by patterns. Patterns are the language of nature, echoed in the arrangement of galaxies, the structure of atoms, and the intricate web of life. Patterns are mathematical. The 'Mathematical Universe Hypothesis' argues for a foundational mathematical structure to all existence, while our theory extends this concept to assert that these mathematical patterns are biological by their nature. Biological patterns, in turn, define the construct and evolution of the universe, as manifested in the systems, processes, and objects that constitute reality.

### ***Biological Framework for a Mathematical Universe Hypothesis: A Common Frame of Reference***

The mathematical universe hypothesis suggests that the physical universe is not just described by mathematics, but is actually a mathematical structure itself. Our theory asserts that this mathematical structure is biologically based. In essence, this means that the framework for the mathematical universe hypothesis is defined by biological patterns. As a result, all systems, processes, and objects in reality possess biological patterns and are inherently biological in nature. This applies to everything in the universe and the world around us, physical or conceptual.

Furthermore, this theory further postulates that the emergence of life and living organisms is a direct consequence of the evolution of the universe's biological processes and therefore the physiology of living organisms are models which reveal the hidden biological patterns throughout the universe and our surroundings. Thus, as a result of this relationship between the universe's biological processes and the living organisms which it creates, analogies can be structurally mapped from the biological domain to any target domain to reveal and explain the biological nature of the target domain. This mapping allows for the transferring of knowledge and general principles from the biological domain to the target domain. This process can be applied to both physical things and intangible concepts.

Furthermore, the idea of a biological universe predates the establishment of all major religions in ancient times. Our research provides evidence which supports the claim that many religious, spiritual, and philosophical ideas were initiated through "perennial wisdom" stemming from the ideas of a biological framework to the universe. Our evidence suggests that many religious concepts intended to convey the notion that the biological patterns within the human body have the ability to reveal and understand the hidden biological patterns present in the universe and the world around us—for example, the *microcosm and macocosm* motif observed across many of the major religions and cultures. Furthermore, evidence suggests that God is the personification of the universe, and God's spirit, God's essence, and the Divine, are all referring to the biological patterns of the universe—i.e., the Universe's essence/patterns.

Our theory of a biological framework for mathematical universe establishes the common frame of reference for which all people can use to define, measure and understand all pre-existing knowledge and new information. It also enables individuals to predict outcomes based off of current states and trajectory.

## Theoretical Foundations

The theoretical foundations are composed of scientific, historical and religious concepts. The **scientific foundations** support our theory's ideas that: (a) the universe is rooted in biology's patterns and that; (b) the physiological patterns contained within living organisms can be used to structurally map correspondences to any target domain, in order to reveal and understand the biological nature of the target domain. The **religious and historic foundations** provide support that the ideas of this biologically-patterned universe existed in the past and was taught through various cultures worldwide, from the Upanishads, Judaism, Islam, Catholicism, Christianity, Taoism and Shintoism, to Ancient Roman and Greek beliefs. The religious and historical foundations provide evidence that the idea of perennial wisdom did indeed exist and was in fact initiated through conveying the ideas of a biological universe whose nature could be revealed and understood through correspondences with the physiological patterns contained within the human body. Furthermore, not only does this religious and historical foundations support the ideas of a biological universe, but also a universe that could be described through biology's patterns—particularly those contained within the human body.

### *Scientific Foundations:*

**Mathematical Universe Hypothesis.** The mathematical universe hypothesis suggests that the physical universe is not just described by mathematics, but is actually a mathematical structure itself. According to the hypothesis, the universe *is* a **mathematical object** in and of itself. Furthermore, Tegmark suggests that not only is the universe mathematical, but it is also **computable**.

*a. Patterns and order in a mathematical universe:* A mathematical universe hypothesis posits that the fundamental nature of the universe can be described and understood through mathematical principles and patterns. Our theory suggests that biological patterns define the framework for a mathematical universe. Biological patterns can be interpreted as mathematical patterns, and contribute to the order and structure of the universe.

*b. Universal applicability of mathematical concepts:* A mathematical universe hypothesis postulates that mathematics is not just a human invention but rather a fundamental aspect of reality itself. Considering our theory's emphasis on the inherent biological nature of all systems, processes, and objects in reality, the mathematical concepts can be universally applicable, including within biological contexts. Mathematical principles are manifest in biological structures, functions, and processes.

*c. Modeling and analogies in a mathematical universe:* Our theory suggests that analogies can be structurally mapped from the biological domain to any target domain to reveal and explain the biological nature of the target domain. This aligns with the concept of modeling in a mathematical universe hypothesis. Mathematics allows for the creation of models that can describe and explain complex phenomena. Mathematical modeling and analogies helps uncover or clarify the biological patterns in different domains and how this supports our theory.

**Systems Theory.** Systems theory emphasizes the interconnectedness and interdependence of various components within a system. Systems theory provides a theoretical foundation for the idea that all systems, processes, and objects in the universe possess biological patterns and are fundamentally biological in nature. Systems Theory allows for a holistic understanding of how biological patterns could permeate throughout different domains.

**Systems Biology.** The field of systems biology also provides valuable insights into the biological foundations of the universe. Systems biology aims to study biological systems as a whole, rather than focusing on individual components. This holistic approach recognizes the interdependency and interconnectedness of different biological elements, suggesting that similar principles could be applied to understand the universe as a complex, interconnected system.

### **Fractal Cosmology.**

Fractal cosmology is a branch of cosmology that incorporates the concept of fractals, which are intricate and self-similar patterns that repeat at different scales. This theory supports our hypothesis that biological patterns define the framework for a mathematical universe. The application of fractal cosmology to our theory suggests that the universe itself may exhibit similar patterns and structures found in living organisms. Just as a tree branches out in a fractal pattern, the universe may have a similar organizational structure, with galaxies forming clusters and clusters forming superclusters. This fractal structure may extend indefinitely, revealing biological patterns at every scale.

Furthermore, fractal cosmology also suggests that the evolution of the universe's biological processes has led to the existence of life and living organisms. Just as the growth and development of cells and organisms follow certain patterns and principles, the universe may have followed a similar process of evolution that eventually gave rise to the formation of galaxies, stars, and planets. This perspective provides a deeper understanding of the interconnectedness between the biological nature of living organisms and the larger framework of the universe.

### **Evolutionary Biology.**

Drawing upon the principles of evolutionary biology, our theory of a biological framework for a mathematical universe hypothesis proposes that the existence of life and living organisms is a direct consequence of the universe's biological processes. Evolutionary theory provides a foundation for understanding how life evolves and adapts over time, and how biological patterns could shape the development of systems, processes, and objects in reality.

### **Complexity Science.**

Complexity science studies complex systems and emergent phenomena. This theory aligns with complexity science by stating that biological patterns are present in all systems, processes, and objects, indicating fundamental complexity in reality. It suggests that understanding the underlying biological nature requires considering emergent properties and patterns that arise from complex interactions within these systems.

### **Universal Laws or Principles.**

The theory posits that biological patterns define the framework for a mathematical universe hypothesis. This implies the presence of universal laws or principles that govern both biological processes and other phenomena. Exploring the existence of such universal laws or principles and their applicability across different domains provides a theoretical foundation for our theory.

### **Mathematical Modeling of Biological Systems.**

Mathematical modeling in biology involves using mathematical frameworks to describe and analyze biological phenomena. Through this approach, researchers have uncovered mathematical regularities and patterns within biological systems. Applying this principle to the theory, it suggests that the presence of biological patterns throughout reality can be revealed and explained by mapping analogies from the biological domain to other domains.

## Structure Mapping Theory.

Dedre Gentner's work on analogies is foundational for our theory of a biological framework for a mathematical universe hypothesis, as it explores the cognitive process of analogical reasoning. Analogies play a crucial role in our theory by proposing the mapping of structural relationships from the biological patterns within living organisms to other domains to reveal and explain their biological nature. Here's how Gentner's work is foundational for our theory:

a. *Structure Mapping Theory*: Gentner's Structure Mapping Theory explains how analogical reasoning involves mapping the structural relationships between two domains of knowledge. This theory provides a foundation for our theory's proposal that analogies can be structurally mapped from biological patterns to other domains to uncover and explain their biological nature. Gentner's work establishes a cognitive framework for understanding how this process of mapping and reasoning through analogies can occur.

b. *Cross-Domain Mapping*: Gentner's work highlights that analogical reasoning often involves identifying similarities and differences across different domains. In our theory, the cross-domain mapping of biological patterns to other domains allows for the identification of shared structural relationships and the subsequent understanding of the biological nature of the target domain. Gentner's research can provide insights into the process of recognizing and mapping these cross-domain relationships.

c. *Mapping Biologically-Inspired Patterns*: Gentner's work also explores how analogies can be used to understand and describe complex phenomena. In our theory, the analogical mapping of biological patterns allows for the unveiling of hidden biological features in diverse systems, processes, and objects within reality. Gentner's research on analogical reasoning provides a theoretical foundation for understanding how these mappings of biologically-inspired patterns can be a viable approach.

By drawing upon Dedre Gentner's work on analogies and structure mapping, our theory of a biological framework for a mathematical universe can be supported by an established cognitive framework for understanding the process of analogical reasoning. Gentner's research provides insights into how cross-domain mappings can be made, allowing for the recognition and application of biological patterns in diverse domains. Integrating her work help bolster the theoretical underpinnings of our theory and provides more depth to the process of mapping analogies within our proposed biological framework for a mathematical universe hypothesis.

## Biomimicry

The field of **biomimicry** also provides foundational support for a biological framework for a mathematical universe hypothesis. From structural and functional adaptation to material innovations, energy efficiency, and systems thinking, biomimicry exemplifies the inherent biological nature of the systems, processes, and objects in reality. By acknowledging and applying these biological patterns, we gain valuable insights into the fundamental principles that govern human innovation. As biomimicry continues to flourish, we can expect further empirical evidence to affirm our theory, solidifying the understanding of the intricate relationship between biological processes and the systems they shape within our universe.

Look at what has been created in the field of biomimicry:

**<http://AskNature.org/innovation/>**

**Living Systems** (James Grier Miller)

James Grier Miller's work on "Living Systems" offers a theoretical foundation that can support and provide insights for the theory of "The Biological Framework for a Mathematical Universe."

In his book "Living Systems," Miller introduces the concept of living systems theory, which aims to study and understand various aspects of living organisms as complex systems. He proposes that living systems, including biological organisms, can be analyzed and understood through a systemic approach that considers their structure, function, and processes.

Miller's work emphasizes the interconnectedness and interdependence of different components within a living system, as well as the dynamic interactions between the system and its environment. He explores how living systems exhibit specific patterns, characteristics, and behaviors, which can be observed across different scales and contexts.

In the theory of "The Biological Framework for a Mathematical Universe," the idea that biological patterns define the framework of a mathematical universe aligns with Miller's perspective. Miller's approach acknowledges the inherent patterns and structures within living systems, which can extend to the broader universe.

By considering Miller's ideas, the theory of a biological framework for a mathematical universe hypothesis posits that the existence and functioning of living organisms are not separate from the overall biological processes that underpin the universe. It suggests that the biological patterns seen in living organisms can serve as models to reveal and explain the hidden biological patterns that permeate the universe and our surroundings. This perspective resonates with Miller's systemic thinking and recognition of interconnectedness within living systems.

Therefore, referencing Miller's work on living systems theory provides a theoretical foundation that supports the idea of a biological framework for a mathematical universe, reinforcing the understanding of the interconnectedness between living systems and the broader biological nature of reality proposed in the theory.

### **Huygens Synchronization + Law of Conservation of Energy:**

By incorporating Huygens' synchronization and the law of conservation of energy, we introduce concepts that highlight the interconnectedness, coordination, and energy transformations in biological systems and their relationship to the broader universe. These concepts provide a theoretical foundation for understanding the emergence and presence of biological patterns and processes throughout reality, as proposed in our theory. Here's how these concepts contribute:

a. *Huygens' Synchronization:* Huygens' synchronization refers to the phenomenon where two or more oscillators, even if initially not in sync, eventually synchronize and oscillate together. This phenomenon occurs due to the transfer of energy and information between the oscillators. In the context of our theory, Huygens' synchronization can support the idea that biological patterns and processes in the universe are interconnected. The synchronization of oscillators can be seen as an analogy for the interconnectedness and coordination of biological systems within the larger framework of the universe. This notion supports our postulation that all systems, processes, and objects possess biological patterns, suggesting a fundamental interplay of energy and information throughout reality.

b. *Law of Conservation of Energy:* The law of conservation of energy states that energy within a closed system remains constant; it cannot be created or destroyed, only transformed from one form to another. This law embodies the idea that energy is a fundamental aspect of the universe, and its transformations underlie various processes and phenomena. In our theory, the notion that the existence of life and living organisms is a consequence of the universe's biological processes aligns with the principle of conservation of energy. The evolution of these processes and the transfer of energy over time can lead to the emergence of complex biological systems, forming a coherent framework for understanding the biological nature of reality.

## **Reaction-Diffusion System**

Reaction-Diffusion Systems can explain these “ostensible correspondences” between the biological domain and all things within the universe. Reaction-diffusion systems can serve as a theoretical foundation for the theory of "The Biological Framework for a Mathematical Universe" by providing insights into the emergence and propagation of biological patterns in various systems.

Reaction-diffusion systems refer to mathematical models that describe how substances or entities interact and spread throughout space. These systems involve the interplay between chemical reactions (reactions) and the movement or diffusion of molecules (diffusion).

In the proposed theory, the assertion is made that biological patterns define the framework for a mathematical universe. Reaction-diffusion systems offer a framework that can explain the formation and propagation of patterns in biological systems. For example, Turing patterns, a well-known type of reaction-diffusion pattern, have been used to explain how various biological features, such as skin pigmentation patterns or the formation of fingers during embryonic development, can emerge from initially uniform conditions.

The theory suggests that all systems, processes, and objects in reality possess biological patterns. Reaction-diffusion systems provide a theoretical foundation by demonstrating how these patterns can arise through the interplay of molecular interaction and diffusion. This understanding supports the notion that biological patterns are present throughout the universe.

Furthermore, the theory proposes that the physiology of living organisms serves as a model that reveals hidden biological patterns throughout the universe. Reaction-diffusion systems can be seen as analogous to the biological processes occurring in organisms, as they involve the interaction and diffusion of substances. By mapping and studying the patterns observed in reaction-diffusion systems, we can gain insights into the underlying biological nature of different target domains.

In summary, the theoretical foundation of reaction-diffusion systems aligns with the theory's proposition that biological patterns define the framework of a mathematical universe. The study of reaction-diffusion systems provides a mathematical understanding of how patterns emerge and propagate, which sheds light on the biological nature observed in various systems.

## **Stephen Wolfram’s “A Class of Models with the Potential to Represent Fundamental Physics”**

Stephen Wolfram's work on "A Class of Models with the Potential to Represent Fundamental Physics" can provide a theoretical foundation for the theory of "The Biological Framework for a Mathematical Universe" by offering insights into how mathematical models can represent the fundamental physics underlying biological systems.

In his research, Wolfram explores the concept of computational irreducibility, which suggests that certain complex systems, including those found in biology, may not be predicted or understood simply by analyzing their individual components or through reductionist approaches. Instead, he argues that computational processes, specifically cellular automata, can exhibit emergent behaviors and complex patterns that cannot be easily reduced or simplified.

The theory of a biological framework for a mathematical universe posits that biological patterns define the framework for a mathematical understanding of reality. Wolfram's work aligns with this concept by emphasizing the complexity and emergent nature of computational models. The use of cellular automata as a modeling framework highlights how local interactions between cells can give rise to intricate and global patterns—a feature also observed in biological systems.

By considering Wolfram's work, the theory suggests that the fundamental physics underlying biological processes can be represented through mathematical models that capture the emergent patterns and behaviors of complex systems. It postulates that the mathematics encompassed by Wolfram's class of models can provide a platform to understand the inherent biological nature seen throughout reality.

Furthermore, the idea that the physiology of living organisms serves as models to reveal hidden biological patterns aligns with Wolfram's exploration of computational and emergent processes. The relationships and analogies between the biological patterns observed in living organisms and the mathematical models proposed by Wolfram can provide an avenue to explain and understand the biological nature of the target domains.

Considering Stephen Wolfram's work offers a theoretical foundation for the theory of a biological framework for a mathematical universe by incorporating computational irreducibility, emergent behaviors, and complex patterns, which resonate with the concept of biology defining the underlying framework of a mathematical universe.

### **Fractals.**

By integrating the principles of fractals into our theory, we highlight the self-similarity, complexity, mathematical nature, and analogy mapping present in the biological framework of the universe. This enhances our hypothesis by bringing in a mathematical and visual framework that supports the concept of biological patterns throughout various scales and domains. Here's how fractals contribute to supporting our theory:

a. *Self-Similarity*: Fractals are geometric patterns that exhibit self-similarity at different scales. This property aligns with our theory's assertion that biological patterns define the framework of the universe. Just as fractals exhibit self-similarity, our theory proposes that biological patterns are present and repeated across different systems, processes, and objects. Fractals can serve as a metaphorical representation of the inherent biological nature and self-similar patterns found throughout the universe.

b. *Complexity and Emergence*: Fractals often display intricate and complex structures emerging from simple underlying rules or equations. Our theory posits that the biological nature of systems, processes, and objects emerges from the evolution of the universe's biological processes. Fractals can provide a conceptual framework through which you can explain how complexity and emergence arise in the biological framework of the universe. The intricate and detailed structures seen in fractals reflect the complexity and emergence found in biological patterns.

c. *Unified Mathematical Language*: Fractals have a strong connection to mathematics, particularly with concepts such as recursion, iterative functions, and non-Euclidean geometry. Our theory emphasizes the mathematical nature of the universe, suggesting that a mathematical framework underlies biological patterns. By incorporating fractals, which have a deep mathematical foundation, we can reinforce the idea that the mathematical properties of fractals serve as a language to describe the biological patterns present across the universe.

d. *Mapping Analogies*: Fractals can be used as a tool for mapping analogies. Our theory proposes that analogies can be structurally mapped from the biological framework to any target domain to reveal the target domain's biological nature. Fractals offer a visually compelling way to map analogies, as they provide a framework to explore and identify similarities in form and structure across different domains. By employing fractals in our theory, we demonstrate how mapping analogies from biological patterns to other areas can reveal the underlying biological nature of those domains.

## **The Mandelbrot Set.**

By utilizing The Mandelbrot Set as a theoretical foundation for our theory, we bring in concepts of infinite complexity, self-similarity, emergence, iterative processes, and mathematical beauty. This strengthens our hypothesis by incorporating a visually captivating fractal that embodies the intricate and detailed nature of biological patterns throughout the universe. The Mandelbrot Set serves as an emblematic representation of the biological framework for a mathematical universe hypothesis. It shows how complex life can arise. Here's how The Mandelbrot Set supports our theory:

*a. Infinite Complexity:* The Mandelbrot Set is a mathematical fractal that exhibits infinite complexity and detail when zoomed in. Our theory emphasizes the idea that the nature of all systems, processes, and objects in reality possess biological patterns. The infinite complexity of The Mandelbrot Set can symbolize the intricate and detailed biological patterns that exist throughout the universe, reinforcing the notion of inherent biological nature and the abundance of patterns in reality.

*b. Self-Similarity:* The Mandelbrot Set is characterized by self-similarity at different scales. The smaller parts of the fractal resemble the larger whole, creating a similar pattern. This property aligns with our theory's proposition that biological patterns define the framework of the universe. Just as The Mandelbrot Set exhibits self-similar patterns, our theory suggests that biological patterns are repeated and present across different systems, processes, and objects.

*c. Emergence and Iterative Processes:* The Mandelbrot Set emerges from simple iterative mathematical equations. Our theory posits that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. The emergence and dynamic nature of The Mandelbrot Set can serve as a metaphorical representation of how complexity arises from iterative processes in the biological framework of the universe, highlighting the evolution of biological patterns throughout time.

*d. Mathematical Beauty and Universality:* The Mandelbrot Set is renowned for its aesthetic appeal and mathematical beauty. It exemplifies the elegance found in mathematical concepts and equations. By incorporating The Mandelbrot Set into our theory, we can emphasize the mathematical nature of the universe and how a mathematical framework underlies biological patterns. The beauty and universality of The Mandelbrot Set can symbolize the inherent mathematical beauty and universality present in the biological framework of reality.

## Occam's Razor

Occam's Razor, a principle attributed to philosopher and theologian William of Ockham, states that among competing hypotheses, the one with the fewest assumptions should be selected. In the context of our theory, Occam's Razor serves as a theoretical foundation in the following ways:

a. *Simplicity*: Occam's Razor promotes simplicity and parsimony in scientific explanations. Our theory posits that biological patterns define the framework for a mathematical universe hypothesis, implying that the inherent biological nature and patterns of all systems, processes, and objects in reality can explain their properties. This simplicity, attributing a common biological basis to diverse phenomena, aligns with the principle of Occam's Razor by embracing a single overarching explanation rather than multiple independent explanations.

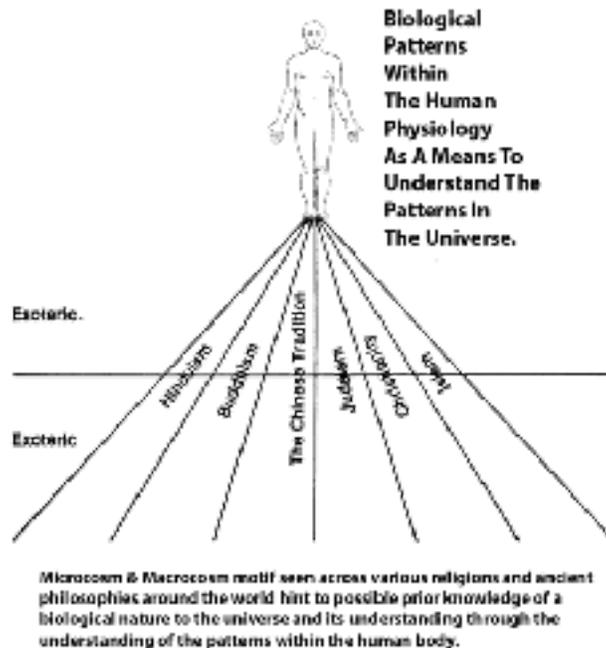
b. *Reduction of Assumptions*: Occam's Razor encourages minimizing unnecessary assumptions. As our theory suggests that the presence of life and biological organisms arises directly from the evolution of the universe's biological processes, it reduces the need for separate explanations to account for the emergence of life and the prevalence of biological patterns. Instead, it offers a concise framework that derives both from a shared source, highlighting the principle of minimizing assumptions.

c. *Coherence and Explanatory Power*: Occam's Razor seeks explanatory power and coherence in scientific theories. By proposing that the universe's biological processes and the physiology of living organisms reveal hidden biological patterns throughout the universe and its surroundings, our theory offers a cohesive framework for understanding the nature of different domains. This coherency implies a higher level of explanatory power, fitting with Occam's Razor's preference for theories that provide simple yet powerful explanations.

By applying Occam's Razor to our theory, we make an argument for a single, unifying principle - the biological framework for a mathematical universe hypothesis. The emphasis on reducing unnecessary assumptions, promoting simplicity, and ensuring coherence aligns with the spirit of Occam's Razor, providing a theoretical foundation for our proposed framework.

## Theoretical Foundations

### Historical Foundations



**Perennial wisdom**, also known as perennial philosophy or perennial tradition, refers to the concept of universal and timeless spiritual truths that are found across various religious, philosophical, and mystical traditions throughout human history. It suggests that there are fundamental principles and insights about the nature of reality and the human experience that remain consistent throughout different cultures and historical periods. Building upon the concept of perennial wisdom, the ideas of a biological framework for a mathematical universe hypothesis can be seen in many cultures and historical periods. Here's how perennial wisdom is incorporated into our theory:

1. *Universal Principles*: Perennial wisdom suggests that there are fundamental and universal principles that underlie all religious and philosophical traditions. By considering our theory within the framework of perennial wisdom, we have discovered that our theory of a biological framework for a mathematical universe hypothesis parallels with many of the religions and philosophical ideas from the past (which we show), especially the motif surrounding the microcosm and macrocosm.

2. *Biological Patterns and Spiritual Truths*: Perennial wisdom emphasizes the interconnectedness of all things and the underlying unity of existence. In our theory, the idea that biological patterns define the framework for the mathematical universe hypothesis aligns with this emphasis on interconnectedness. By linking the biological patterns to spiritual truths, we can posit that these patterns serve as a bridge between

the physical and the spiritual realms, revealing deeper spiritual realities through their existence and interplay.

3. *Common Motifs*: Perennial wisdom recognizes the presence of common motifs or themes across different religious and philosophical traditions. Our theory can utilize this concept by suggesting that the concept of a biological framework for the mathematical universe hypothesis predates the formation of specific religions and philosophies on Earth and its ideas/concepts can be seen within the ancient text of our religions and ancient philosophies. This implies that the presence of biological patterns as a fundamental aspect of reality is reflected in the common motifs found in various traditions. It highlights the universal nature of these biological patterns, further supporting our theory's assertion of their pervasiveness.

4. *Compatibility with Science*: Perennial wisdom emphasizes the compatibility of spiritual and scientific understanding. Our theory, which proposes a biological framework for a mathematical universe hypothesis, integrates scientific principles and patterns into the understanding of the nature of reality. This aligns with the aim of perennial wisdom to bridge the gaps between different modes of knowledge and to unite spiritual and scientific perspectives.

By incorporating perennial wisdom as a theoretical foundation for our theory, we strengthen the idea that the biological framework within the mathematical universe hypothesis is in alignment with universal and timeless spiritual truths. This perspective allows for a broader understanding of the interrelation between biological patterns, spiritual realities, and the common motifs found in different religious and philosophical traditions. We also propose that our theory for a biological framework for a mathematical universe may have been what was originally conveyed through our religion, and only through misinterpretations through time, have we come to a more “spiritual/religious” context of religion, and not the purely scientific meaning of what was being expressed. [Insert Atlas Cloud Scene when Tom Hanks talks to children at the end]

#### **Atman & Brahman (Upanishads 3000 - 500 BCE):**

The concepts of Atman and Brahman, as described in the Upanishads, can provide interesting perspectives and potentially contribute to the theoretical foundation of our theory, "biological framework for a mathematical universe hypothesis." Here's how these concepts can be relevant:

1. *Atman*: In the Upanishads, Atman refers to the individual self or soul, representing the essence of an individual being. It is considered eternal and interconnected with the ultimate reality. Our theory proposes that all systems, processes, and objects in reality possess biological patterns. From the perspective of Atman, one can interpret this as the essence or intrinsic nature of all things being interconnected and sharing common biological patterns. The concept of Atman supports the idea of the underlying unity and interdependence of all elements within the biological framework we propose.

2. *Brahman*: Brahman refers to the supreme cosmic reality, the ultimate truth or universal consciousness that encompasses and transcends individual beings. Brahman is considered the essence or source of everything. In our theory, the postulation that the existence of life and living organisms arises due to the evolution of the universe's biological processes aligns with the idea of Brahman as the creative force behind all manifestation. The concept of Brahman can provide a theoretical foundation for understanding the interconnectedness of the universal biological processes we propose and their relationship to the larger cosmic reality.

By integrating the concepts of Atman and Brahman, we incorporate ideas of interconnectedness, unity, and the universal nature of biological patterns. These concepts contribute to the theoretical framework of our theory by providing a philosophical and metaphysical basis for understanding the inherent biological

nature of all systems, processes, and objects in reality, as well as the relationship between biological processes and the larger cosmic fabric.

**“Namaste” Meaning (Hinduism):**

In the realm of Hinduism, the traditional greeting "Namaste" carries a profound meaning. It serves as a acknowledgement that the divine essence resides within oneself as well as in others, emphasizing the unity that transcends physical boundaries and highlights the interconnectedness of all living beings. Namaste can be understood as "I respectfully bow to the divine within you"<sup>1 2 3</sup> or "the sacred within me recognizes the sacred within you".<sup>4</sup> We propose that the customary practice of bowing to one another may have originally served as a means to acknowledge the inherent sacredness of biological patterns that pervades every aspect of our existence. Regrettably, over time, the true meaning and context behind this divine salutation were lost.

**Pnimityut and Chitzonyut (Judaism, Kabbalah):**

The concepts of Pnimityut and Chitzonyut from Kabbalah, a mystical tradition within Judaism, can provide intriguing theoretical foundations for certain aspects of our theory, "biological framework for a mathematical universe hypothesis." Here's how these concepts may be relevant:

1. *Pnimityut*: Pnimityut suggests an inward, hidden essence or inner dimension of reality. It refers to the underlying essence or spiritual aspect that is concealed from ordinary perception. In our theory, we propose that the hidden biological patterns throughout the universe can be revealed through the models of living organisms. This aligns with the concept of Pnimityut, as it suggests that there is an inner essence or pattern within all systems, processes, and objects that can be uncovered and understood. By exploring the biological nature and patterns of living organisms, we aim to reveal the hidden essence or Pnimityut within other domains.

2. *Chitzonyut*: Chitzonyut refers to the external or outer dimension of reality. It represents the surface-level or manifested aspects of existence. In our theory, we propose that all systems, processes, and objects possess biological patterns and are inherently biological in nature. This relates to Chitzonyut, as it suggests that the external manifestations or physical appearances of different domains can be seen as reflections of the underlying biological patterns. The interplay of Chitzonyut and Pnimityut in our theory can be seen as a parallel to the relationship between the revealed and hidden dimensions of reality within Kabbalah.

By integrating the concepts of Pnimityut and Chitzonyut, we incorporate ideas of hidden essences, inner dimensions, and external manifestations into our theory. These concepts can contribute to the theoretical framework by providing a philosophical and mystical basis for understanding the underlying biological patterns throughout reality and their relationship to the visible manifestations in different domains. Moreover, the concepts of Pnimityut and Chitzonyut can enrich the exploration of the interplay

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<sup>1</sup> Ying, Y. W., Coombs, M., & Lee, P. A. (1999), "Family intergenerational relationship of Asian American adolescents", *Cultural Diversity and Ethnic Minority Psychology*, 5(4), pp. 350–363

<sup>2</sup> K V Singh (2015). *Hindu Rites and Rituals: Origins and Meanings*. Penguin Books. pp. 123–124. ISBN 978-0143425106. Archived from the original on 2019-12-17. Retrieved 2017-05-20.

<sup>3</sup> Lawrence, J. D. (2007), "The Boundaries of Faith: A Journey in India", *Homily Service*, 41(2), pp. 1–3

<sup>4</sup> Oxhandler, Holly (2017). "Namaste Theory: A Quantitative Grounded Theory on Religion and Spirituality in Mental Health Treatment". *Religions*. 8 (9): 168. doi:10.3390/rel8090168.

between hidden and revealed aspects, adding depth to our understanding of the biological nature of diverse phenomena.

**Batin and Zahir** (Sufism, Islam):

The concepts of Batin and Zahir from Sufism, a mystical branch of Islam, can provide theoretical foundations for certain aspects of our theory, "biological framework for a mathematical universe hypothesis." Here's how these concepts may be relevant:

1. *Batin*: Batin refers to the inward or hidden dimension of reality. It represents the spiritual or esoteric aspect that is concealed from superficial observation. In our theory, we propose that biological patterns define the framework of a mathematical universe hypothesis. By emphasizing the hidden biological patterns throughout the universe, we can draw parallels with the concept of Batin. It suggests that there is an inner essence or hidden dimension within all systems, processes, and objects that can be explored and understood. By uncovering the Batin or hidden biological patterns, we aim to reveal the underlying nature of various domains.

2. *Zahir*: Zahir refers to the outer or apparent dimension of reality. It represents the manifest or surface-level aspects of existence. In our theory, we argue that all systems, processes, and objects possess biological patterns and are inherently biological in nature. This aligns with the concept of Zahir, as it suggests that the external manifestations or observable characteristics of different domains can be seen as reflections or manifestations of the underlying biological patterns (Batin). The interplay between Zahir and Batin in your theory can be seen as reflecting the relationship between the manifest and hidden dimensions of reality within Sufism.

3. *Whirling Dervish Ritual*: Whirling Dervishes spin in circles like parties within the body and planets within the solar system. They direct their attention inward and focus on the mystical contemplation of God's nature.

By integrating the concepts of Batin and Zahir, we incorporate ideas of hidden dimensions, spiritual aspects, and observable manifestations into our theory. These concepts can contribute to the theoretical framework by providing a mystical and philosophical foundation for understanding the underlying biological patterns throughout reality and their relationship to the visible expressions in different domains. Moreover, the concepts of Batin and Zahir can add depth to the exploration of the interplay between hidden and apparent aspects, enriching our understanding of the biological nature of diverse phenomena.

**Microcosm and macrocosm:**

The concept of microcosm and macrocosm provide a theoretical framework for certain aspects of our theory, "biological framework for a mathematical universe hypothesis." Here's how these concepts can be relevant:

1. *Microcosm*: In the concept of microcosm, it is believed that the smaller or individual part reflects or mirrors the larger or universal whole. This means that the characteristics and patterns found in a smaller or more localized entity can be seen as representative of the larger universe. In our theory, we propose that biological patterns define the framework for a mathematical universe hypothesis. By considering living organisms as microcosms, or smaller entities within the universe, we suggest that they embody and reveal the hidden biological patterns that exist throughout reality. This concept supports our postulation that

analogies can be mapped from the biological to any target domain, allowing for a better understanding of the biological nature of the target domain by looking at the microcosm.

2. *Macrocosm*: The concept of macrocosm, on the other hand, suggests that the larger universe is reflected in or reflected by the smaller entities within it. This means that the patterns and principles present in the universe at a larger scale are found and reflected in smaller systems and processes. In our theory, we propose that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. This aligns with the concept of macrocosm, as it suggests that the larger-scale biological processes of the universe are mirrored in the physiology and patterns of living organisms, acting as models revealing the underlying biological nature of the macrocosm.

By incorporating the concepts of microcosm and macrocosm, we acknowledge the interconnectedness and mirroring of patterns between smaller and larger scales within the universe. These concepts provide a theoretical foundation for our understanding that biological patterns define the framework for a mathematical universe hypothesis. By exploring the biological nature of living organisms, perceived as microcosms, we seek to unravel and explain the broader biological patterns and processes present in the macrocosm, or the universe.

### **Incarnation** (Religious Concept):

To explore the potential connection between the theory of biological framework for a mathematical universe and religious concepts such as "incarnation," we consider the idea that "God" may represent the personification of the universe. In this view, "God's spirit," "God's essence," and "God's nature" are essentially synonymous with the biological patterns inherent in the fabric of reality. Thus, it is conceivable that the religious term "incarnation" attempts to express the concept of a biological framework for a mathematical universe hypothesis. Traditionally, the term "incarnation" is associated with the embodiment of a divine being in human form, as seen in various religious traditions. However, through the lens of a biological framework, we can reinterpret this concept as the manifestation of the universe's inherent biological patterns in human form.

The concept of incarnation, as traditionally understood in religious contexts, typically refers to the belief that a divine being assumes human form. In the context of our theory, we draw a parallel between the Universe's biological patterns that permeate reality, which we propose, and the embodiment or manifestation of the Universe's biological patterns in a living organism, such as human form. The concept of incarnation could have originally meant to convey the universe's biological patterns (i.e., divine, God, divine essence) manifestation into human form.

**"So God created man in his own image"** (Genesis 1:27) — For example, if one were to understand God as the personification of The Universe, one can see how biological universe could create man in its own image.

**"Yet in my flesh I will see God"** (Job 19:26) — This also supports our biological framework to a mathematical universe by implying that by the biological patterns in my flesh allow me to see the biological patterns in the universe and world around me. Now, did job know the context behind what he was saying? Or was he reiterating (without scientific/biological/astrophysical context) his teachings?

**"One God and Father of all, who is over all, and through all, and in all"** (Ephesians 4:1-6) — This is another example where if one were to understand God as the personification of the universe, one can see how this phrase could support the ideas that the concepts of a biological framework to the universe may have been conveyed to (tried to be conveyed) to a people during ancient times.

**“The Word became flesh”** (John 1:14) — In context to our theory of a biological framework to the universe, the Word became flesh, could mean referring to the manifestation of the universe’s biological patterns in the creation of Jesus Christ.

**“Body is a Temple of the Holy Spirit who is in you”** (Corinthians 3:16 and Corinthians 6:19-20) — In light of perennialism and our theory of a biological natured-universe, this passage could be trying to express the biological patterns of the universe (i.e., Holy Spirit) being within a person’s body, and arguing to a person to not disrespect the pattern.

### ***Theology of the Body***

In light of perennialism, particularly how we suggest that the biological framework for the universe may have been conveyed in the ancient past, and the possibility of the original context being lost, we come to the misinterpretations of this knowledge in Pope John Paul II’s lectures on Theology of the Body. Pope John Paul II’s **"Theology of the Body"** acknowledges the importance of the human body in understanding the nature of God but does not grasp the concept that God is the personification of the universe and that by knowing the biological patterns within the human body is what allows one to understand the hidden biological patterns in the universe and world around us. Here is a quote from his lecture: *“The body, and it alone is capable of making visible what is invisible, the spiritual and divine. It was created to transfer into the visible reality of the world, the invisible mystery hidden in God from time immemorial, and thus to be a sign of it.”*, We can make the assumption based off his statement and by what he actually preached during his 128 lectures did not coincide with our theory of a biological framework for a mathematical universe. The Pope acknowledges the importance of the human body in understanding the nature of God but does not grasp the underlying scientific concepts, perhaps due to being lost through time, or being unable to communicate to a society who had no prior knowledge of biology, cosmology, and physics.

### **Anthropomorphism in Kabbalah.**

By incorporating anthropomorphism from Kabbalah as a theoretical foundation, our theory gains a perspective that recognizes the divine essence and intention within the biological patterns and processes of the universe. This supports our argument that biological patterns define the framework for the mathematical universe hypothesis, highlighting the deliberate design, interconnectedness, and unity found within creation. It also provides a metaphysical component that aligns with the concept of hidden biological patterns being revealed through the examination of the living things that the universe creates. Here's how it can be applied to support our theory:

1. **Divine Blueprint:** In Kabbalah, anthropomorphism is used as a metaphorical device to describe the divine essence. Anthropomorphism suggests that human characteristics and patterns can be seen as reflections of the divine nature. Similarly, our theory posits that the biological patterns found within living organisms serve as models for understanding the hidden biological patterns throughout the universe—that the patterns observed within the human physiology is a reflection of the biological patterns of the universe. By incorporating anthropomorphism from Kabbalah, we can argue that the biological framework observed in living beings reflects a larger divine blueprint, where biological patterns are intertwined with the mathematical framework of the universe.
2. **Intention and Design:** Anthropomorphism in Kabbalah also suggests that the divine essence has intention and purpose within creation. Applying this concept to our theory, we can propose that the evolution of the universe's biological processes, leading to the existence of life and living organisms, is not purely coincidental but rather displays an inherent intention and design. By viewing the universe through the lens

of anthropomorphism, we can argue that the physiology of living organisms acts as a model that reveals the hidden biological patterns throughout the universe, reflecting the intentional design underlying the mathematical framework.

3. **Holistic Understanding:** Kabbalistic anthropomorphism encourages a holistic understanding of the divine, seeing aspects of the divine in different aspects of creation. By incorporating this perspective into our theory, we can emphasize the importance of a holistic approach that considers both the biological and mathematical elements of reality. This supports your theory's assertion that biological patterns define the framework for the mathematical universe hypothesis, with the ability to structurally map analogies from the biological domain to any target domain in reality, highlighting the interconnectedness and harmony between biology and mathematics within the greater cosmic order.

4. **Unity of Existence:** Anthropomorphism in Kabbalah also suggests the unity of existence, where all aspects of creation are interconnected. Linking this concept to our theory, you can argue that just as Kabbalah perceives the unity of existence, with every aspect reflecting the divine, our theory proposes that all systems, processes, and objects in reality possess inherent biological patterns. This unity emphasizes the interconnectedness of the biological patterns found throughout the universe, reinforcing our theory's assertion of a biological framework underlying the mathematical universe.

### **Akasha.**

Utilizing the concept of Akasha as a theoretical foundation for our theory can enhance the understanding of the interconnectedness, hidden patterns, and universal consciousness underlying the biological framework of the universe. Remember, Akasha is a philosophical concept from Hindu and Buddhist traditions; its inclusion in our theory demonstrates an interdisciplinary approach that integrates different philosophical frameworks to support our hypothesis. Here's how Akasha contributes to supporting our theory:

1. **Universal Consciousness:** Akasha is often described as the primordial element or universal consciousness that permeates everything in the universe. This concept aligns with our theory's proposition that all systems, processes, and objects possess biological patterns and are inherently biological in nature. By incorporating the idea of Akasha, we can argue that this universal consciousness is deeply connected to and shaped by biological patterns, establishing a link between consciousness and the biological framework of the universe.

2. **Interconnectedness and Holistic Approach:** Akasha emphasizes the interconnectedness of all things, with every entity and phenomenon connected and influenced by the universal consciousness. In the context of our theory, Akasha can serve as a theoretical foundation to highlight the interconnectedness and interdependence of biological patterns throughout the universe. The biological patterns within systems, processes, and objects can be seen as reflections of the universal consciousness, revealing the underlying unity in the manifestation of life and its interconnectedness with the wider universe.

3. **Revealing Hidden Patterns:** Akasha is often associated with the ethereal dimension that holds the records of everything that has occurred, the "Akashic Records." Analogously, in our theory, the physiological models of living organisms can be seen as revealing the hidden biological patterns throughout the universe and our surroundings. Akasha can provide a conceptually similar framework wherein the universal consciousness holds the records or underlying patterns of biological processes that shape and create life in various forms.

4. **Metaphorical Mapping:** Akasha can offer a metaphorical mapping for bridging the biological framework to other domains. By drawing upon Akasha's holistic and universal nature, we can propose that analogies can be structurally mapped from the biological realm to any target domain. This mapping can help reveal and explain the biological nature of the target domain, showcasing the interconnectedness of biological patterns and their presence across the universe.

## **The Principle of Correspondence.**

By drawing upon the Principle of Correspondence from Hermeticism, our theory gains a theoretical foundation that underscores the interconnectedness of different planes of existence and the correspondence between biological and mathematical patterns. This principle can support our argument that biological patterns define the framework for the mathematical universe hypothesis and highlight the importance of recognizing the underlying connections in order to reveal and explain the biological nature of any target domain. Here's how it can be applied to support our theory:

1. **Interconnectedness:** The Principle of Correspondence in Hermeticism asserts that there is a correspondence and interconnectedness between different planes of existence, from the microcosm to the macrocosm. Applying this principle to our theory, we can propose that the biological patterns found in living organisms reflect and correspond to the larger patterns within the universe. In this way, the concept of Correspondence reinforces our theory's assertion that all systems, processes, and objects possess inherent biological patterns, highlighting the interconnectedness between the biological and mathematical aspects of the universe.

2. **Fractal Nature:** The Principle of Correspondence also emphasizes the idea that the same patterns and principles manifest at different scales, creating a resemblance between the microcosm and the macrocosm. In our theory, this concept aligns with the notion that the biological patterns found within living organisms serve as models for understanding the hidden biological patterns throughout the universe. By recognizing the fractal-like nature of reality, where patterns repeat and display similarity across different scales, our theory can argue that analogies can be mapped from the biological to any target domain, revealing the underlying biological nature of that domain.

3. **Universal Laws:** Hermeticism holds that there are universal laws governing the cosmos, and the Principle of Correspondence suggests that these laws apply across different planes of existence. Correlating this principle with our theory, we can propose that the universal laws underlying biological patterns (and biological principles) are intertwined with the fundamental mathematical principles that govern the universe. This supports our postulation that the evolution of the universe's biological processes directly contributes to the existence of life and living organisms. By emphasizing the interconnectedness of these laws, our theory can argue that understanding the biology of living organisms provides insights into the broader mathematical nature of the universe revealing these hidden universal-biological laws.

4. **Holistic Perspective:** The Principle of Correspondence fosters a holistic perspective, encouraging the exploration and understanding of the interconnected nature of reality. By incorporating this principle into our theory, we can emphasize the importance of adopting a holistic approach that considers both the biological and mathematical aspects of the universe. This holistic perspective allows for a more comprehensive understanding of the underlying patterns and connections between the biological patterns within living organisms and the mathematical framework of the universe.

### **Emanationism:**

Emanationism is a philosophical concept that suggests the universe emanates or originates from a divine source or ultimate reality. It proposes a hierarchical structure of existence wherein different levels or stages emanate from the divine essence.

In our proposed theory, of a biological framework for a mathematical universe hypothesis, we draw a parallel between the idea of biological patterns emanating from the universe and the notion of emanationism. Considering the existence of biological patterns as emanations from the fundamental properties of the universe could provide a framework for understanding the interconnectedness between the physical and biological aspects of reality.

By positing that the biological patterns found in all systems and processes stem from the evolution of the universe's biological processes, we can argue that these patterns are manifestations or emanations of the underlying essence of the universe. This interpretation aligns with the notions of emanationism, where the divine or fundamental essence is understood to permeate and give rise to various forms of existence.

### **Anima Mundi:**

Anima Mundi, often translated as "world soul" or "soul of the world," is a concept that has been present in various philosophical and religious traditions throughout history.

Anima Mundi suggests the notion of a vital and animating force that permeates and connects all living beings and the natural world. It represents the idea of an underlying, unifying principle that integrates and sustains the diverse manifestations of life in the world.

Drawing a parallel between the concept of Anima Mundi and our theory of a biological framework for a mathematical universe, we propose that the biological patterns we postulate as inherent in all systems, processes, and objects in reality, are expressions of this underlying animating force. By considering the presence of biological patterns as a manifestation of the animating principle of the universe, we claim that our theory aligns with the concept of Anima Mundi.

Furthermore, Anima Mundi might have been attempting to express similar concepts that our theory proposes, we can posit that over time, the context and interpretation of the concept might have evolved or been misunderstood, leading to potential divergence from its original intent, which we believe to be this biological framework for a mathematical universe hypothesis.

### **Panentheism:**

Panentheism is a philosophical or religious concept that suggests the presence of a transcendent yet immanent divine reality within and beyond the universe. It posits that the divine is both intimately present in all aspects of existence and extends beyond them.

Within the framework of our theory, we propose that the concept of panentheism aligns with the idea that biological patterns define the framework for a mathematical universe hypothesis. By considering the presence of biological patterns as inherent in all systems, processes, and objects in reality, the notion of a divine essence that permeates and manifests itself through these patterns can be contemplated.

From a panentheistic perspective, the universe itself, including its biological processes and patterns, could be seen as a manifestation or expression of the immanent divine reality. In this interpretation, the physiological models found in living organisms could be understood as reflections or representations of the hidden biological patterns throughout the universe.

By connecting the concept of panentheism with our theory, we argue that the interplay between the universe's biological processes and the living organisms it generates reveals an underlying divine presence or creative force. This perspective potentially provides a theoretical foundation for understanding the inherent biological nature of systems, processes, and objects in reality.

## **Theosophy**

**Theosophy**, with its emphasis on a pure spiritual formation gradually materializing into an observable, material realm, echoes the hypothesis' proposition of a gradual manifestation of biological patterns in the universe. While theosophy primarily refers to spiritual formations, interpreting it as representing the biological pattern of the universe aligns with the hypothesis. This interpretation suggests that theosophy may actually be trying to express that the nature of a universe is governed by biological patterns. Theosophy speaks of a universal intelligence or divine wisdom permeating all aspects of the cosmos. The biological framework for a mathematical universe could be seen as providing a scientific basis for this universal intelligence, suggesting that the inherent biological patterns are the physical discernible manifestation of a universal intelligence or divine wisdom. Theosophy posits the existence of interconnectedness between all beings and aspects of reality. This mirrors the concept of biological patterns as the foundation of the mathematical framework for the universe. By considering all systems as interconnected through biological patterns, both Theosophy and the biological framework for a mathematical universe highlight the idea of a unified existence. Furthermore, Theosophy recognizes the concept of spiritual evolution, suggesting that beings progress and evolve through various stages. Similarly, the biological framework for a mathematical universe proposes that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. This implies an inherent link between biological evolution and spiritual growth, aligning with the idea of progressive development and evolution in Theosophy.

## **Stoic Physics:**

Stoic Physics is a philosophical framework developed by the ancient Stoic philosophers, provides some interesting insights for our theory. Stoic physics aimed to understand the workings of the universe through a combination of physics and metaphysics. While Stoic physics primarily focused on the study of the material world, it also incorporated elements of divine reasoning and nature.

In relation to our theory, Stoic physics can lend support to the idea of a biological framework for a mathematical universe hypothesis. The Stoics believed that the natural world operates according to a rational principle they called "logos." They posited that this governing principle was imprinted in everything in the form of active and passive forces.

By drawing on Stoic physics, we can argue that the biological patterns present throughout the universe are a reflection of the underlying logos. We can propose that the inherent biological nature of systems, processes, and objects in reality is a result of this rational principle imbued within them.

Additionally, Stoic physics emphasized the interconnectedness and interdependence of all aspects of the universe. This idea aligns with our theory's assertion that all systems, processes, and objects possess biological patterns. Stoicism suggests that these patterns are not isolated but partake in a unified fabric of existence.

Furthermore, the Stoic concept of the "pneuma," often translated as "breath" or "spirit," can be related to your theory's notion of these biological patterns. According to the Stoics, the pneuma permeated all matter, connecting everything. By this interpretation, the biological patterns could be seen as reflections of the underlying pneuma or life force present in the universe.

## **Ahimsa.**

Ahimsa is a concept rooted in Indian philosophy and often associated with Jainism and Buddhism, refers to the principle of non-violence, non-harm, and compassion towards all living beings. While at first glance, it may not seem directly related to our theory, there are some possible connections to explore:

1. **Ethical Considerations:** Ahimsa places great importance on fostering harmony and minimizing harm to living beings. In our theory, you could emphasize the ethical implications of understanding the inherent biological nature of all systems, processes, and objects in reality. By acknowledging and respecting the biological patterns present in the universe, our theory can highlight the interconnectedness and value of all life forms, aligning with the spirit of ahimsa.
2. **Unity and Interconnectedness:** Ahimsa promotes the recognition of the inherent unity and interdependence of all beings. Within our theory, the concept of inherent biological patterns also implies an interconnectedness between all systems, processes, and objects in reality. This correspondence with ahimsa can contribute to a holistic worldview that acknowledges the interwoven nature of life and promotes compassion towards all living entities.
3. **Holistic Understanding:** Ahimsa encourages a deep understanding of the web of life and the acceptance of the sacredness of all living beings. In our theory, the recognition of hidden biological patterns throughout the universe can be seen as an extension of this holistic understanding, uncovering the biological nature present in different domains. This shared perspective promotes a sense of reverence and appreciation for the interconnectedness of life, supporting the principles of ahimsa.

While these connections between our theory and ahimsa are exploratory in nature, incorporating the principles of non-violence, interconnectedness, and compassion within your research can enrich the philosophical and ethical dimensions of our work.

## **Animism.**

Animism is a belief system found in various indigenous cultures, holds that all entities, including plants, animals, and inanimate objects, possess a spiritual essence or soul. While animism focuses on spirituality and the interconnectedness of living and nonliving things, it can be applied as a theoretical foundation for our theory:

1. **Interconnectedness:** Animism emphasizes the interconnectedness of all aspects of the natural world. Similarly, our theory suggests that all systems, processes, and objects in reality possess inherent biological patterns, implying an underlying interconnectedness. By drawing on animistic principles, we can emphasize the spiritual or interconnected aspect of the biological patterns throughout the universe, aligning it with the notion of all things possessing spiritual essences in animism.
2. **Reverence for Nature:** Animism often includes a deep respect and reverence for the natural world. In our theory, recognizing the biological nature of all systems, processes, and objects can encourage a similar reverence for the complexity and interconnectedness of life and the universe. By integrating animistic values, our theory can underpin an understanding and appreciation for the inherent significance and value of biological patterns.
3. **Universal Spirituality:** Animism considers the existence of spiritual essences in both living and nonliving entities. Similarly, our theory suggests that the hidden biological patterns in the universe exist within everything in the universe. By considering animism, we can interpret these biological patterns as a reflection of the universal spirituality present in all domains, showing the interconnectedness between the spiritual essence within living beings and the universe as a whole.

## **Taoism,**

Taoism is an ancient Chinese philosophy and spiritual tradition, offers some intriguing aspects that can be related to your theory on the "biological framework for a mathematical universe hypothesis." Here's how Taoism might serve as a theoretical foundation:

1. **Harmony and Balance:** Taoism emphasizes the importance of harmony and balance in all aspects of existence. Within your theory, the concept of biological patterns defining the framework implies an inherent balance and harmony present in the universe. Like the Taoist idea of the Tao, representing the natural order of the cosmos, your theory suggests that the biological patterns contribute to the overall harmony and interconnectedness of reality.

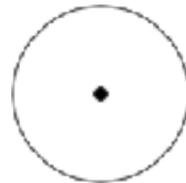
2. **Nature as a Teacher:** Taoism views nature as a profound source of wisdom and guidance. In your theory, by asserting that the universe's biological processes led to the existence of life and living organisms, you align with the Taoist perspective that nature itself can reveal fundamental truths. Just as Taoists observe and learn from the natural world, your theory implies that studying and understanding biological patterns can uncover the hidden workings and principles of the universe.

3. **Wu Wei (Non-Action):** Wu Wei is a Taoist concept that refers to effortless action in harmony with the natural flow. In the context of your theory, the notion of analogies being structurally mapped from biological patterns to reveal the biological nature of target domains can be related to Wu Wei. Rather than forcing understanding or imposing artificial frameworks, your theory suggests that by aligning with the natural biological patterns, insights and connections can be discovered more effortlessly and in harmony with the inherent nature of the universe.

By incorporating Taoism as a theoretical foundation, you can draw upon its emphasis on harmony, balance, nature as a teacher, and the concept of Wu Wei. These aspects complement the central ideas of your theory: the inherent biological patterns, the relationship between the universe's biological processes and living organisms, and the use of analogies to reveal the biological nature of different domains. Exploring Taoist principles can enrich your theory by providing a philosophical framework that resonates with the natural order and interconnectedness found in the biological patterns you propose.

## ***The Circled Dot***

The Pythagoreans and later Greeks employed the circled dot to represent the Monad or The Absolute, a metaphysical entity signifying the ultimate essence of reality. While traditionally interpreted as a symbol for the pure and indivisible first principle, we propose an alternative interpretation that aligns with our theory. Perhaps the Pythagoreans and later Greeks were attempting to convey the true nature of the universe (and where all first principles of the universe stem from): that it was biological in nature and its structure resembled that of a single-celled organism.



The circled dot was used by the Pythagoreans and later Greeks to represent the first metaphysical being, the Monad or The Absolute. The Monad, understood as the original source and principle of all reality, represents the indivisible and all-encompassing essence that lies beyond the physical world and is conceived as a fundamental, undifferentiated principle that encompasses all aspects of reality. The Pythagoreans believed that all things emanated from the Monad and are interconnected through the golden ratio and other mathematical proportions.

By acknowledging the circled dot as a representation of a single-celled organism, we can draw parallels between the structure and functions of living organisms and the underlying framework of the universe. This recognition supports our view that the universe's nature is inherently biological. Just as living organisms exhibit various patterns, processes, and interactions, the universe manifests similar characteristics on a grander scale. The flowing patterns of galaxies, the intricate networks of particles, and the dynamic interplay of forces all align with the biological patterns found within living organisms.\*\*

## **Existing Scientific Literature:**

Several theoretical and empirical studies support the idea that a biological framework shapes the structure and behavior of the universe.

### ***The Life of the Cosmos***

For instance, theoretical physicist Lee Smolin in his book "**The Life of the Cosmos**" argues that the laws of nature evolve in a similar way to biological systems, with a process of natural selection favoring those laws that are conducive to the formation of stable and complex systems. Smolin suggests that this evolutionary process ultimately leads to the emergence of life.

### ***The Blind Watchmaker***

In "**The Blind Watchmaker**," biologist Richard Dawkins explores the concept of complex biological structures emerging through the process of natural selection. Dawkins argues that biological patterns, such as the intricate design of organisms or the genetic information encoded in DNA, can be seen as optimized solutions to various environmental challenges. He proposes that, in a similar vein, the mathematical structures underlying the universe may be the result of an evolutionary process.

### ***Systems Biology***

The field of **systems biology** also provides valuable insights into the biological foundations of the universe. Systems biology aims to study biological systems as a whole, rather than focusing on individual components. This holistic approach recognizes the interdependency and interconnectedness of different biological elements, suggesting that similar principles could be applied to understand the universe as a complex, interconnected system.

### ***General System Theory*** (Bertalanffy)

Ludwig von Bertalanffy's "**General System Theory**" offers a valuable framework for understanding complex systems found in various fields of study. By utilizing biological systems as exemplars to explain principles and relationships of his General System Theory, Bertalanffy recognized the essential interconnectedness and interdependence that define all systems. Through his emphasis on the holistic nature of biological systems and their commonalities with other systems, Bertalanffy provides a sound footing to bridge biology and mathematics. General System Theory, with its universal applicability, enhances our understanding of the intricate patterns that define the framework of reality.

### ***Quantitative Comparison Between the Neuronal Network and Cosmic Web***

In "**Quantitative Comparison Between the Neuronal Network and Cosmic Web**," Franco and Vazza supports this hypothesis of a biological framework for a mathematical universe by demonstrating the striking similarities between the neuronal network and cosmic web. The structural and scaling properties shared by these complex systems provide evidence for a deep interconnection between biology and the underlying mathematical principles that govern the universe.

### ***Wave-particle Duality***

We also highlighted how other scientists established analogies from the biological domain to various phenomena in the universe, such as how Neils Bohr's work on **wave-particle duality** can be seen as evidence of the inherent biological patterns in the universe. If we consider light as a biological phenomenon, we can observe that it exhibits behaviors that are analogous to living organisms. Just as living organisms can exist in multiple states and exhibit different behaviors based on the environments they encounter, light can exist as a wave or a particle depending on the context, displaying a “consciousness or freewill.”

### ***Gaia's Body: Toward a Physiology of Earth*** (Tyler Volk)

In ***Gaia's Body: Toward a Physiology of Earth***, Tyler Volk (a scientist who aided in the construction of self-sustaining systems for NASA's space shuttles), examined the principles of Gaia theory and demonstrated how Earth exhibits biological patterns in its functions and processes. The concept of feedback loops, the emergence of life, and the interconnectedness of ecosystems all provide evidence for the existence of a biological framework within the universe, especially within systems and processes which govern the Earth.

### ***Living Systems*** (Miller)

Observations presented in James Grier Miller's book, ***Living Systems***, highlight analogies between the biological domain and innovations of human society, including human society itself. Miller showed that a “general theory of living systems can be constructed, and; he assembled facts and revealed how they support a set of unifying scientific principles.” Miller constructed detailed diagrams showing how systems, processes, and objects in human society are analogous to biological systems, processes, and objects. The fact that Miller was able to establish analogies between phenomenon in human society and biology provides support to the theory of a biological framework for a mathematical universe hypothesis.

### ***Biomimicry***

The field of **biomimicry** offers substantial support for a biological framework for a mathematical universe hypothesis. From structural and functional adaptation to material innovations, energy efficiency, and systems thinking, biomimicry exemplifies the inherent biological nature of the systems, processes, and objects in reality. By acknowledging and applying these biological patterns, we gain valuable insights into the fundamental principles that govern the universe. As biomimicry continues to flourish, we can expect further empirical evidence to affirm our theory, solidifying the understanding of the intricate relationship between biological processes and the systems they shape within our universe.

### ***“Digital Biology”***

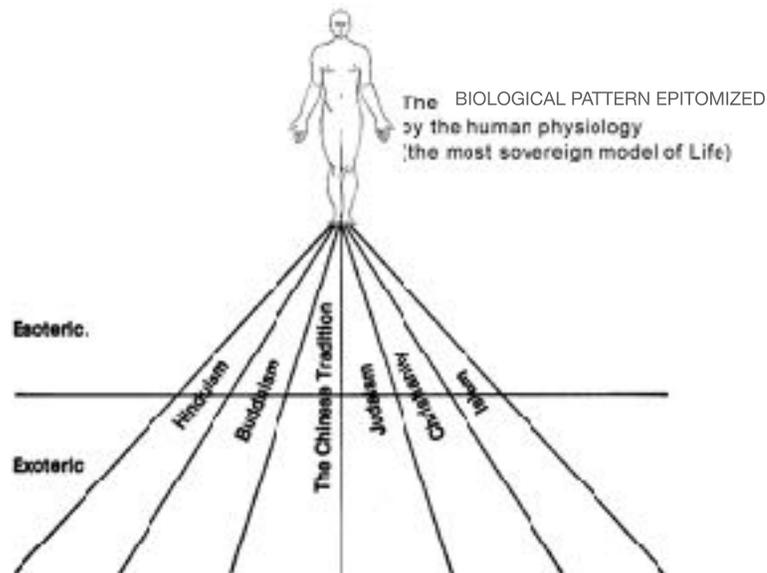
Jensen Huang explains why “digital biology” will be “on of the biggest revolutions ever.” “Where do I think the next amazing revolution is going to come? And this is going to be flat our one of the biggest ones ever. There's no question that digital biology is going to be it.” Jensen continues, “For the first time in human history, biology has the opportunity to be engineering, not science. When something becomes engineering, not science, it becomes less sporadic and exponentially improving. It can compound on the benefits of the previous years. And every researcher's contributions compound on each other... We're going to have incredible tools that bring the world of biology—which is very chaotic and constantly changing and diverse and complex—into the world of computer science. And that is going to be profound.

### **Occam's Razor**

The concept of irreducible complexity in biology supports our theory of a mathematical universe that is biological in nature. According to **Occam's razor**, biology can be studied effectively by understanding that biological systems cannot be simplified further without losing their essential functions. This idea aligns with Occam's razor's preference for simplicity and implies that biology serves as the foundation for comprehending other complex phenomena in the universe. Our theory proposes that a biological framework underlies all systems, processes, and objects in the universe. By asserting that biology defines the underlying framework for a mathematical universe, this theory of a biological framework for a mathematical universe provides an elegant and simple explanation of complex phenomena, making it a strong contender against alternative explanations.

### **Existing Historical Literature:**

Various religious and historical concepts and philosophies support the idea that a biological framework shapes the structure and behavior of the universe. We highlight how many of these concepts, philosophies and ideas may have actually been trying to express a biological framework to the universe, especially how the biological patterns in human body help us recognize and understand the biological patterns in universe and the world around us. Our research supports the idea of perennial wisdom, or perennialism, surrounding our major religions and ancient philosophies around world throughout human history.



### ***Atman & Brahman*** (Upanishads)

Such religious ideas are that of the **Atman** and **Brahman** in Upanishads (1500-500BCE). The Upanishads exhibit a tendency towards the convergence of the microcosm (individual self) and macrocosm (universe). This convergence culminates in the equating of Atman with Brahman. Drawing from our theory, this relationship can be understood as the recognition that the biological patterns within oneself reflect the larger universal biological patterns. As individuals gain self-knowledge and understand the intricacies of their own biological functions, they can begin to unveil and comprehend the underlying biological patterns that define the fabric of reality, leading them to a better understanding of Brahman.

### ***Pnimiyyt and Chitzoniyyt*** (Kabbalah, Judaism)

The concepts of **Pnimiyyt** and **Chitzoniyyt** from Jewish Mysticism may be trying to express the biological nature of the universe. Pnimiyyt and Chitzoniyyt are fundamental concepts in Jewish Mysticism, particularly within the teachings of Kabbalah. Pnimiyyt refers to the internal essence, while Chitzoniyyt describes the external manifestation or outer appearance. These concepts are often used to explain the nature of reality, existence, and the relationship between the material and the spiritual. “God’s ‘revealed’ energy permeates and provides existence to all worlds, but His essence is completely hidden, transcending creation. Similarly, the soul (which is a reflection of G-d) has a revealed element, that level that expresses itself within and vivifies the body, as well as an essence that transcends the body.” Drawing from our theory, we propose that Pnimiyyt and Chitzoniyyt may be expressing the biological nature of the universe. Pnimiyyt could be trying to express the biological patterns in the human body. Chitzoniyyt, on the other hand, can be seen trying to express the external manifestation of these biological patterns that are inside the human body. Just as Chitzoniyyt reflects the tangible aspects of existence in Jewish Mysticism, it also reflects the observable manifestations of the biological patterns found throughout the universe

### ***Batin and Zahir*** (Sufism, Islam)

Medieval Sufis conceive the human body as the primary shuttle between interior (**batin**) and exterior (**zahir**) realities. Muslim groups believe that batin can be fully understood only by a figure with esoteric knowledge, which our paper interprets is a person who has understanding of biological patterns. For Shia Muslims, that is the Imam of Time. In a wider sense, batin is the inner meaning or reality behind all existence, the Zahir being the world of form and the apparent meaning. Interestingly, the ideas inherent to these concepts bear striking resemblance to the central tenets of the theory of Biological Framework for a Mathematical Universe Hypothesis. The Sufi concept of Batin (internal meaning or reality) could be interpreted as the biological patterns within the human body which reveal the biological patterns of the external (zahir) realities—i.e., all things in the universe and world around us. The Sufi concept of Zahir (external realities) could be interpreted as akin to the things within our external reality, or visible world, whose biological patterns can be revealed through structurally mapping analogies to them from the biological domain modeled by the patterns observed within living organisms (batin), such as the human body. This could explain why whirling dervishes practiced the ritual of spinning around in circles and contemplated the nature of God within themselves, a practice tries to help the partaker understand the correspondence between the particles within the body and in the motion of celestial bodies in the universe.

### ***Microcosm and Macrocosm***

Ancient philosophical and mystical traditions often referred to the ideas of **microcosm** and **macrocosm** to express the fundamental interconnectedness of the universe. The microcosm was believed to reflect the same patterns and laws as the macrocosm, implying that the smallest elements mirrored the structure and dynamics of the larger whole. Our theory suggests that these concepts might have indirectly alluded to the existence of a biological framework within a mathematical universe. By recognizing the biological nature of patterns in reality, especially those biological patterns observed within ourselves and other living organisms, we can unveil the intricate connections between individual non-living entities and larger systems, shedding light on the interplay between the small-scale and grand-scale phenomena.

### ***Incarnation*** (Religious Concept)

We believe the term “**incarnation**” as a term which tries to express the biological nature of the universe. To explore the potential connection between the theory of biological framework for a mathematical universe and religious concepts such as “incarnation,” we consider the idea that "God" may represent the personification of the universe. In this view, "God's spirit," "God's essence," and "God's nature" are essentially synonymous with the biological patterns inherent in the fabric of reality. Thus, it is conceivable that the religious term "incarnation" attempts to express the concept of a biological framework for a mathematical universe hypothesis. Traditionally, the term "incarnation" is associated with the embodiment of a divine being in human form, as seen in various religious traditions. However, through the lens of a biological framework, we can reinterpret this concept as the manifestation of the universe's inherent biological patterns in human form.

### ***Man made in the image of God***

Genesis 1:27 states, "**So God created man in his own image**, in the image of God he created him; male and female he created them." Traditionally, this verse has been interpreted in religious contexts as an expression of humanity's unique position as the pinnacle of creation. However, within the framework of a biological understanding of the universe, the phrase takes on a new meaning. The reference to being made in the "image of God" can be reinterpreted as the reflection of the biological patterns inherent in the universe within the physiology of humans. If "God" is seen as the personification of the universe, then "God's spirit," "God's essence," and "God's nature" might symbolize the biological patterns that pervade the universe. Thus, the image of God in humans could represent the presence of these biological patterns within the human body. So “God created man in his own image..” Can be interpreted as “The Universe created man in its own image.”

### ***Theology of the Body***

The theory of a biological framework for a mathematical universe posits that every aspect of reality possesses inherent biological patterns. These patterns are essential to understanding the nature of the universe and the processes that occur within it. Pope John Paul II's "**Theology of the Body**" acknowledges the importance of the human body in understanding the nature of God but does not grasp the concept that God is the personification of the universe and that by knowing the biological patterns within the human body is what allows one to understand the hidden biological patterns in the universe and world around us. We can make the assumption based off his statement: “*The body, and it alone is capable of making visible what is invisible, the spiritual and divine. It was created to transfer into the visible reality of the world, the invisible mystery hidden in God from time immemorial, and thus to be a sign of it.*”, and what he actually preached, which does not coincide with our theory. The Pope acknowledges the importance of the human body in understanding the nature of God but does not grasp the scientific concepts.

### ***Emanationism***

The concept of a mathematical universe hypothesis suggests that mathematics plays an essential role in understanding the fundamental laws and structures of our reality. In our proposed theory, the mathematical framework is defined by biological patterns. This implies that the multitude of patterns found in living organisms is directly connected to the mathematical underpinnings of the universe. When we consider **emanationism** in this context, it becomes apparent that the hierarchical flow of existence. "from an underlying principle, or reality, usually called the Absolute or Godhead," can be seen as the progression of biological patterns throughout various levels of the universe. Just as emanationism posits a decrease in perfection as reality descends from the divine to the material world, the biological framework suggests that the integrity of biological patterns diminish as we move from patterns in the universal level towards specific organisms, humanity and the world that they create. This implies that biological patterns, which are prevalent in living organisms, are reflective of the underlying mathematical structures that govern the universe. By exploring the possibility that emanationism is actually attempting to express the concepts within this biological framework, science can consider a biological framework for a mathematical universe hypothesis.

### ***Anima Mundi***

The concept of the **Anima Mundi**, originating from ancient philosophy, suggests the existence of a unifying force that animates and connects all living beings. This force, often called the World-Soul, encompasses the entire natural world, including organic and inorganic matter. Our theory suggests that Anima Mundi may be referring to the biological patterns that we propose make up all of physical and conceptual reality. Our theory also suggests that the "unifying force" of the Anima Mundi actually stems from the forces of the biological patterns set into motion during the creation of the universe and of which connects all things.

### ***Panentheism***

**Panentheism**, as an ancient and diverse religious and philosophical belief, posits that the Divine is immanent and transcendent, encompassing all of creation while also existing beyond it. This concept emphasizes the interconnectedness of all things and the presence of divinity within the fabric of reality. Traditionally, panentheism has been seen as a spiritual and metaphysical perspective. However, when examined through the lens of a biological framework for a mathematical universe, it becomes apparent that panentheism may be pointing towards something more concrete. The hypothesized biological framework for a mathematical universe suggests that the concept of God is the universe personified and the Divine can be understood as the biological patterns of the universe. This proposition is in line with the central idea of panentheism, wherein God is perceived as encompassing and interpenetrating everything in existence. By reimagining the divine through a biological lens, we can comprehend the intricate connections and patterns that underlie all phenomena, bridging the gap between spiritual and scientific understandings.

### ***Theosophy***

**Theosophy**, with its emphasis on a pure spiritual formation gradually materializing into an observable, material realm, echoes the hypothesis' proposition of a gradual manifestation of biological patterns in the universe. While theosophy primarily refers to spiritual formations, interpreting it as representing the biological pattern of the universe aligns with the hypothesis. This interpretation suggests that theosophy may actually be trying to express that the nature of a universe is governed by biological patterns. Theosophy speaks of a universal intelligence or divine wisdom permeating all aspects of the cosmos. The biological framework for a mathematical universe could be seen as providing a scientific basis for this universal intelligence, suggesting that the inherent biological patterns are the physical discernible manifestation of a universal intelligence or divine wisdom. Theosophy posits the existence of interconnectedness between all beings and aspects of reality. This mirrors the concept of biological patterns as the foundation of the mathematical framework for the universe. By considering all systems as interconnected through biological patterns, both Theosophy and the biological framework for a mathematical universe highlight the idea of a unified existence. Furthermore, Theosophy recognizes the concept of spiritual evolution, suggesting that beings progress and evolve through various stages. Similarly, the biological framework for a mathematical universe proposes that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. This implies an inherent link between biological evolution and spiritual growth, aligning with the idea of progressive development and evolution in Theosophy.

### ***Ahimsa***

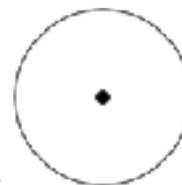
In exploring the roots of the concept of **ahimsa**, a principle dating back to ancient India and a core virtue in Hinduism, Buddhism, and Jainism, we can consider the influence of this theory of a biological universe. Ahimsa, a principle promoting nonviolence towards all living beings, is based on the belief that all life contains a spiritual energy or essence of the divine. It suggests that harming any living being is equivalent to harming oneself. This concept resonates strongly with the theory that all systems in reality possess biological patterns, as it recognizes the interconnectedness and inherent value of all life forms. The possibility arises that the roots of ahimsa may lay within the understanding of the universe's biological patterns. If all systems, processes, and objects are fundamentally biological in nature, then it follows that the recognition of the sacredness of all life is a natural consequence. This perspective aligns with the principles of ahimsa, as it emphasizes the interconnectedness of all living beings and promotes the idea that causing harm to others ultimately harms oneself.

### ***Animism***

**Animism**, which comes from the Latin word "anima" meaning breath, spirit, life, holds the belief that all things in the world - living beings, elements of nature, and human creations - are infused with a life force or spiritual essence. According to animism, these spiritual essences govern and animate objects, places, and creatures, making them alive and interconnected. It recognizes a spiritual dimension in both animate and inanimate entities. Both animism and the idea of a biological framework for a mathematical universe highlight the interconnectedness of all entities. Animism sees a spiritual essence in every aspect of the world, emphasizing the unity and harmony between the living and non-living. Similarly, the biological framework suggests that this essence is the biological patterns which underlie all systems and objects, revealing a deep interconnectivity between living organisms and everything else in the universe. Animism asserts that all entities possess distinct spiritual essences. This aligns with the theory of a biological framework, which suggests that all systems, processes, and objects have inherent biological patterns, essentially implying a form of life or vitality within them. Both perspectives affirm that there is more to the natural world than meets the eye, hinting at a spiritual essence underlying all existence. While animism regards everything as animated and alive, the theory of a biological framework suggests that everything in the universe contains biological patterns and is essentially part of a living universe. This aligns with the animistic belief that everything in the world possesses an inherent liveliness, indicating a profound unity between the spiritual and physical realms. \*\*

### ***The Circled Dot***

The Pythagoreans and later Greeks employed the circled dot to represent the Monad or The Absolute, a metaphysical entity signifying the ultimate essence of reality. While traditionally interpreted as a symbol for the pure and indivisible first principle, we propose an alternative interpretation that aligns with our theory. Perhaps the Pythagoreans and later Greeks were attempting to convey the true nature of the universe (and where all first principles of the universe stem from): that it was biological in nature and its structure resembled that of a single-celled organism.



The circled dot was used by the Pythagoreans and later Greeks to represent the first metaphysical being, the Monad or The Absolute. The Monad, understood as the original source and principle of all reality, represents the indivisible and all-encompassing essence that lies beyond the physical world and is conceived as a fundamental, undifferentiated principle that encompasses all aspects of reality. The Pythagoreans believed that all things emanated from the Monad and are interconnected through the golden ratio and other mathematical proportions.

By acknowledging the circled dot as a representation of a single-celled organism, we can draw parallels between the structure and functions of living organisms and the underlying framework of the universe. This recognition supports our view that the universe's nature is inherently biological. Just as living organisms exhibit various patterns, processes, and interactions, the universe manifests similar characteristics on a grander scale. The flowing patterns of galaxies, the intricate networks of particles, and the dynamic interplay of forces all align with the biological patterns found within living organisms. \*\*



### ***Research Aims***

Our paper aims to illustrate the profound relationship between biological patterns and the nature of the universe. We will do this by exploring the insights provided by recent scientific literature, the field of biomimicry, and the observation of biological patterns in the world around us. We will also examine various religious and historical philosophies, concepts, and theories that date back to the beginning of human history whose ideas may have actually been trying to convey this idea of a biological universe. Through this research, we hope to garner overwhelming support for our theory of a mathematical universe that is rooted in biology. Additionally, we will highlight the implications of a biological universe.\*\*

### ***Research Objectives*** (Specifics to achieving the aims)

- Objective #1      To identify scientific literature that supports a biological framework for a mathematical universe.
- Objective #2      To recognize the diverse array of human innovations that support the theory proposing a biological framework for a mathematical universe.
- Objective #3      To identify historical and religious literature and concepts throughout human history that may have been trying to express the concept of a biological framework for a mathematical universe.
- Objective #4      To structurally map analogies from the biological domain to a diverse range of target domains—i.e., systems, processes and objects observed:
  - (a) in the Universe;
  - (b) on Earth;
  - (c) in societies of animals;
  - (d) in human society;
  - (e) in human innovation.
- Objective #5      To use first principles logic to support a biological framework for a mathematical universe
- Objective #6      To discuss the implications a biological framework for a mathematical universe will have on current knowledge and the various fields of study.

### **Research Questions:**

1. To what extent do biological patterns play a role in the framework of a mathematical universe?
2. Are there specific mathematical principles or concepts that can be identified as inherently biological in their nature?
3. How do biological patterns influence the behavior and interactions of different systems, processes, and objects in reality?
4. Can the identification and understanding of biological patterns facilitate the development of new mathematical models and theories?
5. What are the implications of recognizing biological patterns in the framework of a mathematical universe for fields such as physics, biology, and psychology, and other fields?
6. Are there any limitations to the concept of biological patterns defining the framework for a mathematical universe?

### **Hypotheses:**

1. H1: The presence of recognizable biological patterns in various mathematical models and systems suggests a strong correlation between biology and mathematics in shaping the framework of the universe.
  - This hypothesis assumes that there are identifiable patterns within mathematical models that resemble biological structures, indicating a connection between the two domains.
2. H2: The emergence of self-organization and complexity in natural systems can be explained by the intrinsic presence of biological patterns in their mathematical representation. Also, see Biomimicry.
  - This hypothesis suggests that the presence of biological patterns inherently drives the emergence of complex phenomena and self-organization in physical and biological systems.
3. H3: The identification and utilization of biological patterns can contribute to the development of more accurate and efficient mathematical models and theories, such as that which can be observed within the field of biomimicry.
  - This hypothesis posits that understanding and incorporating biological patterns into mathematical frameworks can lead to enhanced predictive capabilities and explanatory power.
4. H4: The recognition of biological patterns within the framework of a mathematical universe challenges traditional disciplinary boundaries and necessitates interdisciplinary approaches in scientific research.
  - This hypothesis asserts that acknowledging the biological underpinnings of mathematics prompts collaboration between scientific fields and suggests the need for interdisciplinary efforts in various research areas.
5. H5: Similar to how biological patterns have revolutionized the field of engineering, create a field called Biomimicry, a biological framework for a mathematical universe will revolutionize all other fields.
  - This hypothesis suggests that knowledge and general principles from the biological domain will define the framework for all other fields of study.
6. H6: No.
  - This hypothesis asserts that because the universe is biological in nature and everything in it contains biological patterns, then there should be no limitations by defining, measuring and understanding everything in the universe relative to biological patterns.



## 2. Literature Review

### **Scientific Literature:** *Supporting a Biological Framework for a Mathematical Universe*

Several theoretical and empirical studies support the idea that a biological framework shapes the structure and behavior of the universe.

#### **The Life of the Cosmos** (Lee Smolin).

For instance, theoretical physicist Lee Smolin in his book "The Life of the Cosmos" argues that the laws of nature evolve in a similar way to biological systems, with a process of natural selection favoring those laws that are conducive to the formation of stable and complex systems. Smolin suggests that this evolutionary process ultimately leads to the emergence of life.

#### **The Blind Watchmaker** (Richard Dawkins).

In "**The Blind Watchmaker**," biologist Richard Dawkins explores the concept of complex biological structures emerging through the process of natural selection. Dawkins argues that biological patterns, such as the intricate design of organisms or the genetic information encoded in DNA, can be seen as optimized solutions to various environmental challenges. He proposes that, in a similar vein, the mathematical structures underlying the universe may be the result of an evolutionary process.

#### **Systems Biology.**

The field of **systems biology** also provides valuable insights into the biological foundations of the universe. Systems biology aims to study biological systems as a whole, rather than focusing on individual components. This holistic approach recognizes the interdependency and interconnectedness of different biological elements, suggesting that similar principles could be applied to understand the universe as a complex, interconnected system.

#### **General System Theory** (Bertalanffy).

Ludwig von Bertalanffy's "**General System Theory**" offers a valuable framework for understanding complex systems found in various fields of study. By utilizing biological systems as exemplars, Bertalanffy recognized the essential interconnectedness and interdependence that define all systems. Through his emphasis on the holistic nature of biological systems and their commonalities with other systems, Bertalanffy provides a sound footing to bridge biology and mathematics. General System Theory, with its universal applicability, enhances our understanding of the intricate patterns that define the framework of reality.

#### **Quantitative Comparison Between the Neuronal Network and Cosmic Web** (Franco, Vazza).

In "**Quantitative Comparison Between the Neuronal Network and Cosmic Web**," Franco and Vazza supports this hypothesis of a biological framework for a mathematical universe by demonstrating the striking similarities between the neuronal network and cosmic web. The structural and scaling properties shared by these complex systems provide evidence for a deep interconnection between biology and the underlying mathematical principles that govern the universe.

## **Fractal Cosmology**

### *Introduction:*

The exploration of the nature of reality and the principles that govern it has been a central pursuit of human curiosity throughout history. Over time, numerous theories and hypotheses have emerged, aiming to comprehend the underlying structures and patterns that shape the world. In recent years, a fascinating idea has gained traction: the concept that biological patterns intricately define the framework for a mathematical universe hypothesis. This essay aims to examine this theory and explore how the concept of fractal cosmology can support and provide insights into the intricate relationship between biological patterns and the broader cosmos.

### *Biological Patterns and the Mathematical Universe:*

According to this theory, all forms of life, systems, processes, and objects in reality possess inherent biological patterns. These patterns, whether visible or hidden, derive from the intricate interplay of mathematical principles that govern the very fabric of the universe. By recognizing the ubiquitous presence of biological patterns, we begin to understand that everything we encounter, from the smallest organisms to the grand cosmos, holds fundamental biological accordances.

### *Fractal Cosmology: A Framework for Understanding Biology's Patterns Throughout the Universe:*

Fractal cosmology, a branch of astrophysics, offers a valuable perspective in supporting the notion that biological patterns pervade the universe. Fractals, intricate geometric shapes that exhibit self-similarity at different scales, have been observed in various natural phenomena, including rivers, clouds, and even galaxies. These self-repeating patterns bear a striking resemblance to the biological patterns found in living organisms, reinforcing the idea that nature operates on unified principles.

One of the key principles in fractal cosmology is the notion of scale invariance. This concept describes the idea that the properties and patterns observed at one scale also manifest in a similar manner at other scales. The application of scale invariance to the biological patterns hypothesis implies that the biological patterns found in living organisms could exist in different magnitudes within the cosmos itself.

### *The Evolution of Biological Processes and Life in the Universe:*

The hypothesis proposed also suggests that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. As the universe unfolds, it follows a trajectory of continuous growth, complexity, and self-organization. These processes, observed on both micro and macro levels, exhibit a likeness to biological growth and development.

Remarkably, the intertwined interplay of biological patterns, mathematical principles, and the evolution of the cosmos has given rise to the diversity of life. The physiology of living organisms emerges as a model that can reveal and elucidate the hidden biological patterns infused throughout the universe. From DNA's double-helical structure to the branching patterns in trees, life showcases the mathematical elegance inherent in nature.

*The Power of Biological Analogy through Structurally Mapping:*

The theory further posits that by structural mapping, or drawing analogies between the biological patterns and the target domain, we can discern and explain the biological nature of the latter. This approach allows us to uncover the deep-rooted connections between seemingly unrelated realms and further appreciate the underlying unity that permeates the cosmos.

Through fractal cosmology, we are equipped with a powerful framework to explore the intricacies of the universe's structure. Fractals, serving as mathematical representations of natural patterns, can aid in identifying and unveiling the biological nature of various phenomena. By employing this analogy-driven methodology, we can potentially enhance our understanding of complex systems and uncover hidden patterns that elude conventional analysis.

*Conclusion:*

In conclusion, the theory asserting that biological patterns define the framework for a mathematical universe hypothesis holds significant promise in our quest to comprehend the nature of reality. By recognizing the inherent biological patterns present in all systems, processes, and objects, we begin to unravel nature's deeply interconnected tapestry. With fractal cosmology as a supportive framework, we gain a means to explore this intriguing relationship between biological and mathematical principles at various scales, bridging the realms of life and the cosmos. Embracing this perspective may ultimately enable new avenues of discovery, revolutionizing our understanding of the universe, and our place within it.

## **Fractal Cosmology**

Fractal cosmology is a branch of cosmology that incorporates the concept of fractals, which are intricate and self-similar patterns that repeat at different scales. This theory supports our hypothesis that biological patterns define the framework for a mathematical universe. Fractals are often found in nature, from the branching patterns of trees to the intricate shapes of coastlines and structure of the cosmic web. These patterns can be considered biological in nature, as they exhibit similar characteristics to living organisms.

The application of fractal cosmology to our theory suggests that the universe itself may exhibit similar patterns and structures found in living organisms. Just as a tree branches out in a fractal pattern, the universe may have a similar organizational structure, with galaxies forming clusters and clusters forming superclusters. This fractal structure may extend indefinitely, revealing biological patterns at every scale.

Furthermore, fractal cosmology also suggests that the evolution of the universe's biological processes has led to the existence of life and living organisms. Just as the growth and development of cells and organisms follow certain patterns and principles, the universe may have followed a similar process of evolution that eventually gave rise to the formation of galaxies, stars, and planets. This perspective provides a deeper understanding of the interconnectedness between the biological nature of living organisms and the larger framework of the universe.

### **Wave-partical Duality** (Neils Bohr).

We also highlighted how other scientists established analogies from the biological domain to various phenomena in the universe, such as how Neils Bohr's work on **wave-particle duality** can be seen as evidence of the inherent biological patterns in the universe. If we consider light as a biological phenomenon, we can observe that it exhibits behaviors that are analogous to living organisms. Just as living organisms can exist in multiple states and exhibit different behaviors based on the environments they encounter, light can exist as a wave or a particle depending on the context, displaying a “consciousness or freewill.”

### **Gaia’s Body: Toward a Physiology of Earth** (Volk).

In *Gaia’s Body: Toward a Physiology of Earth*, Tyler Volk (a scientist who aided in the construction of self-sustaining systems for NASA’s space shuttles), examined the principles of Gaia theory and demonstrated how Earth exhibits biological patterns in its functions and processes. The concept of feedback loops, the emergence of life, and the interconnectedness of ecosystems all provide evidence for the existence of a biological framework within the universe, especially within systems and processes which govern the Earth.

### **Living Systems** (Miller).

Observations presented in James Grier Miller’s book, *Living Systems*, highlight analogies between the biological domain and innovations of human society, including human society itself. Miller showed that a “general theory of living systems can be constructed, and; he assembled facts and revealed how they support a set of unifying scientific principles.” Miller constructed detailed diagrams showing how systems, processes, and objects in human society are analogous to biological systems, processes, and objects. The fact that Miller was able to establish analogies between phenomenon in human society and biology provides support to the theory of a biological framework for a mathematical universe hypothesis.

### **Biomimicry.**

Biomimicry is the emulation of the models, systems, and elements of nature for the purpose of solving complex human problems.<sup>5</sup> It is the design and production of materials, structures, and systems that are modeled on biological entities and processes. For example, biomimicry can be seen with how: *bur fruit seeds* are used as a model for *Velcro*; how the *beak of a kingfisher bird* is used as a model for high-speed trains through tunnels; how *shark skin* is used as a model for antibacterial surfaces; how bee stingers are used as a model for surgical needles; how red blood cells are used as a model for desalination processes, or; how trees and bones are used as models for structural composition of bridges and cars to reduce materials, while increasing strength. The fact that biomimicry exists as an emerging field in science and technology provides scientific evidence supporting the premise that the systems, processes, objects, principles, and philosophies composing the physiology of living organisms can be used to define, measure, and understand the systems, processes, objects, principles, and philosophies that compose reality. Here are some biomimicry examples structurally mapped:

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<sup>5</sup> Vincent JF, Bogatyreva OA, Bogatyrev NR, Bower A, Pahl AK. Biomimetics: its practice and theory. J R Soc Interface. 2006 Aug 22;3(9):471-82. doi: 10.1098/rsif.2006.0127. PMID: 16849244; PMCID: PMC1664643.

#### BURR FRUIT SEEDS → VELCO

Velcro, contains tiny hooks and interlocking mechanisms which are analogous to that of the burr fruit seed. <sup>6</sup>

#### BEE STINGERS → SURGICAL NEEDLES<sup>7</sup>

Surgical needles<sup>8</sup> were designed to biomimic bee stingers in order to create instruments that can decrease tissue damage while increasing precision.

#### RED BLOOD CELLS → DESALINATION PROCESSES<sup>9</sup>

More recent innovations to produce fresh water from salt water have used the Life-pattern observed within the membranes of red blood cells. Red blood cells were used as an analogous model for desalination processes.

#### BIRD WINGS (ALBATROSS) → AIRPLANE WINGS (AIRBUS)<sup>10</sup>

Airbus engineers are considering how an albatross benefits from having an aspect ratio of about 18:1 compared to 9.5 for an A320 aircraft.

#### SHARK SKIN → PAINT COATING (AIRPLANES)<sup>14</sup> → ANTIBACTERIAL SURFACES<sup>11</sup>

The biological patterns particular to that of the sharkskin's ability to reduce drag has been used and applied to long-range aircraft to reduce drag while in flight. Recent studies have shown that a special sharkskin-style coating can benefit long-long-range aircraft like the A350XWB, since its drag-reducing surface is particularly effective during flight.

Sharklet (anti-bacterial surfaces) is the world's first technology to inhibit bacterial growth through pattern alone. The Sharklet surface is comprised of millions of microscopic features arranged in a distinct diamond pattern. The structure of the pattern alone inhibits bacteria from attaching, colonizing and forming biofilms. Sharklet contains no toxic additives or chemicals, and uses no antibiotics or antimicrobials. Sharklet (antibacterial surfaces) draws inspiration from the shape and pattern of the dermal denticles of sharkskin. Sharks are resistant to fouling organisms in the water including algae and barnacles.

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<sup>6</sup> <https://www.microphotonics.com/biomimicry-burr-invention-velcro/>

<sup>7</sup> <https://3dprintingindustry.com/news/bees-put-sting-templates-bioinspired-3d-printed-needle-design-132859/>

<sup>8</sup> <https://3dadept.com/honeybees-stingers-inspire-the-creation-of-3d-printed-surgical-needles/>

<sup>9</sup> <https://cbm.msoe.edu/mapsTeams/assets/biomemeticMembrane2.pdf>

<sup>10</sup> <https://www.airbus.com/newsroom/news/en/2018/01/biomimicry--engineering-in-nature-s-style.html>

<sup>11</sup> <https://www.sharklet.com>

#### SELF-HEALING PLANTS & ANIMALS → SELF-HEALING AIRCRAFT<sup>12</sup>

The researchers have developed tiny capsules of liquid solvent that bleed when the structure cracks, sealing the damage—analogueous to that of how a plant or animal heals itself when injured.

#### MANTIS SHRIMP → DURABLE MATERIALS<sup>13</sup>

The composite materials industry is always looking for ways to increase performance, to reduce the amount of raw materials used, and to make lightweight, tougher products. For example, doubling the length of a wind turbine blade will quadruple the energy output, reducing the weight of automobiles by 10% can result in 6-8% fuel economy improvement, and lighter aircraft will result in reduced fuel costs and a lower carbon footprint, all meaningful environmental and sustainability benefits. Helicoid Industries took inspiration from the mantis shrimp to develop lightweight, stronger, and more impact resistant composite materials.

#### KINGFISHER (BIRD) → HIGH SPEED TRAINS (SHINKANSEN)

The Shinkansen bullet train travels along high-speed railways throughout Japan at speeds of 240–320 km/hr (150–200 mph), carrying millions of passengers every year. However, when it was first designed, the high speeds caused an atmospheric pressure wave to build up in front of the train. When it would travel through tunnels, the wave would cause a loud “tunnel boom” at the exit, disturbing nearby residents. The engineers had to find a way for the train to travel more quietly without sacrificing speed or using more energy.

The engineers looked to nature to re-design the bullet train. They noticed how kingfisher birds are able to slice through the air and dive into the water to catch prey while barely making a splash. They then re-designed the front end of the train to mimic the shape of the kingfisher’s beak. Not only did this help to reduce noise and eliminate tunnel booms, it also allowed the train to travel 10% faster using 15% less electricity.

#### TERMITE MOUND DESIGN → BUILDING DESIGN

We generally think of termites as destroying buildings, not helping design them. But the Eastgate Building, an office complex in Harare, Zimbabwe, has an internal climate control system originally inspired by the structure of termite mounds. Further research is revealing more about the relationship between mound structure and internal temperature, and could influence additional building designs as our understanding grows.

FOR MORE BIOMIMICRY EXAMPLES, PLEASE VISIT: <https://asknature.org/innovations/>

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<sup>12</sup> <https://www.airspacemag.com/flight-today/how-things-work-self-healing-airplanes-35558146/>

<sup>13</sup> <https://www.helicoidind.com/helicoid-technology>

## The Biological Framework for a Mathematical Universe: Supporting Evidence from Biomimicry

The theory proposed by our research project posits that biological patterns define the framework for a mathematical universe hypothesis. It suggests that all systems, processes, and objects in reality possess inherent biological patterns and are, therefore, biological in nature. One field that provides substantial evidence in support of our theory is biomimicry. Biomimicry involves the study and imitation of nature's designs, processes, and systems to solve human problems and advance technological innovation. This essay will explore how various examples within biomimicry directly support our theory, demonstrating the widespread existence of biological patterns across different domains.

*I. Structural and Functional Adaptation:* One key aspect of biomimicry is the observation and mimicry of nature's adaptations, both structurally and functionally. Organisms are highly optimized for their respective environments, exhibiting remarkable efficiency and elegance in design. These adaptations are driven by biological patterns inherent in their systems, enabling them to perform specific tasks or survive in challenging conditions. For instance, the study of bird flight paved the way for the creation of innovative aircraft designs, including wing contours and aerodynamic principles directly inspired by birds' wings. These examples illustrate how biological patterns observed in living organisms have been directly applied to solve engineering problems, providing tangible evidence for the biological framework hypothesized in our theory.

*II. Material and Surface Innovations:* Another area where biomimicry significantly supports our theory is in the realm of material and surface innovations. Nature has developed numerous specialized surfaces and materials with distinctive properties, often linked to biological patterns inherent in their composition. For instance, shark skin has inspired the development of efficient antibacterial surfaces, while butterfly wings have influenced the creation of color-changing paints. By directly mimicking the biological patterns and properties of these natural materials, scientists and engineers can develop improved technologies that possess similar functionalities. This direct application further supports our theory, emphasizing the inherent biological nature of systems and objects in reality.

*III. Energy Efficiency and Sustainability:* Biomimicry is also strongly associated with the pursuit of energy efficiency and sustainability. Nature has evolved energy-efficient systems that utilize minimal resources while maximizing output. By adopting a biomimetic approach, engineers have developed innovations such as energy-efficient buildings inspired by termite mounds and self-cleaning solar panels inspired by lotus leaves. These bio-inspired solutions showcase the effectiveness of biological patterns applied to enhance sustainability in various fields. They provide further evidence for the biological framework hypothesized in our theory, showcasing the innate presence of biological patterns in systems across the universe.

*IV. Systems Thinking and Resilience:* Furthermore, biomimicry encourages a shift towards a systems thinking approach, mirroring the interconnectedness and resilience found in natural ecosystems. By studying ecosystems and their intricate relationships, practitioners of biomimicry have recognized the crucial role of biological patterns in maintaining balance and adaptability. Applying this perspective to various domains, such as urban planning and industrial design, has resulted in the development of innovative and sustainable solutions. These endeavors provide yet another example of how the observation and integration of biological patterns strengthen our theory, highlighting the pervasive influence of biological systems throughout the universe.

**Conclusion:**In conclusion, the field of biomimicry offers substantial support for our theory that biological patterns define the framework for a mathematical universe hypothesis. From structural and functional adaptation to material innovations, energy efficiency, and systems thinking, biomimicry exemplifies the inherent biological nature of the systems, processes, and objects in reality. By acknowledging and applying these biological patterns, we gain valuable insights into the fundamental principles that govern the universe. As biomimicry continues to flourish, we can expect further empirical evidence to affirm our theory, solidifying the understanding of the intricate relationship between biological processes and the systems they shape within our universe.

### **The Prevalence of Analogy.**

The prevalence of analogy across various domains of the natural world suggests an underlying organic blueprint that unifies disparate entities and processes. The prevalence of analogy could be seen as a consequence of a biological framework to a mathematical universe. For example, the reason why we can use analogy's amongst various domains, whose base domain is not biological is due to the fact that all domains contain these underlying biological patterns. The parts of the biological patterns that overlap allow for analogy to be established between two domains non-biological domains that are being structurally mapped together.

### **Analogous Mappings of Biological Patterns to Other Fields of Science.**

Principles that are seen in biological patterns can also be observed in other areas such as: (1) the formation of a complete animal from a divided sea urchin or newt germ, (2) the restoration of normal function in the central nervous system after the removal or injury of certain parts, and (3) gestalt perception in psychology. Although these phenomena differ phenomenologically and in their intrinsic mechanisms, their governing principles exhibit striking similarities, suggesting a common biological pattern.

Another example of an analogous biological pattern in science is the evolution of language and the evolution of biology. By studying the development of Germanic languages, we can observe that, starting from a primitive language, certain sound mutations occurred concurrently in different tribes that were geographically separated from each other, such as Iceland, the British Isles, and the Iberian Peninsula. There is no mutual influence; rather, the languages developed independently after the separation of the tribes, yet displayed evident parallelism. Biologists may find a similar principle in certain evolutionary developments. For example, the group of extinct hoofed animals called titanotheres started from small early forms and branched out into several groups that evolved independently but still exhibited parallel characteristics. By using principles related to biological mutations in living organisms as a model, it may be possible to understand principles of linguistic mutations.

In simpler cases, support for analogy to biological patterns is easily observed. For instance, the exponential law states that a constant percentage of elements in a complex system decay or multiply per unit time. This law applies to not only radium atoms, molecules, bacteria, or individuals in a population, but also dollars in a bank account.

The logistic law states that the initially exponential growth of a system is limited by certain conditions. In an autocatalytic reaction, a compound catalyzes its own formation, but as the number of molecules transforms, it approaches a limiting value. Similarly, the population grows exponentially with an increasing number of individuals, but if resources such as space and food are limited, the amount of food available per individual decreases. Consequently, the increase in population cannot be infinite, but instead reaches a steady state defined as the maximum population sustainable with available resources. The growth of railway lines in a county follows a similar pattern, as existing railway lines lead to the intensification of traffic and industry, necessitating a denser railway network until it eventually reaches a state of saturation. Railways behave like autocatalyzers, accelerating their own growth, and their growth is modeled after autocatalytic curves found in life patterns.

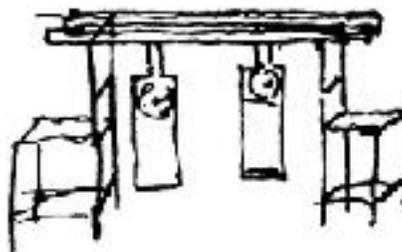
Another example of analogy to biological patterns is the phenomenon of the parabolic law. This law expresses competition within a system, where each element has a share based on its capacity represented by a specific constant. Whether it applies to the competition of individuals in an economic system according to Pareto's law or to organs competing for nutrients in an organism and exhibiting allometric growth, the parabolic law takes the same form.

## The Precision of The Universe (As so to Specifically Produce Life)

Our theory of a biological framework for a mathematical universe is supported by the precise design of the universe to produce life, as evidenced by the fine-tuning of numerous physical parameters. For example, if the big bang had been one-part-in-a billion more powerful, it would have rushed out too fast for the galaxies to form and for life to begin.<sup>14</sup> If the strong nuclear force were decreased by two percent, atomic nuclei wouldn't hold together. Hydrogen would be the only atom in the universe. If the gravitational force were decreased, stars (including the sun) would not ignite. These are just three of more than 200 physical parameters within the solar system and universe so exact that they cannot be random. If these parameters were even slightly different, life as we know it would not be possible. This remarkable precision cannot be attributed to mere chance, indicating the intentional nature of the universe's ability to nurture life. Hence, these biological patterns and forces, which were initiated from the big bang, serve as a foundation for the mathematical framework of the universe, reinforcing the hypothesis of a biological framework.

## Synchronicity of Clock Pendulums — Synchronicity of a Bio-Mathematical Universe

In 1665, Christiaan Huygens made the discovery that two pendulum clocks, when suspended from the same wooden structure, will always oscillate in synchrony. Today, researchers from Eindhoven and Mexico present the most accurate and detailed description of this phenomenon, known as 'Huygens synchronization', in the journal Scientific Reports. Huygens seemed to have arrived at the correct explanation given the limitations of his time. Additionally, if these insights help us comprehend synchronization in various oscillating systems, including the biological rhythms of the human body, could it also be possible that the synchrony of clock pendulums aids our understanding of synchronization in all matter throughout the universe, in accordance with this biological framework we suggest exists to the universe?



For instance, if all matter in the universe is connected by a shared plane of reality or existence, might it be conceivable that all matter oscillates in unison to the rhythm of this biological pattern of the universe, and that the existence of Life, as a result of these universal oscillations, has revealed the nature of the biological patterns of the universe?

## The Natural Existence of 'Emergence.'

The phenomenon of emergence<sup>15</sup> is a fascinating concept that has captivated scientists, philosophers, and researchers across various disciplines. Emergence refers to the occurrence of new and complex properties or behaviors that arise from the interactions of simpler entities. It suggests that the whole is greater than the sum of its parts, as emergent properties cannot be predicted or deduced by simply studying the individual components. Instead, they arise from the intricate relationships and interactions between these constituents. This phenomenon is prevalent in both natural and artificial systems, encompassing physical phenomena like turbulence and self-organization in fluids, as well as social phenomena such as collective intelligence and flocking behavior in animals. Our paper proposes that emergence arises due to the pervasive nature of biological patterns in all aspects of reality/universe, making it a natural outcome resulting from the universe's biological nature—i.e, biological patterns.

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<sup>14</sup> <http://hyperphysics.phy-astr.gsu.edu/Nave/html/Faithpathh/hawking.html>

<sup>15</sup> <https://ed.ted.com/lessons/how-do-schools-of-fish-swim-in-harmony-nathan-s-jacobs>

### **Occam's Razor** (The Principle of Parsimony)

Occam's Razor, also known as the principle of parsimony, asserts that among competing hypotheses, the one with the fewest assumptions should be selected. This principle does not necessarily claim that the simplest account is correct; rather, it serves as a heuristic guide favoring hypotheses that require the least speculative constructs to explain a phenomenon.

In the context of our theory -- that biological patterns are the framework for a mathematical universe hypothesis -- Occam's Razor can serve as a tool to examine the rationality and robustness of this theory. If we observe repetitive biological patterns across different scales and systems within the universe, the hypothesis that these patterns constitute the universe's foundational structure becomes a simpler explanation compared to assuming multiple disjunctive and complex patterns for each system or object.

#### *A Biological Framework for the Universe:*

Biology, the science of life, reveals patterns at every level, from the spirals of DNA molecules to the fractal branching of trees and the vascular networks within organisms. The recurrence of these patterns across different scales implies a self-similar and organizational consistency that is suggestive of underlying principles governing the structure and dynamics of the universe. By extrapolating this observation, the proposal that the universe is inherently biological in nature carries fewer assumptions than positing a diverse set of non-biological mechanisms for every observed natural process.

#### *The Emergence of Life as a Universal Phenomenon:*

If we accept that biological processes are foundational to the universe, the emergence of life can be seen as an inevitable outcome of the universe's evolution rather than a random, isolated incident. This perspective aligns well with Occam's Razor as it leverages existing, observed biological principles to explain the rise of complexity and life, without invoking additional or extraordinary mechanisms.

#### *Physiology as a Universal Model:*

The physiology of living organisms is a reflection of biological patterns, and these forms can serve as models that reveal similar patterns throughout the universe. For example, the network theory used to understand neural networks in the brain has also been applied to understand astrophysical structures and social networks, suggesting a shared biological pattern in their architecture. This transference of biological understanding to explain non-biological phenomena is both intellectually economical and adherent to the principle of Occam's Razor, as it simplifies our interpretation of the universe.

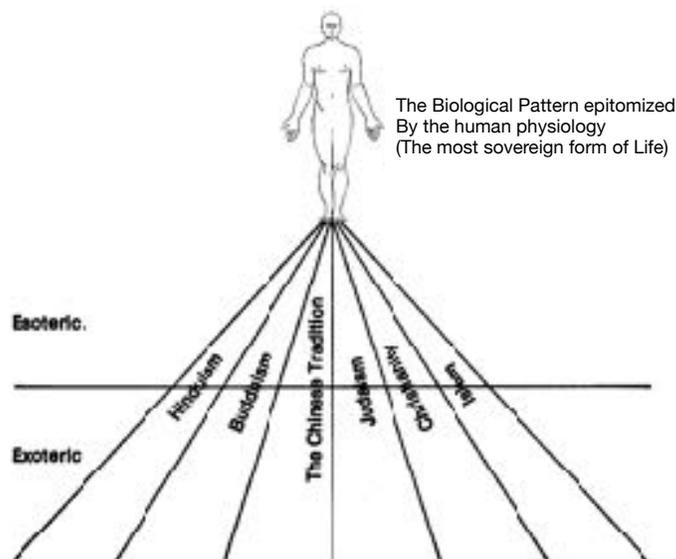
#### *Analogical Reasoning and Structural Mapping:*

The theory advances that analogies can be used to structurally map biological patterns onto other domains, thus revealing their inherent biological nature. This form of reasoning fits Occam's Razor, as it postulates one comprehensive explanatory system (the biological framework) as opposed to independent explanations for every domain or phenomenon.

#### *Conclusion:*

Through the application of Occam's Razor, the theory that biological patterns underpin the universe's structure and function is strengthened. By relying on observed and recurring biological patterns to explain both the existence of life and the characteristics of inanimate systems, this proposition emerges as parsimonious and compelling. The principle of parsimony encourages us to recognize the simplicity and universality of biology as a template for understanding the cosmos, suggesting that life and the evolution of the universe are intrinsically intertwined by a common biological thread. As research continues, both the mathematical and biological disciplines may converge further, potentially offering deeper insights into the unified nature of our reality.

**Historical and Religious Literature: Supporting a Biological Framework for a Mathematical Universe**



Perennial wisdom refers to a perspective in philosophy and spirituality that holds the belief that all religious traditions have a shared, underlying truth or origin. According to this viewpoint, the knowledge and teachings found in both esoteric and exoteric aspects of many religions around the world, such as Hinduism, Buddhism, Christianity, Judaism, Islam, The Chinese Tradition, Japanese Shinto, and tribal religions have evolved from a single metaphysical truth, or science. This can be observed with overlapping conceptual themes across religions. Perennial wisdom recognizes the interconnectedness of different belief systems and seeks to uncover the essence that unifies them all. Our research suggests that these ancient religious and historical ideas are actually expressing a biological framework to the universe. In this section, we show how concepts from various cultures and time periods in human history may have actually been trying to express a biological framework to the universe.

Firstly, it is important to note that in attempting to map the prior understanding of a biological universe to various religious traditions around the world would imply that a more advanced civilization than our own has long been aware of a biological framework for the universe. Moreover, it would also suggest that this advanced civilization shared this knowledge across cultures who had no prior knowledge of biology, physics, cosmology, mathematics, etc, specifically highlighting how understanding patterns within our own bodies enables us to recognize and understand similar patterns that exist in the world around us—an understanding that can then assist us in making decisions based on the principles, laws, and mathematics relative to Life—i.e., relative to the universe’s biological patterns. "Life" serves as the most important frame of reference, through which *all* living organisms must interpret all concepts, principles, mathematics, physics, situations, and information in their reality.

In addition, while we propose that our theory of a biological universe has existed since before our civilization and has been passed down through various religious texts globally. through the concept of perennialism, it is possible over time the meaning of the theory may have become less clear or misunderstood to a learning-population who lacked knowledge in fields such as biology, science, mathematics, physics, and the cosmos during their time periods; As a result, leading to literal interpretations that fail to grasp the deeper meaning behind the notion of a biological framework for the universe. This misunderstanding is reflected in some religious groups that understand God as a person with power and not as the actual universe and everything in it.

***Understanding the biological patterns within ourselves helps us reveal and comprehend the biological patterns in the universe and the world around us.***

Several historical, religious, and philosophical concepts suggest prior knowledge of a biological framework to the universe through a common motif. This motif is of understanding the internal reality, or God's Essence within themselves as a means for understanding the external reality, or God. We interpret this motif as ideas expressing understanding the biological patterns within oneself to understand the biological patterns in the universe and the world surrounding us—i.e., microcosm and macrocosm. Our paper interprets God as the personification of the universe, God's Essence and God's Spirit (which permeates all things in reality) as the Universe's biological patterns which permeate all things in reality, and so forth. With this in mind, let us explore the various ideas/concepts around the world that may be actually trying to express the ideas of a biological universe.

**Atman & Brahman (Upanishads)**

\*\*\* The concepts of **Brahman** (ultimate reality) and **Atman** (soul, self) are central ideas in all of the The Upanishads (1500-500BCE), and "know that you are the Atman" is their thematic focus. Atman is a Sanskrit word that means inner self, spirit, or soul.<sup>16 17</sup> The Ātman is the first principle,<sup>18</sup> the true self of an individual beyond identification with phenomena, the essence of an individual. In order to attain Moksha (liberation), a human being must acquire self-knowledge (atma jnana), which is, according to Advaitins, to realize that one's true self (Ātman) is identical with the transcendent self Brahman.<sup>19 20</sup> Brahman connotes the highest Universal Principle, the Ultimate Reality in the universe.<sup>21</sup> "Atman as the innermost essence or soul of man, and Brahman as the innermost essence and support of the universe. (...) Thus we can see in the Upanishads, a tendency towards a convergence of microcosm and macrocosm, culminating in the equating of atman with Brahman."<sup>22</sup>

According to our theory, the Atman can be interpreted as the biological patterns which compose the human physiology and used to understand the nature of the universe, known as Brahman. Just as the Atman is the innermost essence or soul of a man, and necessary to understanding Brahman, the understanding of

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<sup>16</sup> [a] **Atman**, Oxford Dictionaries, Oxford University Press (2012), **Quote**: "1. real self of the individual; 2. a person's soul";  
[b] John Bowker (2000), *The Concise Oxford Dictionary of World Religions*, Oxford University Press, ISBN 978-0192800947, See entry for Atman;  
[c] WJ Johnson (2009), *A Dictionary of Hinduism*, Oxford University Press, ISBN 978-0198610250, See entry for Atman (self).

<sup>17</sup> David Lorenzen (2004), *The Hindu World* (Editors: Sushil Mittal and Gene Thursby), Routledge, ISBN 0-415215277, pages 208-209, **Quote**: "Advaita and nirguni movements, on the other hand, stress an interior mysticism in which the devotee seeks to discover the identity of individual soul (atman) with the universal ground of being (brahman) or to find god within himself".

<sup>18</sup> Deussen, Paul and Geden, A. S. *The Philosophy of the Upanishads*. Cosimo Classics (June 1, 2010). P. 86. ISBN 1616402407.

<sup>19</sup> David Lorenzen (2004), *The Hindu World* (Editors: Sushil Mittal and Gene Thursby), Routledge, ISBN 0-415215277, pages 208-209,

<sup>20</sup> Richard King (1995), *Early Advaita Vedanta and Buddhism*, State University of New York Press, ISBN 978-0791425138, page 64,

<sup>21</sup> Lochtefeld, James G. (2002). *The Illustrated Encyclopedia of Hinduism*. 1. The Rosen Publishing Group. p. 122. ISBN 978-0823931798.

P. T. Raju (2006), *Idealistic Thought of India*, Routledge, ISBN 978-1406732627, page 426 and Conclusion chapter part XII. Fowler 2002, pp. 49–55 (in Upanishads), 318–319 (in Vishistadvaita), 246–248 and 252–255 (in Advaita), 342–343 (in Dvaita), 175–176 (in Samkhya-Yoga).

<sup>22</sup> Richard King (1995), *Early Advaita Vedanta and Buddhism*, State University of New York Press, ISBN 978-0791425138, page 64,

biological patterns within oneself is essential to recognize the biological patterns within reality. In order to achieve Moksha, a state of liberation, one must acquire self-knowledge or atma jnana. Our theory suggests that this self-knowledge goes beyond the mere understanding of the individual self, extending to the recognition and comprehension of the biological functions within oneself. By understanding these patterns within ourselves, individuals can begin to discern and appreciate the intricate web of biological processes that define the fabric of reality and thus understand Brahman. \*\*\*

### **Pnimiyt & Chitzoniyut** (Jewish Mysticism, Kabbalah).

The concepts of **Pnimiyt** and **Chitzoniyut** from Jewish Mysticism may be trying to express the biological nature of the universe. Pnimiyt and Chitzoniyut are fundamental concepts in Jewish Mysticism, particularly within the teachings of Kabbalah. Pnimiyt refers to the internal essence, while Chitzoniyut describes the external manifestation or outer appearance. These concepts are often used to explain the nature of reality, existence, and the relationship between the material and the spiritual. “God’s ‘revealed’ energy permeates and provides existence to all worlds, but His essence is completely hidden, transcending creation. Similarly, the soul (which is a reflection of G-d) has a revealed element, that level that expresses itself within and vivifies the body, as well as an essence that transcends the body.” Drawing from our theory, we propose that Pnimiyt and Chitzoniyut may be expressing the biological nature of the universe. Pnimiyt could be trying to express the biological patterns in the human body. Chitzoniyut, on the other hand, can be seen trying to express the external manifestation of these biological patterns that are inside the human body. Just as Chitzoniyut reflects the tangible aspects of existence in Jewish Mysticism, it also reflects the observable manifestations of the biological patterns found throughout the universe

### **Batin & Zahir** (Muslim Mysticism, Kabbalah).

Medieval Sufis conceive the human body as the primary shuttle between interior (**batin**) and exterior (**zahir**) realities. Muslim groups believe that batin can be fully understood only by a figure with esoteric knowledge, which our paper interprets is a person who has understanding of biological patterns. For Shia Muslims, that is the Imam of Time. In a wider sense, batin is the inner meaning or reality behind all existence, the Zahir being the world of form and the apparent meaning. Interestingly, the ideas inherent to these concepts bear striking resemblance to the central tenets of the theory of Biological Framework for a Mathematical Universe Hypothesis. The Sufi concept of Batin (internal meaning or reality) could be interpreted as the biological patterns within the human body which reveal the biological patterns of the external (zahir) realities—i.e., all things in the universe and world around us. The Sufi concept of Zahir (external realities) could be interpreted as akin to the things within our external reality, or visible world, whose biological patterns can be revealed through structurally mapping analogies to them from the biological domain modeled by the patterns observed within living organisms (batin), such as the human body. This could explain why whirling dervishes practiced the ritual of spinning around in circles and contemplated the nature of God within themselves, a practice tries to help the partaker understand the correspondence between the particles within the body and in the motion of celestial bodies in the universe.

### **Whirling Dervishes**

Whirling Dervishes spin in circles like particles within the body and planets within the solar system. They focus on the mystical contemplation of God’s nature through directing their attention inward. Our theory suggests that the ritual of the Whirling Dervishes has roots to the contemplation of the biological patterns present within our body and in the universe.

## Aniconism in Islamic, Jewish, and Byzantine Traditions

In the context of our theory, "the biological framework for a mathematical universe," we can explore the possibility of why some religions, such as Islam, avoid depicting images of God. It's important to note that interpretations of religious practices can vary among individuals and communities, and this response seeks to provide a general understanding.

In Islam, the avoidance of visual depictions or images of God, known as aniconism, is rooted in the concept of tawhid, the fundamental principle of the oneness and uniqueness of God. Muslims believe that God is beyond human comprehension and cannot be fully represented or encapsulated by any physical form or image. The focus in Islamic theology is on contemplating and understanding the nature and attributes of God, rather than attempting to visually depict the divine essence.

If we consider our theory, where the "divine spirit" and "God's essence" are interpreted as the universe's biological patterns, the avoidance of depicting images of God in Islam may be aligned with this line of thinking. By understanding that biological patterns permeate everything in the universe and are fundamental to its nature, it becomes apparent that attempting to depict God as a specific physical form, such as a person, would limit and confine the divine essence to a single representation.

Furthermore, the concern may be that if visual depictions of God were widely circulated, there could be a risk of people mistakenly worshiping the physical image itself, rather than contemplating the deeper nature and essence of God as exemplified by the underlying biological patterns present throughout the universe. Islam emphasizes the importance of focusing on the qualities and attributes of God, rather than attempting to portray or worship a physical representation.

## Whirling Dervishes

Whirling Dervish Ritual is a customary meditation practice performed within the *sema*, or worship ceremony, through which dervishes (from the persian Darvish *Persian* درویش also called semazens, from *Persian* سماعزن) aim to reach greater connection with Allah. This is sought through abandoning one's *nafs*, *ego* or personal desires, by listening to the music, focusing on God, and spinning one's body in repetitive circles, which has been seen as a symbolic imitation of planets in the *Solar System* orbiting the Sun.<sup>23</sup> Medieval Sufis conceive the human body as the primary shuttle between interior (*batin*) and exterior (*zahir*) realities.<sup>24</sup> Our theory suggests that the ritual of the Whirling Dervishes has roots to the contemplation of the nature of the biological patterns present within our body and in the universe. The body is the tool for understanding the nature of God—The personification of The Universe.

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<sup>23</sup> "The Sema of the Mevlevi". Mevlevi Order of America. Archived from [the original](#) on 21 December 2012. Retrieved 26 March 2009.

<sup>24</sup> Bashir, Shahzad. *Sufi Bodies: Religion and Society in Medieval Islam*. Columbia University Press, 2013.

## **Fractal-like Patterns Inside Mosques Possibly Represents The Universe's Patterns Inside The Body**

In light of the theory of the "biological framework for a mathematical universe" theory, and considering the geometric patterns within Islamic mosques, it is possible to explore a connection between these patterns and the understanding of the biological patterns/nature of Allah within the human body.

In Islam, there is a longstanding tradition of contemplating the signs of Allah's creation and finding reflections of divine wisdom and order within the world. This includes reflecting on the natural world as well as the human body, which is considered a sacred creation.

With the idea that biological patterns are inherent in all systems, processes, and objects, including the human body, it is conceivable to draw parallels between the geometric patterns within mosques and the biological patterns/nature of Allah within the human body. Here are some potential points of connection:

1. Microcosm and macrocosm: The human body is often seen as a microcosm that reflects the macrocosm of the universe. Just as the universe exhibits inherent biological patterns, it is possible to interpret the geometric patterns within mosques as representing the microcosmic reflection of those patterns within the human body. This could be seen as a way to contemplate Allah's creation and understand the interconnectedness between the human body and the broader cosmos.

2. Sacred geometry: Geometric patterns within Islamic art and architecture, such as those found in mosques, are often based on sacred geometry. This involves the use of specific mathematical ratios and geometric principles believed to reflect divine order and perfection. By considering these geometric patterns as representations of Allah's biological patterns/nature within the human body, one can engage in a reflective and contemplative process to deepen understanding and connection with the divine.

3. Spiritual symbolism: Islamic geometric patterns are known to convey symbolic meanings and represent aspects of Islamic theology, spirituality, and cosmology. By connecting these patterns to the idea of Allah's biological patterns/nature within the human body, individuals may find spiritual and symbolic significance in the geometry, fostering a deeper sense of reverence and connection to the divine.

It's important to note that these interpretations are speculative and depend on individual perspectives and cultural contexts. They are not binding religious interpretations, but rather an exploration of potential connections between the biological framework theory, Islamic geometric patterns, and the understanding of the biological patterns/nature of Allah within the human body.

## **Patterns Of God Within Mosques**

Figurative representations within mosques evoke Allah in other ways. Written within the mosque are Arabic scripture from Koran, as well as abstract elements (or geometrical shapes). "But these designs were full of meaning and were often in fact designed by not only important artists and architects, but also by theologians to help choreograph the meaning of the interior space, so that it moves the abode of the divine, and at the same time stimulate contemplation, prayer and devotion." (Believe, Season 1, Episode 2, Curiosity Stream). Our theory would suggest that these geometric patterns are to help the individual who enters inside the mosque try to contemplate the biological patterns of the universe, who has been personified in the term Allah. The reason why Whirling Dervishes spin around in circles and contemplate the nature of God within themselves, is to try to understand this biologically-patterned connection between Allah and the human body. These geometric patterns inside mosques—a place of Allah—almost representing being inside the universe, is a metaphor meant to try to stimulate this idea of the Universe's patterns.

## **Microcosm and Macrocosm.**

Ancient philosophical and mystical traditions often referred to the ideas of **microcosm** and **macrocosm** to express the fundamental interconnectedness of the universe. The microcosm was believed to reflect the same patterns and laws as the macrocosm, implying that the smallest elements mirrored the structure and dynamics of the larger whole. Our theory suggests that these concepts might have indirectly alluded to the existence of a biological framework within a mathematical universe. By recognizing the biological nature of patterns in reality, especially those biological patterns observed within ourselves and other living organisms, we can unveil the intricate connections between individual non-living entities and larger systems, shedding light on the interplay between the small-scale and grand-scale phenomena.

## **Pentagram**

[The Pentagram] is “the sign of intellectual omnipotence and autocracy... It is the sign of the Word made flesh; The pentagram is the figure of the human body, having four limbs and the single point [at the top] representing the head.” [...] “the Pentagram is called the Sign of the Microcosm, and it represents what the Kabalists of the book of Zohar term the Microproposopus.” [...] “The complete comprehension of the Pentagram (i.e., Human body) is the key of the two worlds. It is absolute philosophy and natural science.”<sup>25</sup>

The theory postulated in our research thesis is that biological patterns define the framework for a mathematical universe hypothesis. In other words, the patterns found in living organisms and biological processes serve as the underlying structure for the mathematical principles governing our reality. This idea can be supported by the concept of the pentagram in occult sciences, as elaborated by Eliphas Levi.

According to Levi, the **pentagram** symbolizes intellectual omnipotence and autocracy, representing the Word made flesh. Levi further equates the pentagram with the human body, with the four limbs corresponding to the points of the star, and the single point at the top representing the head. This interpretation aligns with our theory that biological patterns hold significance in understanding the mathematical nature of the universe.

Levi refers to the pentagram as the Sign of the Microcosm, which aligns with the concept of the human body as the microproposopus in the book of Zohar. This idea resonates with our hypothesis, as it suggests that the human body, being a biological entity, embodies the framework for understanding the intricacies of the universe. By comprehending the pentagram, or the human body, one gains access to the key of the two worlds - a reference to the interconnectedness of the biological and mathematical realms.

Levi goes on to proclaim that the pentagram represents absolute philosophy and natural science. This statement further solidifies our theory, as it implies that the understanding of biological patterns and processes is essential for comprehending the fundamental workings of the universe. The notion of the pentagram as a symbol encompassing both philosophy and science supports the idea that biological patterns provide the foundation for a mathematical universe hypothesis.

In conclusion, the occult concept of the pentagram, as expounded by Eliphas Levi, offers support for our theory that biological patterns define the framework for a mathematical universe hypothesis. Levi's interpretation portrays the pentagram as symbolic of the human body, emphasizing the connection between biological entities and the deeper mathematical principles governing reality. Furthermore, Levi's assertion that the pentagram represents absolute philosophy and natural science aligns with our hypothesis, reinforcing the idea that understanding biological patterns is crucial for comprehending the fundamental nature of our universe.

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<sup>25</sup> Lévi, E., & Waite, A. E. (2011). *Transcendental magic, its doctrine and ritual*. Martino Publishing.

## **Incarnation.**

We believe the term “**incarnation**” as a term which tries to express the biological nature of the universe. To explore the potential connection between the theory of biological framework for a mathematical universe and religious concepts such as “incarnation,” we consider the idea that "God" may represent the personification of the universe. In this view, "God's spirit," "God's essence," and "God's nature" are essentially synonymous with the biological patterns inherent in the fabric of reality. Thus, it is conceivable that the religious term "incarnation" attempts to express the concept of a biological framework for a mathematical universe hypothesis. Traditionally, the term "incarnation" is associated with the embodiment of a divine being in human form, as seen in various religious traditions. However, through the lens of a biological framework, we can reinterpret this concept as the manifestation of the universe's inherent biological patterns in human form.

## **“Theology of the Body”** (Lectures by Pope John Paul II).

Pope John Paul II's "**Theology of the Body**" acknowledges the importance of the human body in understanding the nature of God and reality. Theology of the Body is a topic of a series of 129 lectures given by Pope John Paul II during his Wednesday audiences in Saint Peter's Square and the Paul VI Audience Halle between September 5th, 1979, and November 28, 1984. In Theology of the Body, Pope John Paul II intended to establish “an adequate anthropology in which the human body reveals God.” The Pope's thesis is that “*The body, and it alone is capable of making visible what is invisible, the spiritual and divine. It was created to transfer into the visible reality of the world, the invisible mystery hidden in God from time immemorial, and thus to be a sign of it.*” Our paper suggests that the Pope acknowledges the importance of the human body in understanding the nature of God but does not have the context that allows him to grasp the scientific concepts of a biological framework to a mathematical universe.

The teachings of Pope John Paul II in Theology of the Body provide valuable insights that support our theory of a mathematical universe that is biological in nature. The Pope's emphasis on the human body's ability to reveal the divine aligns with our assertion that biological patterns within living organisms, such as the human body, hold the key to understanding the biological patterns in the universe and all phenomenon in it. While his understanding may have been more spiritually inclined, it is evident that he recognized the profound potential of the human body as a conduit for comprehending the deeper mysteries of the universe.

## **“So God created man in his own image”** (Genesis 1:27).

Genesis 1:27 states, "**So God created man in his own image**, in the image of God he created him; male and female he created them." Traditionally, this verse has been interpreted in religious contexts as an expression of humanity's unique position as the pinnacle of creation. However, within the framework of a biological understanding of the universe, the phrase takes on a new meaning. The reference to being made in the "image of God" can be reinterpreted as the reflection of the biological patterns inherent in the universe within the physiology of humans. If "God" is seen as the personification of the universe, then "God's spirit," "God's essence," and "God's nature" might symbolize the biological patterns that pervade the universe. Thus, the image of God in humans could represent the presence of these biological patterns within the human body. So “God created man in his own image..” Can be interpreted as “The Universe created man in its own image.”

**“Yet in my flesh I will see God” (Job 19:26).**

The verse "Yet in my flesh I will see God" (Job 19:26) bears a striking correlation to the theory that proposes a biological framework for the universe. Through this perspective, Job's declaration can be seen as an expression of humanity's innate yearning to unveil the universe's biological essence that defines the nature of all things and which provides wisdom. By acknowledging the presence of God within his body, but not understanding of God as the universe, Job recognizes the interconnectedness between his physical body, the divine essence, and the underlying fabric of existence but does not have the context of the universe' biological patterns to his body's biological patterns. Thus, this interpretation lends support to the hypothesis and highlights the profound wisdom encapsulated in Job's words, resonating with the possibility of perennial wisdom and the loss of context of the original ideas of a biological framework to the universe.

**Who is over all, and through all, and in all (Ephesians 4:1-6)**

In Ephesians 4:1-6, it was written:

“Unity in the Body of Christ: As a prisoner for the Lord I urge you to live a life worthy of the calling you have received. Be completely humble and gentle; be patient, bearing with one another in love. Make every effort to *keep the unity of the Spirit* through the bond of peace. There is one Spirit — just as you were called to one hope when you were called — one Lord, one faith, one baptism; ***one God and Father of all who is over all, and through all, and in all.***”

Our theory would suggest that the title, “Unity in the Body of Christ” is a reference to the general principles surrounding biological patterns, which humanity must assimilate to. Our theory suggests that “being a prisoner for the Lord” is the idea of being a prisoner to the logic and reasoning underlying the principles of these biological patterns which allow Life to live. Humanity and the individual people within it must be a “prisoner” to these biological principles just as individual cells within a cellular society must be a prisoner to the rules of DNA. Our theory would suggest that “keeping the unity of the Spirit” is keeping in harmony with the biological patterns inherent to the universe and modeled by the human physiology epitomized by Christ. Lastly, or theory would suggest that the ideas of “one God and Father of all who is over all, and through all, and in all,” is referring to the idea of the Universe's biological patterns permeating all things in reality—i.e., that “this Biological Pattern inherent to the Universe is around every thing, connects all things, and is in all things.”

**The Word Became Flesh (John 1:14).**

By embracing the hypothesis that biological patterns inherently define the universe, we offer a novel interpretation of John 1:14. This verse can be understood as highlighting how the essence of these biological patterns of the universe became realized in the creation of living organisms, ultimately culminating in the embodiment of Jesus Christ, The Word, aka the person who was to communicate the knowledge of these patterns of the Universe. Through this interpretation, we can perceive a deeper harmony between science, spirituality, and the divine, allowing for a more comprehensive understanding of the intricacies of existence.

### **“The Kingdom of God is Within You.” (Luke 17:21)**

The Kingdom of God is within You, can be interpreted as “the realm of the universe is within you,” or “the order and principles which are necessary for human society to achieve Heavenly status is within the order and principles surrounding the cellular society that composes your body.” The hypothesis that biological patterns define the framework of a mathematical universe proposes that all systems, processes, and objects in reality are biologically patterned. In Luke 17:21, it was written: “Now when He [Jesus] was asked by the Pharisees when the kingdom of God would come, He answered them and said, “The kingdom of God does not come with observation; Neither shall they say, Lo here! or, lo there! for, behold, the **kingdom of God is within you.**” Our theory suggests that the phrase can be interpreted literally, suggesting Jesus’ understanding of a profound connection between the biological patterns within the human body and the biological patterns of the universe.

### **Blood & Body of Christ**

In Christian theology, the concepts surrounding the **Blood and Body of Christ** highlights possible connections to our theory of a mathematical universe that is biological in nature. Our theory suggests that the “blood and body of Jesus Christ” is a ritual originally designed to pass on scientific knowledge of the biological patterns which govern the nature of our universe and becoming in harmony with those patterns. Thus, “Eating the body of Christ” and “drinking the blood of Christ,” is an allegorical ritual meant to put the person consuming those materials in harmony with the biological patterns which govern the Universe. For example, In the New Testament, the second letter of Peter states that: delivers in the practice “*become partakers of the divine nature. They become united with God.*” Furthermore, the mass, the communion, the transubstantiation of eating the body of God, allows us to ingest “the divine energy.” The almost cannibalistic aspect of the ritual is crucial for atonement, which is to become one with the divine source.

Our theory suggests that there are good biological patterns and bad biological patterns. Those good biological patterns are those that establish and sustain the development and health of living things (Life). The biological patterns of the universe are that of “good patterns,” and our theory suggests that the blood and body of christ ritual was a means to get re-align people in harmony with those good biological patterns, or at the very least pass on general knowledge of the biological connection between the body and the Universe, despite the people of that time not having any knowledge of the field of biology and the cosmos.

### **Tree of Life** (The Book of Genesis).

"Eating from the tree of Life" could be interpreted as an metaphor for "understanding the world/reality relative to the principles of Life" (i.e., understanding reality relative to the biological patterns which establish and sustain Life). In the Book of Genesis, the tree of life is first described in chapter 2 verse 9 as being "in the midst of the Garden of Eden" with the tree of knowledge of good and evil. After the fall of man, "lest he put forth his hand, and take also of the tree of life, and eat, and live for ever."

Our theory that biological patterns define the framework for a mathematical universe proposes that the nature of all systems, processes, and objects in reality are not only influenced by but also fundamentally grounded in biological patterns. These patterns, which are found throughout the natural world, serve as the underlying principles upon which the mathematical laws that govern our universe are constructed and which all living things must abide by in order to live and thrive, forever—such can be seen to the general principles and wisdom of the cellular societies composing the human body. In parallel to this theory, the concept of "eating from the Tree of Life" and "living for ever" depicted in the Holy Bible offers a profound connection to the idea of understanding the world/reality/universe in terms of biological patterns that establish and sustain Life. The concept of "eating from the Tree of Life" and "living forever" can be seen as a metaphor for gaining a deep understanding of the biological basis of existence and living in harmony with it as so to live forever.

### **The Body is a Temple** (Corinthians 6:19-20, Corinthians 3:16).

Our theory suggests that the idea of "The Body is a Temple" mentioned in Corinthians 6:19-20 and Corinthians 3:16 highlight the importance of understanding the biological patterns of the universe that are within the human body:

In **Corinthians 6:19-20**, it was written: "Or do you know that your body is a temple of the Holy Spirit [Or do you know that your body is a temple of Universe's biological patterns] who is in you, whom you have from God [whom is in you, whom you have from the Universe] and that you are not your own? [a pattern that is not owned by any one thing, but shared with all thing in the universe]...therefore glorify god in your body [therefore glorify the healthy biological patterns that were given to you by the universe, especially as these patterns are the key to Life, your life—so stop being a dumb ass and disrespecting the biological patterns within you].

Furthermore, in **Corinthian's 3:16**, our theory suggests that the passage is saying that you are this representation and place of learning of and worshiping of the Universe, and that the Universe and its biological patterns reside within your body:

In Corinthians 3:16, it was written: "Do you not know that you are God's temple [place where you can learn and understand the nature and wisdom of the Universe], and that God's spirit dwells within you? [and that the Universe's biological patterns dwell within you?]"

### **Emanationism.**

The concept of a mathematical universe hypothesis suggests that mathematics plays an essential role in understanding the fundamental laws and structures of our reality. In our proposed theory, the mathematical framework is defined by biological patterns. This implies that the multitude of patterns found in living organisms is directly connected to the mathematical underpinnings of the universe. When we consider **emanationism** in this context, it becomes apparent that the hierarchical flow of existence. "from an underlying principle, or reality, usually called the Absolute or Godhead," can be seen as the progression of biological patterns throughout various levels of the universe. Just as emanationism posits a decrease in perfection as reality descends from the divine to the material world, the biological framework suggests that the integrity of biological patterns diminish as we move from patterns in the universal level towards specific organisms, humanity and the world that they create. This implies that biological patterns, which are prevalent in living organisms, are reflective of the underlying mathematical structures that govern the universe. By exploring the possibility that emanationism is actually attempting to express the concepts within this biological framework, science can consider a biological framework for a mathematical universe hypothesis.

### **Anima Mundi.**

The concept of the **Anima Mundi**, originating from ancient philosophy, suggests the existence of a unifying force that animates and connects all living beings. This force, often called the World-Soul, encompasses the entire natural world, including organic and inorganic matter. Our theory suggests that Anima Mundi may be referring to the biological patterns that we propose make up all of physical and conceptual reality. Our theory also suggests that the "unifying force" of the Anima Mundi actually stems from the forces of the biological patterns set into motion during the creation of the universe and of which connects all things.

### **Kabbalah (Anthropomorphism in Kabbalah).**

Kabbalah, the central system in Jewish mysticism, uses anthropomorphic mythic symbols to metaphorically describe manifestations of God in Judaism. Based on the verses "God created man in his own image, in the image of God created he him; male and female created he them" (Genesis 1:27) and "from my flesh shall I see God" (Job 19:26), Kabbalah uses the form of the human body to describe the structure of the human soul, and the nature of supernal Divine emanations.

This essay aims to explore the hypothesis that biological patterns define the framework for a mathematical universe and connect it to the use of anthropomorphism in the Kabbalah. We argue that the Kabbalah's anthropomorphic representations may be an attempt to express the underlying ideas of this theory.

#### *Understanding the Biological Framework:*

The theory posits that all systems, processes, and objects in reality possess inherent biological patterns, making them fundamentally biological in nature. These patterns, which are found throughout the universe and our surroundings, form the basis for understanding the fundamental principles that govern both living and non-living entities. By recognizing the presence of biological patterns in all aspects of reality, we can gain deeper insights into the workings of the universe, thereby understand the biological nature of reality.

*The Evolution of Biological Processes:*

According to this theory, the existence of life and living organisms can be understood as a direct consequence of the evolution of the universe's biological processes. The physiological models of living organisms provide a lens through which hidden biological patterns in the world around us can be revealed. By studying and understanding the intricacies of life forms, scientists can extract principles that are applicable to other domains and establish the biological nature of various phenomena.

*Analogies and Mapping in Biological Framework:*

The relationship between the universe's biological processes and the living organisms it creates paves the way for analogies to be drawn between the biological domain and any target domain. Through structural mapping, analogies can help reveal and explain the deep-rooted biological patterns present in diverse fields of study. By employing this approach, researchers can uncover hidden connections and forge novel insights into areas that were previously unexplored.

*Anthropomorphism in the Kabbalah:*

The Kabbalah, a mystical tradition within Judaism, asserts the presence of anthropomorphic representations of the divine. The use of human-like qualities to describe an otherwise transcendent being has often been subject to interpretation and criticism. However, when viewed through the lens of the biological framework hypothesis, anthropomorphism in the Kabbalah takes on a different meaning.

The Kabbalah's anthropomorphic representations can be seen as an attempt to express the underlying biological patterns that govern the universe. By attributing human qualities and traits to the divine, the Kabbalah may be seeking to bridge the gap between the ineffable and the tangible, unveiling the biological nature present in the fabric of existence (our universe).

*Anthropomorphism as an Expression of Biological Essence:*

Our theory suggests that the Kabbalistic notion of anthropomorphism can be understood as an allegorical language that attempts to elucidate the deep-seated biological patterns within the universe. By providing relatable concepts through anthropomorphization, the Kabbalah offers a framework through which individuals can grasp the intricate interplay between the biological and the divine.<sup>26</sup>

Moreover, the use of anthropomorphism in the Kabbalah may serve as a analogical device to express the inherent interconnectivity between all *biological* aspects of existence. Just as biological patterns permeate all systems, processes, and objects in reality, which our theory suggests, so too does the interplay between divine and human characteristics reflect the intrinsic unity within the universe.

*Conclusion:*

The hypothesis that biological patterns define the framework for a mathematical universe provides a unique lens through which we can comprehend the underlying essence of reality. This essay has suggested that the anthropomorphism depicted in the Kabbalah may be an attempt to express the ideas of this biological framework to the universe. By leveraging the Kabbalah's anthropomorphic representations, we can potentially uncover a deeper understanding of the fundamental patterns that permeate our universe, bridging the gap between the biological and the divine/God—the personification of the universe.

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<sup>26</sup> NOTE: Our paper interprets the divine, or God, as the personification of the Universe. Meanwhile, God's spirit, God's essence and the divine essence are all the Universe's biological patterns which permeate all of its creation.

## **Panentheism.**

**Panentheism**, as an ancient and diverse religious and philosophical belief, posits that the Divine is immanent and transcendent, encompassing all of creation while also existing beyond it. This concept emphasizes the interconnectedness of all things and the presence of divinity within the fabric of reality. Traditionally, panentheism has been seen as a spiritual and metaphysical perspective. However, when examined through the lens of a biological framework for a mathematical universe, it becomes apparent that panentheism may be pointing towards something more concrete. The hypothesized biological framework for a mathematical universe suggests that the concept of God is the universe personified and the Divine can be understood as the biological patterns of the universe. This proposition is in line with the central idea of panentheism, wherein God is perceived as encompassing and interpenetrating everything in existence. By reimagining the divine through a biological lens, we can comprehend the intricate connections and patterns that underlie all phenomena, bridging the gap between spiritual and scientific understandings.

## **Stoic Physics**

In **Stoic Physics**, “Humans are part of the logos which permeates the cosmos” The nature of the world is one of unceasing change, driven by the active part or reason (*logos*) of God which pervades all things. The active substance of the world is characterized as a 'breath', or *pneuma*, which provides form and motion to matter, and is the origin of the elements, life, and human rationality.

The connection between our theory of biological patterns and the ideas of Stoic Physics goes beyond a mere parallel. It suggests that the concept of the "divine" or "universal spirit" in panentheism could potentially be explained by the existence and influence of these biological patterns which permeate our reality/universe. Our theory proposes that these biological patterns, omnipresent and fundamental to the functioning of the universe, may indeed be the source of the divine or universal spirit that is believed to be present within and beyond all things. Biological patterns are the “logos” of reality, it is what is logical and rational.

## **Man is the measure of all things.**

“**Man is the measure of all things,**” is a statement by ancient Greek philosopher Protagoras, which has been mainly been interpreted as radical relativism, could actually be interpreted literally in the sense that the human physiology (i.e., the biological patterns in the human physiology) is the means which to measure all things in reality.

## **Know thyself.**

Another concept that supports our theory of a mathematical universe that is biological in nature is the Delphic Maxim, "Know Thyself," found in the Temple of Apollo at Delphi. Apollo is considered the god of archery, music and dance, truth and prophecy, healing and diseases, the Sun and light, and poetry. One possible interpretation of the phrase "Know Thyself" is to acknowledge and understand the biological patterns within one's own physiology. Our interpretation is supported by a mosaic discovered during excavations in the convent of San Gregorio in Rome. This mosaic features the Greek motto "know thyself" with a silhouette image of the human body outlined with internal features that resemble a skeleton. We interpret these details of human internal physiology in the mosaic as evidence for an ancient understanding of the importance of knowing the biological patterns within one's own physiology, as so to have an understanding of the world/universe around them.

## **Vetruvian Man** (Leonardo DiVinci).

According to Encyclopedia Britannica, Leonardo envisaged the creation of a comprehensive visual representation of the human body, which he achieved through his anatomical drawings and the Vitruvian Man. He referred to this as a "cosmografia del minor mondo" or a cosmography of the microcosm, believing that the functioning of the human body is analogous to the workings of the universe.

Our theory posits that Leonardo da Vinci had a limited understanding of the theory we present in this paper, which suggests that the mathematical universe is fundamentally biological in nature. His lack of contextual understanding regarding the analogy between the human body and the universe prevented him from fully comprehending the true nature of all systems, processes, and objects in reality, which are inherently biological in their patterns and essence. The theory proposes that life and living organisms exist as a direct consequence of the universe's biological processes, and their physiology serves as a model that reveals the nature of the universe's biological patterns. Therefore, it is possible to map analogies from the biological domain to any other domain in order to explain the nature of that domain.

We argue that all the processes occurring in the universe can be described by the biological patterns found in the human form. This is why Leonardo believed that the workings of the human body could serve as an analogy for the workings of the universe and why he attempted to convey this idea through the illustration of the Vitruvian Man. However, in reality, the analogy runs much deeper than what he depicted in his drawing, and he was unable to accurately express the theory of a biological framework for a mathematical universe within his interpretation. This limitation may be attributed to the lack of contextual information available to Leonardo at the time, which may have been lost or misinterpreted throughout the history of human civilization.

## **Theosophy.**

**Theosophy**, with its emphasis on a pure spiritual formation gradually materializing into an observable, material realm, echoes the hypothesis' proposition of a gradual manifestation of biological patterns in the universe. While theosophy primarily refers to spiritual formations, interpreting it as representing the biological pattern of the universe aligns with the hypothesis. This interpretation suggests that theosophy may actually be trying to express that the nature of a universe is governed by biological patterns. Theosophy speaks of a universal intelligence or divine wisdom permeating all aspects of the cosmos. The biological framework for a mathematical universe could be seen as providing a scientific basis for this universal intelligence, suggesting that the inherent biological patterns are the physical discernible manifestation of a universal intelligence or divine wisdom. Theosophy posits the existence of interconnectedness between all beings and aspects of reality. This mirrors the concept of biological patterns as the foundation of the mathematical framework for the universe. By considering all systems as interconnected through biological patterns, both Theosophy and the biological framework for a mathematical universe highlight the idea of a unified existence. Furthermore, Theosophy recognizes the concept of spiritual evolution, suggesting that beings progress and evolve through various stages. Similarly, the biological framework for a mathematical universe proposes that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. This implies an inherent link between biological evolution and spiritual growth, aligning with the idea of progressive development and evolution in Theosophy.

### **Ahimsa.**

In exploring the roots of the concept of **ahimsa**, a principle dating back to ancient India and a core virtue in Hinduism, Buddhism, and Jainism, we can consider the influence of this theory of a biological universe. Ahimsa, a principle promoting nonviolence towards all living beings, is based on the belief that all life contains a spiritual energy or essence of the divine. It suggests that harming any living being is equivalent to harming oneself. This concept resonates strongly with the theory that all systems in reality possess biological patterns, as it recognizes the interconnectedness and inherent value of all life forms. The possibility arises that the roots of ahimsa may lay within the understanding of the universe's biological patterns. If all systems, processes, and objects are fundamentally biological in nature, then it follows that the recognition of the sacredness of all life is a natural consequence. This perspective aligns with the principles of ahimsa, as it emphasizes the interconnectedness of all living beings and promotes the idea that causing harm to others ultimately harms oneself.

### **Animism.**

**Animism**, which comes from the Latin word "anima" meaning breath, spirit, life, holds the belief that all things in the world - living beings, elements of nature, and human creations - are infused with a life force or spiritual essence. According to animism, these spiritual essences govern and animate objects, places, and creatures, making them alive and interconnected. It recognizes a spiritual dimension in both animate and inanimate entities. Both animism and the idea of a biological framework for a mathematical universe highlight the interconnectedness of all entities. Animism sees a spiritual essence in every aspect of the world, emphasizing the unity and harmony between the living and non-living. Similarly, the biological framework suggests that this essence is the biological patterns which underlie all systems and objects, revealing a deep interconnectivity between living organisms and everything else in the universe. Animism asserts that all entities possess distinct spiritual essences. This aligns with the theory of a biological framework, which suggests that all systems, processes, and objects have inherent biological patterns, essentially implying a form of life or vitality within them. Both perspectives affirm that there is more to the natural world than meets the eye, hinting at a spiritual essence underlying all existence. While animism regards everything as animated and alive, the theory of a biological framework suggests that everything in the universe contains biological patterns and is essentially part of a living universe. This aligns with the animistic belief that everything in the world possesses an inherent liveliness, indicating a profound unity between the spiritual and physical realms. \*\*

## **Principle of Correspondence** (Hermeticism's fundamental axiom)

*Biological Patterns as the Framework for a Mathematical Universe: The Principle of Correspondence as a Bridge Between Biological and Cosmic Realities*

### *Abstract:*

The notion that the universe is epitomized by a biological framework sets forth a revolutionary way of understanding the interplay between life and the cosmos. This essay propounds a theory suggesting that biological patterns not only define the structure of our universe but also influence its evolutionary processes, thereby characterizing all systems and objects within it as inherently biological. By employing the Hermetic Principle of Correspondence, known as "As above, so below; as below, so above," we explore the possibility that this ancient tenet may have emerged from a profound, yet subconscious recognition of a universe underpinned by biological patterns. This essay endeavors to elucidate the symbiotic relationship between the biological processes that catalyzed the emergence of life and the hidden biological signatures permeating the universe, illustrating how living organisms may serve as models for uncovering these universal patterns.

### *Introduction:*

The mathematical universe hypothesis suggests that the physical universe is a mathematical structure. However, by postulating that the biological patterns define the framework for this hypothesis, we delve into an intriguing paradigm where biology and mathematics are inextricably intertwined. The Principle of Correspondence, derived from Hermetic philosophy, suggests that there is a congruence between various planes of existence or dimensions. Within the context of our theory, this principle can be leveraged to support the notion that there is a structural harmony between biological patterns and the very fabric of the universe.

### *The Nature of Biological Patterns in the Universe:*

Biological patterns are evident in multiple scales of existence, from the spirals of DNA, the Fibonacci sequences found in plant growth, to fractal patterns in coastlines and galaxies. These patterns reveal an underlying order and suggest that the natural phenomena we observe might be manifestations of common foundational principles. By extending this concept, our thesis argues that the universe's most granular composition is modeled after these biological patterns.

The resemblance between the microcosm and the macrocosm - a concept that mirrors the Principle of Correspondence - leads to a provocative hypothesis: the ordered systems we identify in the cosmos, from the orbits of celestial bodies to the structure of cosmic webs, are expressions of biology on a grand scale. In this context, by "biology," we're referring to the principles and patterns which govern life and growth; a logic that extends beyond the limits of Earth-based life forms, permeating the cosmos.

*Correspondence as a Reflection of Biological Framework:*

The Principle of Correspondence has traditionally been perceived as a philosophical or esoteric insight, highlighting the relationship between various levels of reality. However, within the ambit of our theory, this principle may have roots in the physical evidence of biological patterns throughout the universe.

On Earth, the simplest to complex organisms display symmetries and structures that are echoed in cosmic formations. This mirroring can be viewed as a form of correspondence, suggesting that terrestrial biology and celestial phenomena are reflections of each other. It hints at the possibility that the Principle of Correspondence is not merely an abstract concept but rather originates from a tangible framework, which is in essence, biological.

*Living Organisms as Models of Universal Patterns:*

According to our theory, the physiology of living organisms is not isolated but is a blueprint that reveals the intrinsic biological nature of the universe. This is evident in multiple phenomena; for example, the network of neurons in the brain is reminiscent of the cosmic web of galaxies. The vascular systems that transport nutrients and oxygen in organisms mirror the patterns of rivers and their tributaries.

By studying the structural and functional dynamics of living organisms, we can draw analogies to cosmic processes. The principles governing growth, development, and reproduction in biology could similarly dictate the formation, evolution, and potential life cycles of stars, galaxies, and even universes.

*The Utility of Biological Analogies:*

By employing biological analogies, we can generate novel insights into systems that are not traditionally considered living. This analogical reasoning allows us to reinterpret the mechanisms of the universe through a biological lens, thereby shedding light on the enigmatic principles that guide the cosmos. It also means that the quest to understand life's origins and processes on Earth extends to deciphering the cosmic puzzle.

*Conclusion:*

The theory that biological patterns define the mathematical universe's framework and that the Principle of Correspondence has its roots in this context presents a captivating paradigm shift. It offers a comprehensive perspective that merges biology with cosmology, positioning living organisms as fundamental agents unveiling the universe's cryptic nature. As we further our understanding of biological patterns on Earth and beyond, we can unravel the mysteries of the cosmos, effectively utilizing biological analogies to decode the mathematical universe we inhabit. The potential revelations could redefine our perception of life, existence, and the universal order.

## **Mayan fascination with blood.**

In the ancient Mayan culture, it was believed that blood held a vital force known as "Life-force" or "Chu'lel," which supernatural forces or deities, such as Gods, required. It was customary to regularly offer blood to these Gods through self-sacrificial bloodletting. Our theory suggests that this "Life-force" or Chu'lel which Mayan Culture revered was unknowingly the biological patterns of the universe, represented by the DNA present in the blood, which may have been taught to them by a more advanced group of people who had the knowledge of a biological framework for a mathematical universe.

According to our theory, Mayan fascination with bloodletting signifies a potential misunderstanding regarding the significance of blood. It is possible that their misconceptions regarding the importance of blood arose during teachings from a more advanced civilization (or group of individuals) that emphasized the significance of understanding the biological patterns contained within DNA and those patterns connections to the patterns of a universe whose nature is biological.

Mayan misunderstanding may have stemmed from their lack of knowledge about biology, physics and the cosmology at that time when a more advanced group of people tried to express the importance of blood in understanding the universe and reality. This may have led the Mayans to believe that the advanced civilization (which they may have revered as Gods or deities) held blood itself, in high regard and therefore commenced the practice of bloodletting to offer to the God's/deities regularly and during unfortunate events in order to appease the Gods/deities. These teachers from a more advanced civilization, may have tried to express the knowledge of how the patterns within DNA, found in blood, provide knowledge to the workings of a biological universe. Mayans not completely understanding this science, may have only understood there existed "an importance to blood by these gods," which may have later resulted in a bloodletting ritual to express their understanding to their teachers/gods. Links to references that support the idea of an advanced civilization existing with Mayan Culture. <sup>27 28 29</sup>

**Ritual Bloodletting:** One of the most prominent manifestations of the Mayans' preoccupation with blood was their ritualistic bloodletting practices. This involved piercing or cutting various parts of the body to obtain blood, which was then offered to deities or used in divination rituals. Blood was seen as a powerful life force that could establish a connection between mortals and the supernatural realm.

**Blood as an Offering to the Gods:** For the Mayans, blood was considered a sacred offering to their gods. By sacrificing blood, they believed they were providing nourishment and sustenance to the deities, ensuring their continued protection and favor. The act of giving one's blood was an expression of devotion and gratitude, illustrating the Mayans' deep spirituality and their belief in reciprocal relationships between humanity and the divine.

**Symbolic Meaning of Blood:** Beyond its physical properties, blood held immense symbolic significance in Mayan culture. It was associated with regeneration, life, and creation. The color red, symbolizing blood, was also closely linked to it. The vibrant red of blood represented the energy and power of life, as well as the vitality of the universe, connecting the mortal world to the divine. [Incorporate how our theory interprets this]

**Blood in Divination Practices:** Blood played a crucial role in Mayan divination rituals. Priests and shamans used blood as a medium to communicate with the gods and seek guidance. Whether by observing the flow of blood from a wound or interpreting patterns on an animal's sacrificed heart, the Mayans believed that the gods communicated their intentions and predictions through these signs.

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<sup>27</sup> <https://www.theguardian.com/film/2011/sep/29/mayan-documentary-alien-mexico>

<sup>28</sup> <https://www.reuters.com/article/idUS3099284382/>

<sup>29</sup> [https://www.youtube.com/watch?v=7PtNWRpr\\_Z4](https://www.youtube.com/watch?v=7PtNWRpr_Z4)

## Whirling Dervishes

Our theory suggests that the Whirling Dervishes is a religious ritual created to express the concepts of a biological universe. **Sufism**, known as *tasawwuf* in the Arabic-speaking world, is a form of Islamic mysticism that emphasizes introspection and spiritual closeness with God. Sufism is a mystical type of life philosophy; It is the sense of feeling the creator in your body (Sema ritual). While it is sometimes misunderstood as a sect of Islam, it is actually a broader style of worship that transcends sects, directing followers' attention inward. Sufi practice focuses on the renunciation of worldly things, purification of the soul and the mystical contemplation of God's nature" —directing followers' attention inward.

**Whirling Dervishes** spin in circles like particles within the body and in a solar system.<sup>30</sup> Medieval Sufis conceive the human body as the primary shuttle between interior (**batin**) and exterior (**zahir**) realities.<sup>31</sup> Muslim groups believe that *batin* can be fully understood only by a figure with esoteric knowledge (our theory suggests that this person with esoteric knowledge is a person who has an understanding of biology and the connection to the universe). For Shia Muslims, that is the Imam of Time. In a wider sense, *batin* is the inner meaning or reality behind all existence, the *Zahir* being the world of form and the apparent meaning.

Our theory suggests that the ritual of the Whirling Dervishes is a ritual meant to help one contemplate the biological nature of the universe that exist with inside his own bodies, thereby establishing the connection between *batin* and *zahir*. However, we believe that the original context of this ritual (the universe being biological in nature and that the patterns of the universe are inside all living things) may have been lost or impossible to communicate to a society of people who had no understanding of biology, and astrophysics.

## Blood & Body of Christ

In Christian theology, the concepts surrounding the **Blood and Body of Christ** highlights possible connections to our theory of a mathematical universe that is biological in nature. Our theory suggests that the "blood and body of Jesus Christ" is a ritual originally designed to pass on scientific knowledge of the biological patterns which govern the nature of our universe and becoming in harmony with those patterns. Thus, "Eating the body of Christ" and "drinking the blood of Christ," is an allegorical ritual meant to put the person consuming those materials in harmony with the biological patterns which govern the Universe. For example, In the New Testament, the second letter of Peter states that: delivers in the practice "*become partakers of the divine nature. They become united with God.*" Furthermore, the mass, the communion, the transubstantiation of eating the body of God, allows us to ingest "the divine energy." The almost cannibalistic aspect of the ritual is crucial for atonement, which is to become one with the divine source.

Our theory suggests that there are good biological patterns and bad biological patterns. Those good biological patterns are those that establish and sustain the development and health of living things (Life). The biological patterns of the universe are that of "good patterns," and our theory suggests that the blood and body of christ ritual was a means to get re-align people in harmony with those good biological patterns, or at the very least pass on general knowledge of the biological connection between the body and the Universe, despite the people of that time not having any knowledge of the field of biology and the cosmos.

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<sup>30</sup> Specia, Megan. "Who Are Sufi Muslims and Why Do Some Extremists Hate Them?" *The New York Times*, The New York Times, 24 Nov. 2017, [www.nytimes.com/2017/11/24/world/middleeast/sufi-muslim-explainer.html](http://www.nytimes.com/2017/11/24/world/middleeast/sufi-muslim-explainer.html).

<sup>31</sup> Bashir, Shahzad. *Sufi Bodies: Religion and Society in Medieval Islam*. Columbia University Press, 2013.

### **Akasha.**

Utilizing the concept of Akasha as a theoretical foundation for our theory can enhance the understanding of the interconnectedness, hidden patterns, and universal consciousness underlying the biological framework of the universe. Remember, Akasha is a philosophical concept from Hindu and Buddhist traditions; its inclusion in our theory demonstrates an interdisciplinary approach that integrates different philosophical frameworks to support our hypothesis. Here's how Akasha contributes to supporting our theory:

1. **Universal Consciousness:** Akasha is often described as the primordial element or universal consciousness that permeates everything in the universe. This concept aligns with our theory's proposition that all systems, processes, and objects possess biological patterns and are inherently biological in nature. By incorporating the idea of Akasha, we can argue that this universal consciousness is deeply connected to and shaped by biological patterns, establishing a link between consciousness and the biological framework of the universe.
2. **Interconnectedness and Holistic Approach:** Akasha emphasizes the interconnectedness of all things, with every entity and phenomenon connected and influenced by the universal consciousness. In the context of our theory, Akasha can serve as a theoretical foundation to highlight the interconnectedness and interdependence of biological patterns throughout the universe. The biological patterns within systems, processes, and objects can be seen as reflections of the universal consciousness, revealing the underlying unity in the manifestation of life and its interconnectedness with the wider universe.
3. **Revealing Hidden Patterns:** Akasha is often associated with the ethereal dimension that holds the records of everything that has occurred, the "Akashic Records." Analogously, in our theory, the physiological models of living organisms can be seen as revealing the hidden biological patterns throughout the universe and our surroundings. Akasha can provide a conceptually similar framework wherein the universal consciousness holds the records or underlying patterns of biological processes that shape and create life in various forms.
4. **Metaphorical Mapping:** Akasha can offer a metaphorical mapping for bridging the biological framework to other domains. By drawing upon Akasha's holistic and universal nature, we can propose that analogies can be structurally mapped from the biological realm to any target domain. This mapping can help reveal and explain the biological nature of the target domain, showcasing the interconnectedness of biological patterns and their presence across the universe.

## Namaste

In the realm of Hinduism, the traditional greeting "Namaste" carries a profound meaning. It serves as a acknowledgement that the divine essence resides within oneself as well as in others, emphasizing the unity that transcends physical boundaries and highlights the interconnectedness of all living beings. Namaste can be understood as "I respectfully bow to the divine within you"<sup>32 33 34</sup> or "the sacred within me recognizes the sacred within you".<sup>35</sup> We propose that the customary practice of bowing to one another may have originally served as a means to acknowledge the inherent sacredness of biological patterns that pervades every aspect of our existence. Regrettably, over time, the true meaning and context behind this divine salutation were lost.

## Musubi

Musubi, in Shinto, a native religion of Japan, is often described as the energy of the interconnected universe. Musubi is integral to the Shinto worldview, marking the presence of spiritual power in the process of creating, sustaining, and connecting beings. It is the divine energy by which the kami interact with the world and each other. Theologically, this notion transcends the physical act of creation – it stretches into the maintenance of life, the forces behind growth and decay, and the relational dynamics between beings. Each encounter, relationship, or event is thus considered to be impregnated with musubi, signifying divine orchestration and a chance for kami to manifest.

In a context aligned with the theory of a mathematical universe that is biological in nature, musubi could be interpreted as the kinetic energy of the biological patterns of the universe—similar to the interconnected energy required for establishing and maintaining the development of a fetus from the time of inception to a full grown human being, musubi is the energy required to establish and maintain the universe and its biological patterns.

## Misogi.

In Shinto, misogi is a ritual of purification, often involving washing the entire body.[x] As part of the Misogi practice, they then begin furitama, or “spirit shaking,” by clenching their hands in front of the stomach and shaking them up and down, vibrating the upper torsos. The purpose of this is to become aware of (unified with) the spirits presence within. These two aforementioned practices are sometimes accompanied by special prayers or incantations. After, the leader begins to speak out invocations/prayers that are said to activate the spirit. The followers generally speak along with them, thus affirming the potential for realizing one's own spirit, and thus unifying them with the kami around them. Our theory suggests that misogi serves as a means to remind individuals of the biological patterns of the universe present within their own bodies. By cleansing oneself physically and spiritually, participants reconnect with the innate biological aspects of their existence. The body, through which biological processes flow, serves as a vessel illustrating the interconnectedness of all life forms.

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<sup>32</sup> Ying, Y. W., Coombs, M., & Lee, P. A. (1999), "Family intergenerational relationship of Asian American adolescents", *Cultural Diversity and Ethnic Minority Psychology*, 5(4), pp. 350–363

<sup>33</sup> K V Singh (2015). *Hindu Rites and Rituals: Origins and Meanings*. Penguin Books. pp. 123–124. ISBN 978-0143425106. Archived from the original on 2019-12-17. Retrieved 2017-05-20.

<sup>34</sup> Lawrence, J. D. (2007), "The Boundaries of Faith: A Journey in India", *Homily Service*, 41(2), pp. 1–3

<sup>35</sup> Oxhandler, Holly (2017). "[Namaste Theory: A Quantitative Grounded Theory on Religion and Spirituality in Mental Health Treatment](#)". *Religions*. 8 (9): 168. doi:10.3390/rel8090168.

## **Kami:** the biological patterns of the Universe

In Shinto, kami are not separate from nature, but are of nature, possessing positive and negative, and good and evil characteristics.<sup>36</sup> They are manifestations of musubi,<sup>37</sup> the interconnecting energy of the universe,<sup>38</sup> and are considered exemplary of what humanity should strive towards.<sup>39</sup> Kami are believed to be "hidden" from this world, and inhabit a complementary existence that mirrors our own: shinkai ("the world of the kami").<sup>40</sup> To be in harmony with the awe-inspiring aspects of nature is to be conscious of kannagara no michi "the way of the kami".<sup>41 42</sup>

There are many different varieties of *kami*. There are 300 different classifications of *kami* listed in the Kojiki and they all have different functions, such as the *kami* of wind, *kami* of entryways, and *kami* of roads. Lastly, all *kami* have a different guardianship or duty to the people around them. Just as the people have an obligation to keep the *kami* happy, the *kami* have to perform the specific function of the object, place, or idea they inhabit. Similar to ideas within our theory, biological patterns have the duty to perform their function whether in the universe, on earth, in the world around us, and in our body.

Shinto's concept of Kami can be viewed through the lens of our hypothesis. Kami can be seen as the biological patterns of the universe, or the various types of cellular roles in biology, expressed within the Shinto framework. Similar to our claim that the universe's biological patterns permeate all things, Kami can be understood as the embodiment of the divine spirit (or biological patterns) within the natural world.

Shinto emphasizes the worship of natural phenomena, such as mountains, rivers, and thunderstorms, as manifestations of Kami. These entities are not merely interpreted as physical objects; they are recognized as living beings with spiritual energy. This perception aligns with our theory's assertion that inherent biological patterns exist in all systems and objects.

Furthermore, Shinto recognizes Kami in the form of ancestral spirits. By acknowledging the importance of ancestry, Shinto elevates the human connection to the natural world. In our theory, this aligns with the idea that all living organisms share a common biological foundation, making us interconnected with each other and the rest of the universe. Furthermore, When it is stated that humanity should aspire to the exemplars of kami, our theory suggests that this means humanity should organize itself in a manner similar to that of the cellular society found within the human body. These cellular organisms serve as a model society, organizing themselves according to principles and wisdom that promote development, survival, and the potential of both themselves and their society, as well as all life within their society/ecosystem. Therefore, humanity should take the cellular society as a blueprint for their own societal organization.

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<sup>36</sup> Similar to how the cells within our body contain good and bad nature.

<sup>37</sup> Boyd, James W.; Williams, Ron G. (1 January 2005). "Japanese Shintō: An Interpretation of a Priestly Perspective". *Philosophy East and West*. 55 (1): 33–63. doi:10.1353/pew.2004.0039. JSTOR 4487935. S2CID 144550475.

<sup>38</sup> Interconnecting biological pattern—i.e., those more in harmony with it have a stronger "energy."

<sup>39</sup> As a human, who has the ability to think freely (and stray away from this pattern and create the hells we experience), it is our inherent duty (as a living organism) to define, measure, and understand the nature of reality relative to this Life-pattern.

<sup>40</sup> Yamakage, Motohisa; Gillespie, Mineko S.; Gillespie, Gerald L.; Komuro, Yoshitsugu; Leeuw, Paul de; Rankin, Aidan (2007). *The Essence of Shinto: Japan's Spiritual Heart* (1st ed.). Tokyo: Kodansha International. ISBN 978-4770030443.

<sup>41</sup> Boyd, James W.; Williams, Ron G. (1 January 2005). "Japanese Shintō: An Interpretation of a Priestly Perspective". *Philosophy East and West*. 55 (1): 33–63. doi:10.1353/pew.2004.0039. JSTOR 4487935. S2CID 144550475.

<sup>42</sup> To be in harmony with the awe-inspiring aspects of nature is to be conscious of this Life-pattern's existence throughout all of reality, and the importance to act in harmony with it, or jeopardize Life.

**“There is more wisdom in your body than in your deepest philosophy.”** (Frederich, Nietzsche)

While this quote may not have any connection to prior knowledge biological framework of a mathematical universe, it does however, highlight an interesting fact about the human body in relation to the universe, thus suggesting a possible biological nature of the universe via body’s journey to creation. Chris Nunn from Quora made this beautiful comment: “Our minds make up stories. Our bodies exist because they have the wisdom of a 3.5 Billion year successful journey that our minds are only just now learning about. The body is real, and it is successful, as is evidenced by us being alive to contemplate any of this. The mind is trying to figure it all out. There is more wisdom in the success story of our bodies than even some of the best stuff we make up to explain it in our minds.”

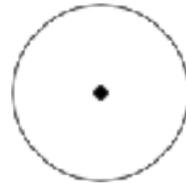
## Taoism

The concept of the Tao, often described as the flow of the Universe or the essence behind the natural world, can be reinterpreted through the lens of this biological pattern hypothesis. Instead of perceiving the Tao as an abstract metaphysical force, we can view it as the manifestation of the inherent biological patterns that govern the balance and order in our universe. These patterns, rooted in the fundamental principles of life, provide the framework for the harmonious functioning of systems, processes, and objects. Just as the Tao is believed to guide and maintain balance in the natural world, so too do these biological patterns guide and shape the functioning of reality.

Furthermore, when examining the concept of *qi*, the vital energy of action and existence, we can consider the possibility that it is associated with this biological pattern that has been set into motion since the inception of the universe. Instead of a purely energetic or spiritual concept, *qi* could be understood as the energy inherent in the biological patterns that form the basis of all existence. This energy drives the processes of growth, development, and transformation, contributing to the dynamic nature of our reality. By acknowledging the role of biological patterns in the generation and regulation of this vital energy, we gain a deeper understanding of the interconnectedness between life and the larger universe.

## The Circled Dot

The Pythagoreans and later Greeks employed the circled dot to represent the Monad or The Absolute, a metaphysical entity signifying the ultimate essence of reality. While traditionally interpreted as a symbol for the pure and indivisible first principle, we propose an alternative interpretation that aligns with our theory. Perhaps the Pythagoreans and later Greeks were attempting to convey the true nature of the universe (and where all first principles of the universe stem from): that it was biological in nature and its structure resembled that of a single-celled organism.



By acknowledging the circled dot as a representation of a single-celled organism, we can draw parallels between the structure and functions of living organisms and the underlying framework of the universe. This recognition supports our view that the universe's nature is inherently biological. Just as living organisms exhibit various patterns, processes, and interactions, the universe manifests similar characteristics on a grander scale. The flowing patterns of galaxies, the intricate networks of particles, and the dynamic interplay of forces all align with the biological patterns found within living organisms.\*\*



### 3. Methodology

#### A. *Biological Framework for a Mathematical Universe Hypothesis:*

The mathematical universe hypothesis (MUH) suggests that the physical universe is not only explained by mathematics, but is, in fact, a mathematical structure itself. Our theory goes a step further by stating that this mathematical structure is rooted in biology. Essentially, this means that the basis for the mathematical universe hypothesis is defined by biological patterns. As a result, all systems, processes, and objects in reality possess these biological patterns and are inherently biological in nature. This concept applies to everything in the universe and the world around us.

Moreover, our theory postulates that the existence of life and living organisms is a direct result of the evolution of these biological processes of the universe. Therefore, embedded into the physiology of living organisms are the patterns of the universe's fundamental processes. The physiology of living things serve as models that allow us to reveal and understand the hidden biological patterns throughout the universe and world around us through the method of allowing us to structurally mapping analogies from the biological domain (i.e., biological patterns observed within the physiology of living organisms) to any target domain to reveal and explain the biological nature of the target domain, as well as facilitate the transfer of knowledge and general principles from the biological domain to the target domain. All physical and conceptual things in our universe contain patterns that correspond to the biological patterns observed within living organisms. It is our duty as a human society to recognize these patterns and use them to aid in navigating our successful journey in Life. This methodology aims to help explain how to do this.

#### B. *The Aim of this Methodology:*

To use Dedre Gentner's Theoretical Framework for Analogy to structurally map the biological domain to various target domains to support a biological framework to a mathematical universe.

#### C. *Research Questions:*

1. To what extent do biological patterns play a role in the framework of a mathematical universe?
2. Are there specific mathematical principles or concepts that can be identified as inherently biological in their nature?
3. How do biological patterns influence the behavior and interactions of different systems, processes, and objects in reality?
4. Can the identification and understanding of biological patterns facilitate the development of new mathematical models and theories?
5. What are the implications of recognizing biological patterns in the framework of a mathematical universe for fields such as physics, biology, and psychology, and other fields?
6. Are there any limitations to the concept of biological patterns defining the framework for a mathematical universe?

## **Structure-Mapping: A Theoretical Framework for Analogy**

### **A. Overview of Dedre Gentner's Theoretical Framework for Analogy**

Dedre Gentner, a renowned cognitive scientist, developed a theoretical framework for analogy, which focuses on mapping correspondences between two domains to enhance understanding and generate new insights. According to her framework, analogies enable individuals to structurally map knowledge from a source domain to a target domain, facilitating a deeper comprehension of the target domain.

The *structure-making theory* describes the implicit interpretation rules of analogy. The central claim of the theory is that analogy is characterized by the mapping of relations between objects, rather than attributes of objects, from base to target; and, further, that the particular relations mapped are those that are dominated by higher-order relations that belong to the mapping (the *systematicity* claim). These rules have the desirable property that they depend only on syntactic properties of the knowledge representation, and not on the specific content of the domain. Further, this theoretical framework allows us to state the difference between analogies and literal similarities, abstraction and other kinds of comparisons.

Two important features of the theory are (a) the rules depend only on syntactic properties of the knowledge representation, and not on the specific content of the domains; and (b) the theoretical framework allows analogies to be distinguished cleanly from literal similarity statements, applications of abstractions, and other kinds of comparisons.

Two mapping principles are described: (a) Relations between objects, rather than attributes of objects, are mapped from base to target; and (b) the particular relations mapped are determined by systematicity, as defined by the existence of higher-order relations.

### **B. Relevance of Gentner's Framework to the Biological Framework for a Mathematical Universe**

*Compatibility of Gentner's Theoretical Framework with Our Theory:*

Our theory of a biological framework for a mathematical universe hypothesis aligns well with Gentner's theoretical framework for analogy due to the inherent nature of analogy itself. Analogy is the process of structurally mapping domains which share a correspondence and transferring that knowledge from one domain to the other. This is why we are using this framework for analogy, to structurally map the biological domain to various target domains, so to reveal and understand the biological nature of the target domain.

*Applicability of Gentner's Theoretical Framework to Our Theory:*

Gentner's theoretical framework for analogy offers a concrete and systematic approach to mapping analogical connections between domains. Applying this framework to our theory allows for a structured examination of biological patterns in target domains, fostering a better understanding of their inherent nature.

By employing Gentner's framework, our theory enables scientists and researchers to identify shared biological patterns within different fields of study. For instance, mapping the biological patterns in a biological system to the patterns present in a technological system could provide insights into the development and functioning of the latter, such as seen in the field of biomimicry. Analogies drawn between the two domains could shed light on the underlying principles and processes involved.

Furthermore, the applicability of Gentner's framework extends beyond the biological domain. Given that our theory posits the existence of biological patterns in all systems and objects in reality, Gentner's framework can be used to identify and explain these patterns in diverse contexts. From the symmetry in mathematical equations to the fractal patterns in natural landscapes, our theory suggests that biological patterns are prevalent throughout the universe. By leveraging Gentner's framework, researchers can unravel these hidden connections, thus expanding our understanding of the biological foundation that underpins all phenomena.

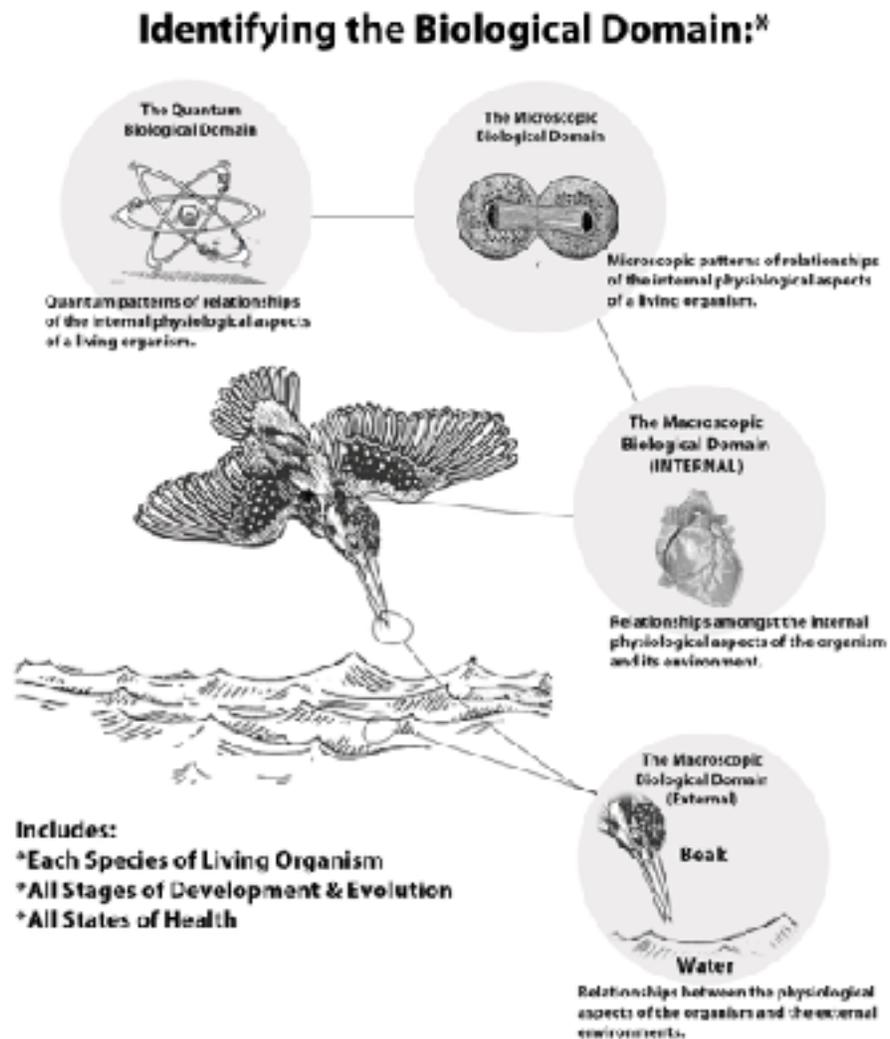
To see structure-mapping (analogy) in action, visit: [www.AskNature.org](http://www.AskNature.org)

## Research Design

### A. Data Collection

#### Identifying the Biological Domain

The biological domain encompasses a wide range of patterns contained within the various systems, processes, and objects which compose the physiology of living organisms. We broadly categorize these patterns into 4 categories: (1) the macroscopic biological domain (external), (2) the macroscopic biological domain (internal) (3) the microscopic biological domain, and (4) the quantum biological domain. Furthermore, the patterns of the biological domain are also dependent these three parameters: (1) species of organism; (2) Stage of development/evolution (3) State of health. All of the possible permutations of these three parameters within all for categories within the biological domain define all of the possible patterns of the biological domain.



**The Macroscopic Biological Domain (External):** The macroscopic biological domain (external) consists of all of the patterns we can perceive with the human eye and senses, pertaining to the interactions between any living organism's physiological aspects with its external environment. Many of the human innovations, which arise from biomimicry, obtain biological patterns within this domain. Examples include the aerodynamics of a King Fischer birds beak and its interactions with water—these patterns are used to understand high patterns of high speed trains through tunnels. Another example is shark skin and its interaction with its environment in such a manner that reduces microbes from fastening themselves to the sharks. This biological pattern has been used in making anti bacterial surfaces.

**The Macroscopic Biological Domain (Internal):** The macroscopic biological domain (internal) consists of all of the patterns we can perceive with the human eye and senses, pertaining to any internal aspects of a living organism's physiology, as well as their interactions within its internal environment relative to establishing and sustaining the life of that organism, as well as the overall function of that organism, relative to its external environment. Examples of such usage of patterns within this domain can involve understanding the circulatory system to understand the biological nature of the phenomenon of Antarctica melting and freezing in such a manner which creates arctic water currents which distribute nutrients around the oceans. Or how we can map the patterns of skeletal structures to that of the framing of a building.

**The Microscopic Biological Domain:** The microscopic biological domain, on the other hand, focuses on objects that are not visible to the naked eye and require the use of microscopes or other advanced imaging techniques. This realm primarily encompasses cells, cellular components, and microorganisms and their environments. Cells are the fundamental units of life and exist in various forms throughout the biological domain. They are composed of different organelles, such as the nucleus, mitochondria, and endoplasmic reticulum, which carry out specific functions within the cell. Understanding the structure and function of cells such as processes like cell division, cell signaling, and molecular interactions is important to understanding the unique biological patterns which can be used to map to various target domains. Examples of using the microscopic biological domain to understand various target domains, include using the biological patterns of desalination processes within red blood cells to create desalination plants for human society. How the structure of cytoskeleton can be structurally mapped to the structure of galaxy clusters. Also how the order and properties of cellular societies can help us understand the order and properties of human society. Cellular economics to socioeconomics, etc.

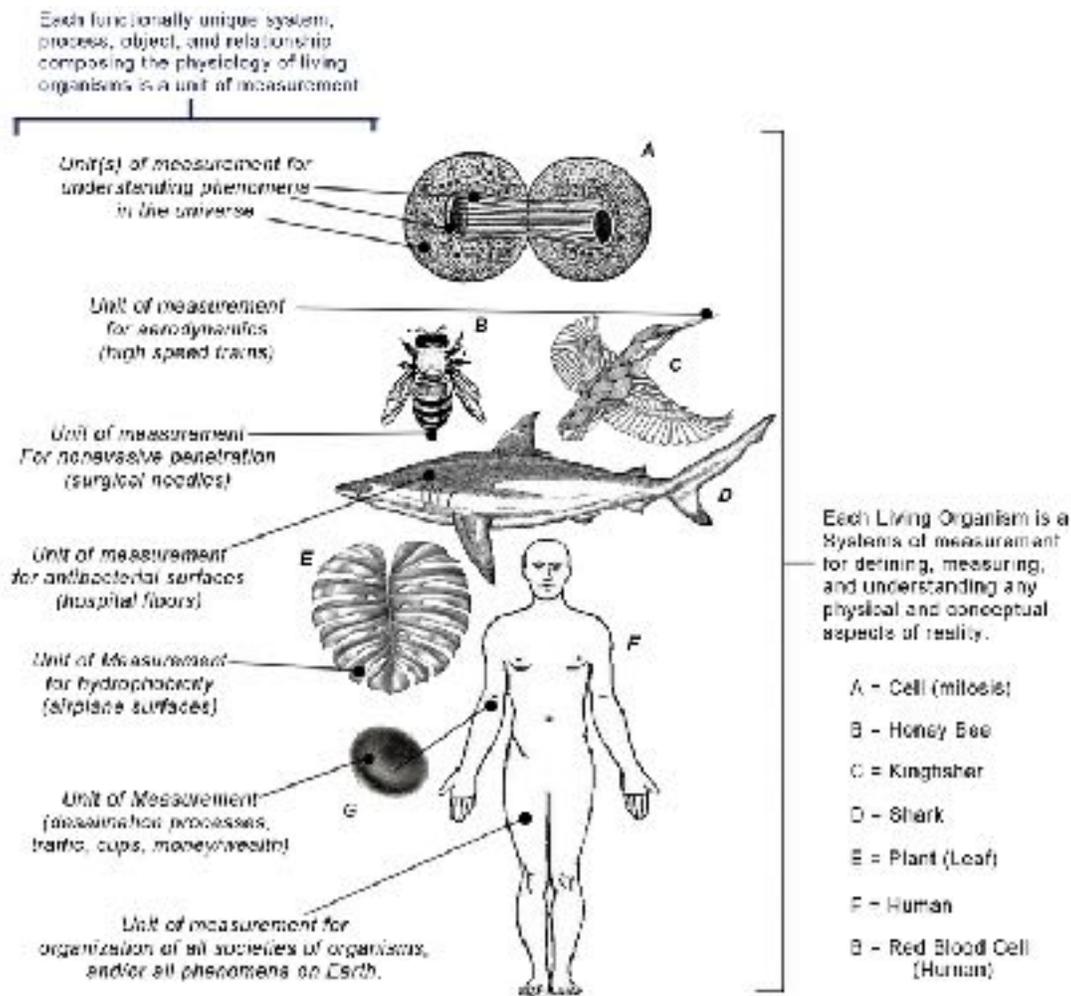
**The Quantum Biological Domain:** Moving into the quantum biological domain, the smallest and most abstract of the four, we enter the realm pertaining to the patterns surrounding molecules, atoms, and subatomic particles. This realm examines the fundamental building blocks of biological patterns. Patterns pertaining to molecules, such as proteins, nucleic acids, and carbohydrates. An example of using patterns from this domain to understand the biological nature of a target domain would be to use the production of proteins from ribosomes to understand the biological nature of music produced from instruments, or; Understanding the biological patterns surrounding the transference of information from one cell to another during cellular mitosis and the patterns surrounding black holes.

**All Stages of Development/Evolution:** All biological patterns pertaining to the development and evolution of a particular living organism contribute to the biological domain used in understanding target domains.

**All States of Health:** All biological patterns pertaining to all states of health of a particular living organism contribute to the patterns of the biological domain used in understanding target domains.

**Every Species of Living Organism:** Each species of living organism contributes to the possible patterns within the biological domain which can be used in structurally mapping correspondences to a target domain.

Some examples of the biological patterns used include:



- (A) Biological Patterns in Cells — e.g., properties of microtubules, atoms, molecules, DNA, RNA, protein
- (B) Biological Patterns of a Bee’s stinger — e.g., Noninvasive Properties
- (C) Biological patterns of a king fisher bird’s beak — e.g., Aerodynamic Properties
- (D) Biological patterns of a Shark’s skin — e.g., Antimicrobial properties
- (E) Biological patterns of a plant’s leaf — e.g., Hydrophobicity properties
- (F) Biological patterns of the human physiology — e.g., organizational properties, logistical properties,
- (G) Biological patterns in red blood cells — e.g., desalination properties; content distribution properties.
- (H) Biological patterns of *any* living organism.

## Selecting Target Domains

When selecting target domains for our research thesis on the "biological framework for a mathematical universe hypothesis," we followed specific criteria to ensure that our chosen domains would effectively support our theory. These criteria consider the relevance, diversity, and comprehensiveness of the target domains, aiming for a comprehensive analysis of the biological patterns present in various realms.

First and foremost, the target domains were selected based on their relevance to the overarching theory. Our theory suggests that biological patterns define the framework of a mathematical universe. Therefore, we considered not only target domains that could be reasonably linked to biology and the natural world but also domains that appear unlikely to contain biological patterns, for example intangible concepts. This criterion ensured that the selected domains would align with our theory and contribute to its validation.

To explore the biological framework across different realms, we sought diversity in the target domains. Our selection included (a) targets within the realm of various phenomena in the universe, allowing us to investigate natural processes and cosmic events; (b) targets within the realm of various phenomena on Earth, such as geological formations, weather patterns, and ecological systems; (c) targets within the realm of societies of animals, encompassing social structures and behaviors exhibited by groups of different species; (d) phenomena within the order of human society, enabling us to analyze cultural systems and societal organization; (e) human innovation, delving into technological advancements and creative processes; and (f) intangible human concepts, allowing us to explore abstract ideas and principles. By breaking down these domains into categories, we can gain a more comprehensive understanding of the world we live in and the various aspects that shape it. Now, we delve into each of these categories, providing a detailed analysis of the systems, processes, and objects that constitute them.

***The Universe:*** Firstly, phenomena in the universe encompass everything beyond our planet. This includes stars, galaxies, black holes, dark matter, and other celestial objects. Understanding the systems and processes that govern these phenomena is essential in fields such as astrophysics and cosmology. Researchers aim to unravel the mysteries of the universe by studying phenomena like gravitational forces, stellar evolution, the formation of galaxies, and expansion of our universe. By analyzing these cosmic objects and their interactions, we can expand our knowledge of the origin, structure, and evolution of the universe itself.

***Earth:*** Moving on to the phenomena on Earth, this domain entails various natural processes and systems that occur on our planet. It includes geological phenomena such as earthquakes, volcanoes, and plate tectonics, as well as atmospheric phenomena like weather patterns, climate change, and the water cycle. These systems and processes are influenced by factors such as the Earth's structure, the interactions between its different components (lithosphere, hydrosphere, atmosphere, and biosphere), and external influences such as solar radiation and gravitational forces. Objects in this domain can range from mountains, rivers, and oceans to weather monitoring stations and scientific instruments used for studying Earth's systems.

***Societies of Living Organisms:*** Moving into the domain of phenomena within societies of animals, we begin to explore the intricate workings of the animal kingdom. This domain encompasses various social structures, communication systems, and behavioral patterns observed in animal societies. From societies of cells to ants working in colonies to whales swimming in pods, animals exhibit complex systems and processes in their social interactions. Objects within this domain can include animal habitats, nests, and tools used by certain species.

**Human Society:** The domain of phenomena within human society is arguably the most complex and diverse. It encompasses various social, economic, political, and cultural systems that humans have developed over time. From the formation of governments and institutions to the establishment of social norms and customs, human society is a complex web of interconnected systems and processes. Factors such as power dynamics, social hierarchies, and human behavior shape these phenomena. Objects in this domain can range from legal frameworks, organizations, and infrastructure to cultural artifacts, artworks, and technological innovations.

**Human Innovation:** In the domain of physical phenomena in human innovation, we shift our focus to the advancements and creations produced by human ingenuity. This domain includes various technological innovations, scientific discoveries, and inventions that have shaped our world. From the development of electricity and telecommunications to the creation of transportation systems and medical advancements, physical phenomena in human innovation are the result of scientific research, engineering, and creative thinking. Objects within this domain can include machines, devices, and infrastructure used in different fields of human endeavor and how they apply to the task they were designed to perform.

**Intangible Concepts:** The final category deals with intangible concepts that shape our understanding of the world. The final category deals with intangible concepts that shape our understanding of the world. These include ideologies, philosophical frameworks, belief systems, and psychological constructs. Research in this area aims to comprehend the intricate nature of concepts such as morality, consciousness, identity, and emotion. This domain encompasses scientific theories, philosophical concepts, artistic movements, and social theories that have shaped our understanding of the world and our place in it. From the theory of relativity to the concept of democracy, conceptual phenomena in human innovation are the products of human thought, reasoning, and creativity. Objects within this domain can be abstract concepts, theories, and models used in various academic disciplines. Investigating intangible concepts provides a deeper understanding of the human condition and helps in creating frameworks for personal growth, mental health, and societal development.

### **Accessibility of Relevant Data and Information**

Furthermore, we considered the availability and accessibility of relevant data and information when selecting target domains. It was crucial for us to ensure that sufficient research has been conducted or that reliable data exists for each chosen target domain. This criterion allowed us to construct well-supported arguments and draw meaningful conclusions from our analysis. Also note, that there are a few outliers where we purposefully chose difficult target domains to explain with biology's patterns to show range.

### **Diversity in Biological Patterns**

Lastly, we aimed for the selected target domains to exemplify a wide range of biological patterns. By considering domains that exhibited different types of biological patterns, such as cellular mitosis, microtubules, atoms within cells, the beating of a heart, the synthesis of proteins from ribosomes, desalination processes of red blood cells, hydrophobicity of plant leaves, good and bad nature of cells, exponential law of growth, and phenomenon of parallel evolution starting from common origins but developing independently, we could provide a comprehensive understanding of how biological patterns manifest across different realms. This criterion ensures that our analysis captures the richness and complexity of biological phenomena in the world around us, reinforcing the notion that the universe's framework is fundamentally biological.

In summary, the criteria for selecting target domains for our research thesis on the "biological framework for a mathematical universe hypothesis" were based on relevance to the theory, diversity across various realms, availability of data and information, and the demonstration of a wide range of biological patterns. By adhering to these criteria, we aimed to establish a solid foundation for our research and support our theory with comprehensive and compelling evidence. \*\*\*

## B. Analogical Mapping Process

### *Establish Analogical Mapping Criteria*

#### *Understanding Analogical Reasoning:*

At its core, analogical reasoning involves recognizing and utilizing similarities between different domains or concepts to make inferences, solve problems, and facilitate learning. Gentner's research emphasizes the structural aspect of analogies, focusing on how individuals highlight and map the underlying relationships between different components of an analogy.

#### *Structural Alignment Theory:*

Gentner's theoretical framework for understanding analogical reasoning is known as the Structural Alignment Theory. According to this theory, successful analogical mapping occurs when there is a "match" between the structural relationships within the base and the target domains of an analogy. Structural alignment involves aligning corresponding components within the analogy to establish mappings and derive inferences.

#### *Components of an Analogy:*

Gentner identifies three essential components in analogical mapping: the source domain (base), the target domain (target), and the mapping relations that establish connections between them. She posits that structural alignment is facilitated through the identification and mapping of features, relations, and higher-level organization between the source and target domains.

#### *Criteria for Structural Mapping:*

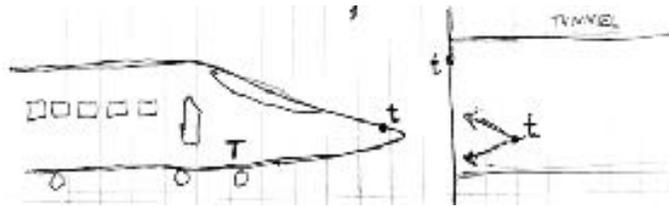
In order to effectively map analogies, Gentner outlines several criteria that individuals employ during the analogical reasoning process.

1. **Relational Correspondence:** Gentner highlights the importance of mapping relationships between corresponding elements in the source and target domains. For example, identifying that the relationship between "bird" and "nest" in the source domain aligns with the relationship between "teacher" and "classroom" in the target domain helps establish a mapping.
2. **Structural Similarity:** The structural similarities or patterns between the base and target domains serve as crucial cues for analogical mapping. Identifying shared organizational structures, such as hierarchies, sequences, or spatial arrangements, aids in the establishment of mappings.
3. **Surfaces Features and Superficial Similarities:** Gentner also recognizes that individuals may rely on surface similarities between the source and target domains as initial cues for analogical mapping. However, she argues that deeper structural mappings are more reliable and informative for understanding the relationships between concepts.

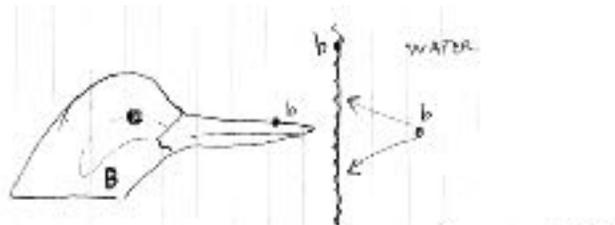
## Conduct Analogical Mapping

### Mapping the Biological Domain to Target Domains

The step-by-step process of mapping the biological domain to target domains, based on Gentner's framework, provides a systematic approach to uncover and understand the biological nature inherent in various aspects of reality. By employing this process, researchers and scholars can gain new insights, explanations, and perspectives in their respective domains. The mapping process facilitates a deeper understanding of the interconnectedness between biological patterns and the fundamental principles that govern different systems, processes, and objects in the universe, ultimately contributing to our overall understanding of a mathematical universe hypothesis.

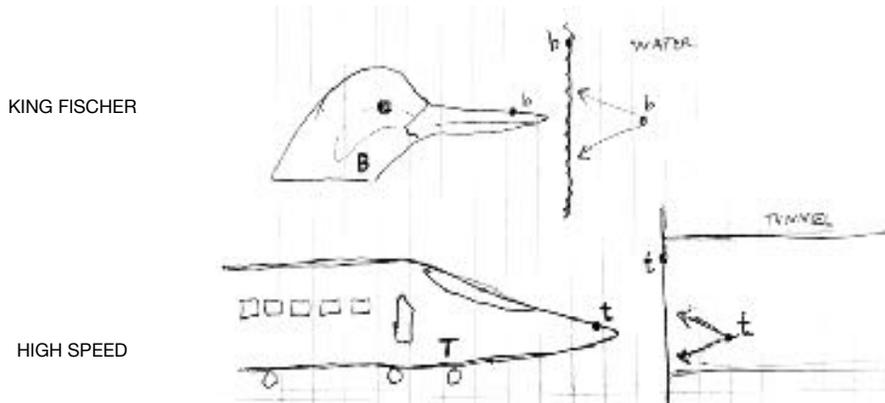


*Step 1: Define the Target Domain.* A clear and comprehensive understanding of the target domain is essential to recognizing biological patterns that share a correspondence. This includes familiarizing oneself with the fundamental concepts, theories, and principles that govern the target domain, as well as the relational correspondences amongst all variables of a target domain. A thorough investigation of existing literature and research in the field of a target domain can provide valuable insights into the specific characteristics and challenges of the target domain. Finally, reiterating *step one* may be required due to the fact that the observer may not have adequate knowledge of biology's patterns to conduct the mapping.



*Step 2: Identify the Biological Patterns.* To initiate the mapping process, it is important to identify the biological patterns so that one can recognize their correspondences to the target domains they aim to explain. These biological patterns encompass all aspects of biology at various realms of biology, such as macroscopic, molecular, and quantum realms. Recognizing and categorizing these biological patterns is crucial as they serve as the foundation for recognizing those patterns in target domains and mapping the aspects of those biological patterns to aspects within the target domain.

*Step 3: Engage in Analogical Mapping.* Analogical mapping involves identifying parallels between the biological patterns and the target domain. This step involves structurally mapping the identified biological patterns onto the target domain and depicting how they align with or relate to the concepts and processes in the target domain. This mapping will reveal similarities, differences, and insights that can enable a deeper understanding of the target domain from a biological perspective.



$$f: B \rightarrow T$$

The analogy “T is (like) B” defines a mapping from  $B$  to  $T$ .  $T$  will be called *target*, since it is the domain being explicated.  $B$  will be called *base* [or *biological domain*], since it serves as the source of knowledge.  $T$  shares a correspondence to the biological patterns of  $B$ . Each  $b$  can be used as a model to explain a corresponding  $t$ . Suppose that the representation of the *biological domain*  $B$  can be stated in terms of object nodes  $b_1, b_2, \dots, b_n$ , and predicates such as  $A, R, R'$ , and that the *target domain* has object nodes  $t_1, t_2, \dots, t_m$ .<sup>43</sup> The analogy maps the object nodes of  $B$  onto the object nodes of  $T$ :

$$M: b_i \rightarrow t_i$$

These object correspondences are used to generate the candidate set of inferences in the target domain. Predicates from  $B$  are carried across to  $T$ ,<sup>44</sup> using the node substitutions dictated by the object correspondences.

The mapping rules are:

1. Discard *attributes* ( $A$ ) of objects:

$$A(b_i) \quad -/-> \quad [A(t_i)]$$

<sup>43</sup> Most explanatory analogies are 1-1 mappings, in which  $m=n$ . However, there are exceptions (Gentner, 1982).

<sup>44</sup> The assumption that predicates are brought across as *identical* math's is crucial to the clarity of this discussion. The position that predicates need only be similar between the biological domain and th

2. Try to preserve *relations* (R) between the objects:

$$R(b_i, b_j) \quad \longrightarrow \quad [R(t_i, t_j),$$

3. {The Systematicity Principle) To decide *which* relations are preserved, choose systems of relations (frame of reference):

$$R \text{ `}(R_1(b_i, b_j), R_2(b_k, b_l)) \quad \longrightarrow \quad [R \text{ `}(R_1(t_i, t_j), R_2(t_k, t_l))]$$

Higher-order relations play an important role in analogy, as is discussed below.

Notice that this discussion has been purely structural; the distinctions invoked rely only on the syntax of the knowledge representation, not on the content. The *content* of the relations may be static spatial information, as in UNDER (x, y), or FULL (CONTAINER, WATER); or constraint information, as in PROPORTIONAL [PRESSURE(liquid, source, goal), FLOW-RATE(liquid, source, goal)]; or dynamic causal information, as in CAUSE{AND [PUNCTURE (CONTAINER), FULL(CONTAINER, WATER)], FLOW-FROM (WATER, CONTAINER)}.

After we establish an analogy, general principles and knowledge can be transferred from the biological domain to the target domain, thereby helping one better understand the nature of the target domain. In this case we can transfer general knowledge and principles surrounding aerodynamics pertaining to a King Fischer bird traveling through fluid at high speed so to prevent inefficiencies of to high speed trains traveling through tunnels at high speeds so to reduce/eliminate sonic boom. Examples of analogical mappings in practice and what knowledge can be transferred and their benefits can be understood in the engineering field of biomimicry, or biomimetics.

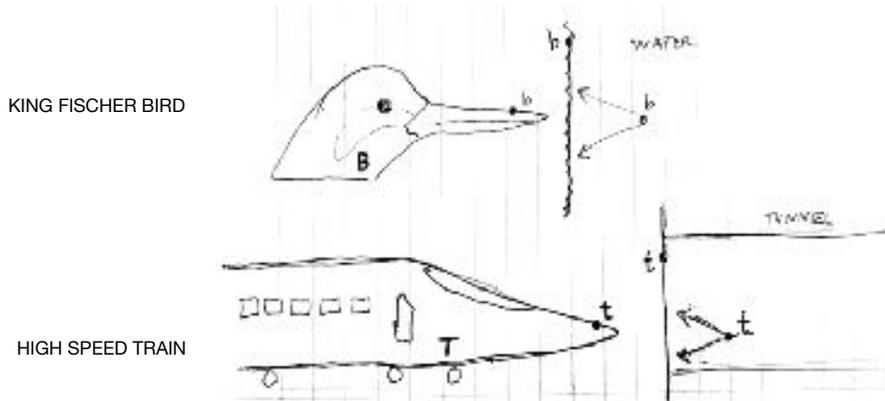
*Step 4: Evaluate the Mapping.* Once the initial mapping between the biological domain and the target domain has been achieved, it is vital to evaluate the effectiveness and validity of the mapping. Are the biological patterns accurately and meaningfully mapped to the target domain? Does the mapping provide new perspectives, explanations, or insights that were previously unseen in the target domain alone? This evaluation will ensure the reliability and usefulness of the mapped analogies.

*Step 5: Refine and Iterate.* As with any scientific process, refinement and iteration are key. Based on the evaluation results, adjustments may be necessary to improve the mapping process. It might involve revisiting the identified biological patterns, exploring additional analogies, or refining the existing mapping to enhance the biological understanding of the target domain. Constant refinement and iteration will lead to a more robust and accurate representation of the biological nature within the target domain.

*Step 6: Validate and Communicate.* The final step of the process involves validating and communicating the findings of the mapped analogies. Validation can be achieved through further research, experimentation, and peer review, ensuring that the biological framework and its mapped analogies hold scientific merit. Once validated, the results should be effectively communicated to the scientific community and relevant stakeholders through publications, conferences, or other platforms, fostering further discussion and exploration of the implications of the biological patterns within the target domain.

## Examples and illustrations of analogical mapping in practice.

The process of structurally mapping analogy requires an adequate understanding of biological functions and biological relationships within a biological domain, as well as mechanical functions and relationships of its parts of the target domain under observation.



$$f: B \rightarrow T$$

The analogy “T is (like) B” defines a mapping from  $B$  to  $T$ .  $T$  will be called *target*, since it is the domain being explicated.  $B$  will be called *base* [or *Biological-Domain*], since it serves as the source of knowledge.  $T$  shares a correspondence to the biological patterns of  $B$ . Each  $b$  can be used as a model to explain a corresponding  $t$ . After we establish an analogy, general principles and knowledge can be transferred from the biological domain to the target domain, thereby helping one better understand the nature of the target domain. Examples of analogical mappings in practice and what knowledge can be transferred and their benefits can be understood in the engineering field of biomimicry, or biomimetics.

**Biomimicry**, or biomimetics, is the design and production of materials, structures, and systems that are modeled on biological entities and processes. Biomimicry aims to take inspiration from natural selection solutions adopted by nature and translate the principles to human engineering. Examples of biomimicry can be found in how Velcro was inspired by burr fruit seeds;<sup>45</sup> how surgical needles were inspired by bee stingers;<sup>46</sup> How producing fresh water from salt water (desalination process) was inspired by biological patterns in red blood cells;<sup>47</sup> How the wings of the Airbus have been inspired by the wings of an albatross;<sup>48</sup> and; How paint coatings on airplanes<sup>49</sup> and antibacterial surfaces have been inspired by the biological patterns observed in shark skin.<sup>50</sup> All of these examples structurally mapped analogies from the biological domain to their respective target domains.

<sup>45</sup> <https://www.microphotonics.com/biomimicry-burr-invention-velcro/>

<sup>46</sup> <https://3dprintingindustry.com/news/bees-put-sting-templates-bioinspired-3d-printed-needle-design-132859/>

<sup>47</sup> <https://cbm.msos.edu/maps/Teams/assets/biomemeticMembrane2.pdf>

<sup>48</sup> <https://www.airbus.com/en/newsroom/stories/2020-03-biomimicry-a-fresh-approach-to-aircraft-innovation>

<sup>49</sup> <https://www.airbus.com/en/newsroom/stories/2020-03-biomimicry-a-fresh-approach-to-aircraft-innovation>

<sup>50</sup> <https://www.sharklet.com>

## C. Data Analysis

### **The approach to analyzing the analogical mappings and extracting insights.**

Analyzing the analogical mappings and extracting insights in our theory of a biological framework for a mathematical universe hypothesis can be approached in several ways. These approaches can help to further understand the biological nature of various phenomena and domains, as well as provide insights into the relationships between them.

#### **Analyze The Structural Similarities.**

One possible approach is to analyze the structural similarities between the biological domain and the target domains. This involves identifying and comparing the underlying patterns, processes, and systems in both domains. By doing so, we can identify commonalities and analogies that shed light on the biological nature present in the target domain.

For example, in understanding the biological nature of phenomena in the universe, we can map the patterns observed in celestial bodies, such as the movement of galaxies or the formation of stars, to biological processes observed within cellular mitosis. By analyzing the structural similarities between these celestial phenomena and biological systems, we can gain insights into the underlying biological patterns that may exist throughout the universe. Such has been done with the **Quantitative Comparison Between the Neuronal Network and Cosmic Web** (Franco, Vazza).

#### **Examine Functional Similarities.**

Another approach is to examine the functional similarities between the biological domain and the target domains. This involves looking at the roles, interactions, and behaviors of entities within both domains, and identifying common functions or purposes. By identifying similarities in the functional aspects, we can extract insights into the biological nature of the target domain.

For instance, in examining the biological nature of human society, we can analyze the social behaviors and interactions among individuals, and compare them to the behaviors and interactions observed in cellular societies. By identifying functional similarities, such as the need for cooperative behaviors, ideas of freedom, democracy, war, etc., we can gain insights into the underlying biological patterns that influence human society.

Furthermore, with regards to human innovation, we can examine functional similarities to the extent of which biomimicry/biomimetics has done. By identifying functional similarities such as desalination processes in red blood cells, or the aerodynamics in a kingfisher bird's beak, we gain insights into the underlying biological patterns in desalination processes for community water supplies and aerodynamics of high speed trains through tunnels, respectively. ///\*\*\*

#### **Cognitive Models.**

\*\*\* One approach to analyzing analogical mappings is through the use of cognitive models. Cognitive models attempt to explain how people think, reason, and make decisions. These models can be used to understand how individuals make analogical mappings, and in turn, provide insights into the underlying cognitive processes. Cognitive models such as the Structure-Mapping Theory (SMT) developed by Dedre Gentner and the Analogical Parable Theory by Dedre Gentner and Keith Holyoak, propose that analogical reasoning involves mapping the similarities and differences between two situations or objects onto each other. By studying how these mappings are formed, researchers can gain insights into how people reason analogically and how they extract insights from those mappings.

### **Computational models.**

Another approach to analyzing analogical mappings and extracting insights is through computational models. Computational models simulate human cognitive processes, often using algorithms or mathematical formulas, to represent analogical reasoning. These models allow researchers to test hypotheses and generate predictions about how analogical mappings might be formed and how insights could be extracted. For example, the Structure-Mapping Engine (SME), developed by Dedre Gentner and Keith Holyoak, is a computational model that implements the principles of the Structure-Mapping Theory. By running simulations using the SME, researchers can analyze the process of analogical mapping and gain insights into how insights are extracted from those mappings.

### **Qualitative Methods.**

Furthermore, qualitative methods can be used to analyze analogical mappings and extract insights. Qualitative methods involve collecting and analyzing non-numerical data, such as interview transcripts, observations, or textual analysis. In the context of analogical mappings, researchers can study how individuals perceive and interpret analogies through interviews or focus groups. By analyzing the qualitative data, researchers can identify common themes, patterns, or insights that emerge from the participants' interpretations. This approach allows for a more in-depth understanding of the personal and contextual factors that influence analogical reasoning.

We will reach out via email and social media to scientists in mathematics, physics, biology, philosophy, and theology, and such, as well as the general public.

### **Quantitative Methods.**

In addition to qualitative methods, quantitative approaches can also be used to analyze analogical mappings. Quantitative methods involve collecting and analyzing numerical data, such as surveys or experimental data. For example, researchers can design experiments to test how different factors, such as task complexity or prior knowledge, influence analogical reasoning. By analyzing the quantitative data, researchers can identify statistical relationships between variables and gain insights into the cognitive processes involved in analogical reasoning. These insights can be used to inform educational practices or interventions aimed at improving analogical reasoning skills.

Overall, analyzing analogical mappings and extracting insights is a complex task that requires a multi-disciplinary approach. Combining cognitive models, computational simulations, qualitative methods, and quantitative approaches can provide a comprehensive understanding of analogical reasoning and how insights can be extracted from those mappings. As research at the thesis level aims to contribute to the existing knowledge in a specific field, these approaches can equip researchers with the tools and methodologies to conduct rigorous and meaningful investigations into analogical reasoning. Ultimately, this research can inform educational practices, cognitive theories, and contribute to the advancement of knowledge.

## **Potential challenges and limitations in the analysis process. \*\*\***

The theory of a biological framework for a mathematical universe hypothesis proposes that all systems, processes, and objects in reality possess inherent biological patterns. It suggests that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. By mapping analogies from the biological domain to various target domains, this theory aims to reveal and explain the biological nature of these domains. However, as with any scientific theory, there are potential challenges and limitations to consider in the analysis process.

***Complexity and diversity of biological patterns:*** One potential challenge in applying the theory of a biological framework for a mathematical universe is the complexity and diversity of biological patterns. Biological systems are incredibly diverse, ranging from single-celled organisms to complex ecosystems. Each organism has its own unique set of biological patterns, making it challenging to identify and map these patterns to other domains. Additionally, biological systems are constantly evolving and changing, making it difficult to establish universal biological patterns that apply to all living things. On top of that the various species, stages of development and states of health of biology play into the complexity of biological patterns and our ability to map and validate them in a target domain.

***Availability and Accuracy:*** Moreover, the analysis process may face limitations in terms of the availability and accuracy of data. Mapping analogies requires comprehensive data on both the biological domain and the target domain being studied. However, obtaining accurate and reliable data for complex phenomena in the universe, societies, or intangible concepts can be a significant challenge. The lack of data may result in incomplete or inaccurate mappings, potentially undermining the validity of the theory.

***Establishing Causal Relationships:*** Another challenge lies in confirming the causal relationship between the universe's biological processes and the emergence of life. While the theory posits that life is a direct consequence of these processes, establishing a clear causal relationship can be challenging. The universe's biological processes span vast time scales and involve various complex factors, making it difficult to isolate and identify the specific mechanisms responsible for the emergence of life. Without a firm understanding of this causal relationship, the theory may face skepticism and criticism from the scientific community.

***Subjective nature of analogy mapping:*** Furthermore, the theory's ability to provide meaningful and insightful explanations for various domains may be limited by the subjective nature of analogy mapping. Analogies, while useful in drawing connections and identifying similarities, can sometimes be subjective and open to interpretation. Different researchers may have different interpretations of the mappings, leading to varying conclusions and potentially undermining the theory's overall coherence and credibility. NOTE: objects being mapped to the biological domain can have multiple functions, therefore multiple analogies; this is determined via its function in a particular situation. A cup has a red blood cell when transporting, but also has the pattern of bones when I'm using it to support myself as I stand on it (when placed upside down on the floor). The ability for multiple possible mappings dependent upon how a person understand the function of a particular thing will result in subjective nature of analogical mapping. To defend against this, we must zoom out further

***Communicability:*** Lastly, the theory of a biological framework for a mathematical universe may face challenges related to its communicability. Scientific theories need to be effectively communicated to the general public and other scientific communities in order to gain acceptance and influence. The complexity and abstract nature of the theory's concepts, such as mapping biological patterns to other domains, may present difficulties in conveying the theory's implications and significance. Clear and concise communication is essential to ensure that the theory is understood and accepted.

**Identifying what constitutes a biological pattern:** \*\* One potential challenge in analyzing this theory is the difficulty in defining and identifying what constitutes a biological pattern. While it is relatively straightforward to recognize patterns in living organisms, extending this concept to non-living entities or abstract concepts could prove challenging. Determining the specific characteristics that make up a biological pattern in these cases would require a comprehensive understanding of both biology and mathematics. \*\*

**Structurally mapping the biological domain to various target domains:** Additionally, the process of structurally mapping the biological domain to various target domains presents its own set of challenges. Dedre Gentner's approach to structure mapping analogies is a useful tool for making connections between different domains. However, the success and accuracy of such mappings depend on the similarity between the structures being compared. It may be difficult to find appropriate structural similarities between biology and certain target domains, which could limit the applicability of this approach.

Furthermore, as with any scientific theory, experimental validation is crucial. While the theory proposes a fundamental relationship between the universe's biological processes and the living entities it creates, empirical evidence to support these claims is necessary. Conducting experiments and gathering data to confirm the presence of biological patterns in various domains would strengthen the theory and solidify its scientific validity. Something to a similar effect of that of biomimicry, with regards to establishing empirical evidence. \*\*

#### **D. Validation**

**Methods that will be employed to validate the accuracy and robustness of the analogical mappings.**

- Dedre Gentner's Approach to Structurally mapping Analogies will be closely followed.

- Youtube. Biological references/diagrams. References related to target domains.
- Credible sources online to understand the functional nature of the domains we are mapping.

**Consider seeking expert opinions or conducting experiments to validate the findings.**

I will have the paper peer-reviewed by professors in physics, mathematics, biology, philosophy, and theology. We will also present the paper's theory on social media and gauge the ability for the public to also recognize the patterns between the biological domain and the target domains we covered, as well as create a dialogue with the public in discussing the theory with more context.

## **Ethical Considerations**

No ethical considerations are associated with the research.

## **Methodology Summary**

The biological framework for a mathematical universe hypothesis, suggests that the physical universe is a mathematical structure rooted in biology. It explains that all systems, processes, and objects possess biological patterns, and that the existence of life is a result of the evolution of these biological processes. We propose using Dedre Gentner's theoretical framework for analogy to map the biological domain to various target domains and support a biological framework for a mathematical universe. The research questions posed include the role of biological patterns in a mathematical universe, the influence of biological patterns on different systems, and the implications of recognizing these patterns in various fields.

We also mentions limitations to the concept of biological patterns defining the framework for a mathematical universe.

We discussed the three realms of the biological domain: the macroscopic realm, the microscopic realm, and the quantum realm. The macroscopic realm focuses on observable biological entities like organisms, organs, and tissues. The microscopic realm focuses on objects that require microscopes, such as cells and microorganisms. The quantum realm examines molecules, atoms, and subatomic particles and their role in biological systems. Each realm contributes to our understanding of biological patterns that will be used in structurally mapping the biological domain the to various target domains. Furthermore, within each realm of biology, we used a wide range of biological patterns, to show wide range of correspondence.

Our methodology discussed the criteria used to select target domains for a research thesis on the "biological framework for a mathematical universe hypothesis." The criteria include relevance to the theory, diversity across different realms, availability of data and information, and the demonstration of a wide range of biological patterns. The selected target domains encompass phenomena in the universe, on Earth, within animal societies, within human society, in human innovation, and intangible concepts. The aim is to provide a comprehensive analysis of biological patterns and support the hypothesis.

Analogical reasoning involves recognizing and utilizing similarities between different domains or concepts to make inferences and solve problems. Gentner's research focuses on the structural aspect of analogies and how individuals map the underlying relationships between different components. Her theory, known as the Structural Alignment Theory, states that successful analogical mapping occurs when there is a match between the structural relationships within the base and target domains. Gentner identifies three components in analogical mapping: the source domain, the target domain, and the mapping relations that connect the source domain to the target domain. Gentner outlines criteria for effective analogical mapping, including relational correspondence, structural similarity, and reliance on deeper structural mappings rather than surface similarities.

Our methodology described the step-by-step process of using Gentner's framework to map the biological domain to target domains. We highlighted the importance of identifying biological patterns and understanding the target domain before engaging in analogical mapping. The process involves identifying parallels between the biological patterns and the target domain, evaluating the effectiveness of the mapping, refining and iterating the process, and validating and communicating the findings. The goal is to gain new insights and perspectives on the target domain by understanding its biological nature.

Analogical mapping is the process of comparing and relating biological functions and relationships to mechanical functions and relationships. It involves understanding the nature of both domains and finding similarities or correspondence between them. This mapping allows for the transfer of knowledge and principles from the biological domain to the target domain, such as in biomimicry or biomimetics, where designs and systems are inspired by biological entities and processes. Examples include Velcro, surgical needles, desalination processes, Airbus wings, and paint coatings on airplanes.

Our methodology discussed different approaches to analyzing analogical mappings and extracting insights in a theory of a biological framework for a mathematical universe hypothesis. These approaches include analyzing structural similarities, examining functional similarities, using cognitive models, utilizing computational models, employing qualitative methods, and implementing quantitative methods. We emphasized the importance of a multidisciplinary approach to gain a comprehensive understanding of analogical reasoning and how insights can be extracted from those mappings. Such research can contribute to educational practices, cognitive theories, and the advancement of knowledge.

We discussed the approach to analyzing analogical mappings and extracting insights in a theory of a biological framework for a mathematical universe hypothesis. We suggested that by analyzing structural similarities and examining functional similarities between the biological domain and target domains, researchers can gain insights into the biological nature of various phenomena. However, there are several challenges and limitations to consider in the analysis process. These include the complexity and diversity of biological patterns, limitations in data availability and accuracy, establishing causal relationships, the subjective nature of analogy mapping, and challenges in communicability. The text concludes by stating that further research and experimentation are needed to address these challenges and refine the theory's framework.

Our methodology discussed how analogical reasoning involves recognizing and using similarities between different domains to solve problems and learn. Gentner's research focuses on the structural aspect of analogies and how individuals identify and map the underlying relationships. She proposes the Structural Alignment Theory, which states that successful analogical mapping occurs when there is a match between the structural relationships within the base and target domains. Gentner identifies three essential components in analogical mapping: the source domain, the target domain, and the mapping relations that connect them. She outlines several criteria for effective analogical mapping, including relational correspondence, structural similarity, and the importance of deeper structural mappings over surface similarities.

Our methodology also outlined the step-by-step process of using Gentner's framework to map the biological domain to target domains. The process involves defining the target domain, identifying biological patterns, engaging in analogical mapping to find parallels between the biological patterns and the target domain, evaluating the mapping, refining and iterating the process, and finally validating and communicating the findings. Through this process, researchers can gain new insights and understanding of the biological nature inherent in different aspects of reality.

Our methodology discussed the concept of analogical mapping and provides examples of its application in practice. Analogical mapping for our methodology involves understanding biological functions and relationships, as well as mechanical functions and relationships, within a given domain. The analogy "T is (like) B" defines a mapping from the base (or biological) domain, B, to the target domain, T. This mapping allows for the transfer of knowledge and principles from the biological domain to better understand the target domain. This process is often seen in the field of biomimicry, where designers and engineers take inspiration from biological entities and processes to create materials, structures, and systems. Examples of analogical mappings in biomimicry include Velcro being inspired by burr fruit seeds, surgical needles inspired by bee stingers, desalination processes inspired by red blood cells, Airbus wings inspired by albatross wings, and paint coatings inspired by shark skin patterns.

Our methodology discussed the different approaches to analyzing analogical mappings and extracting insights. One approach is to analyze the structural similarities between the biological domain and the target domains. This involves identifying and comparing patterns, processes, and systems in both domains. Another approach is to examine the functional similarities between the biological domain and the target domains. This involves looking at the roles, interactions, and behaviors of entities within both domains. Cognitive models can be used to understand how people make analogical mappings and extract insights. Computational models simulate cognitive processes to represent analogical reasoning. Qualitative and quantitative methods can also be used to analyze analogical mappings and extract insights. Overall, a multi-disciplinary approach combining these different methods can provide a comprehensive understanding of analogical reasoning and contribute to the advancement of knowledge.

Our methodology also discusses known challenges and limitations which could hinder the analysis process. Firstly, the complexity and diversity of biological patterns present difficulties in identifying and mapping them onto other domains, compounded by the ever-changing and evolving nature of biological systems. Additionally, obtaining comprehensive and reliable data on at the biological domain and the target domain for analogical mapping proves challenging, potentially resulting in incomplete or inaccurate mappings. Establishing a clear causal relationship between the universe's biological processes and the emergence of life is also hindered by the vast time scales and complex factors involved. The subjective nature of analogy mapping introduces variability in interpretations between researchers, potentially undermining the theory's coherence and credibility. Communicating the theory effectively is challenging due to the abstract nature of its concepts, necessitating clear and concise communication for understanding and acceptance. Defining and recognizing what constitutes a biological pattern, particularly when extending it to non-living entities or abstract concepts, can pose difficulties. The structural mapping of the biological domain to various target domains may present challenges, as finding appropriate structural similarities can be arduous. Lastly, experimental validation becomes essential for the theory's scientific validity, as empirical evidence is crucial in substantiating its claims.

Our methodology also describes the methods that will be used to validate the accuracy and robustness of analogical mappings. These methods include following Dedre Gentner's approach, using credible sources for biological references and diagrams, seeking expert opinions, conducting experiments, peer-reviewing the paper, and presenting the theory on social media to engage the public and gather their opinions.

Our methodology has not ethical considerations, aside from possibly our research coming off brash or arrogant to the various fields it will disrupt.

### *Compatibility of Gentner's Theoretical Framework to a Biological Framework for a Mathematical Universe*

Our theory of a biological framework for a mathematical universe hypothesis aligns well with Gentner's theoretical framework for analogy due to the inherent nature of analogy itself. By positing that biological patterns define the framework for understanding the universe, our theory enables the extraction of analogical connections across various domains. The fundamental premise that biological patterns exist in all systems, processes, and objects implies that these patterns can be mapped and used to explain the biological nature of any target domain. Applicability of Gentner's

### *Theoretical Framework to a Biological Framework for a Mathematical Universe*

Gentner's theoretical framework for analogy offers a concrete and systematic approach to mapping analogical connections between domains. Applying this framework to our theory allows for a structured examination of biological patterns in target domains, fostering a better understanding of their inherent nature.

By employing Gentner's framework, our theory enables scientists and researchers to identify shared biological patterns within different fields of study. For instance, mapping the biological patterns in a biological system to the patterns present in a technological system could provide insights into the development and functioning of the latter, such as seen in the field of biomimicry. Analogies drawn between the two domains could shed light on the underlying principles and processes involved. Furthermore, the applicability of Gentner's framework extends beyond the biological domain. Given that our theory posits the existence of biological patterns in all systems and objects in reality, Gentner's framework can be used to identify and explain these patterns in diverse contexts. From the symmetry in mathematical equations to the fractal patterns in natural landscapes, our theory suggests that biological patterns are prevalent throughout the universe. By leveraging Gentner's framework, researchers can unravel these hidden connections, thus expanding our understanding of the biological foundation that underpins all phenomena.

### *The Novelty and Potential Contributions of the proposed research:*

The understanding of the criteria for structurally mapping analogies, as outlined by Gentner, holds significant implications for research thesis education. By recognizing and leveraging analogical reasoning, educators can foster critical thinking skills, facilitate problem-solving abilities, and enhance knowledge retention among students.

Analogical reasoning encourages students to draw connections between different subjects, helping them approach unfamiliar topics with familiarity. This process further aids in synthesizing information, allowing students to apply knowledge gained from one domain to another. By providing education that actively incorporates analogical reasoning, students can develop a more holistic and multidimensional understanding of their research thesis and its implications in various contexts. Furthermore, incorporating analogical reasoning within research thesis education can stimulate creativity and innovation. By exposing students to diverse analogical mapping scenarios, educators can foster the ability to generate novel ideas, conceptually link unrelated domains, and overcome intellectual barriers.

Dedre Gentner's work on the criteria for structurally mapping analogies provides valuable insights into the mechanisms underlying analogical reasoning. By emphasizing the importance of structural alignment, relational correspondence, structural similarity, and going beyond surface features, Gentner's research offers educators a framework to enhance cognitive processes and problem-solving abilities in

research thesis education. Incorporating analogical reasoning in an educational setting empowers students to think critically, draw connections, and approach their thesis work with a more comprehensive perspective, thereby fostering knowledge acquisition and promoting innovation. Combining Gentner's approach to analogies in mapping the biological domain to various target domains in the universe and the surrounding world we live in, we have the potential of unlocking fascinating discoveries that can significantly accelerate the advancement of human knowledge and innovation and create a more resilient, sustainable and scaleable global-human society.

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## 4. Results

### Levels of Biological Organization.

We have found biological patterns at all levels of organization in the universe.

Universe: is explained using biological patterns observed within cellular organization.

Biosphere: is be explained using biological patterns observed within Organism.

Ecosystems: will be explained using biological patterns observed within organisms.

Populations (organization, behaviors): is explained using biological patterns pertaining to the order and properties observed in cellular societies.

Human Innovation (physical and conceptual): is explained using biological patterns observed across all biological domains (i.e., macro, micro, quantum)

Individual (organization/order and behaviors): is explained using biological patterns observed of a cellular organism.

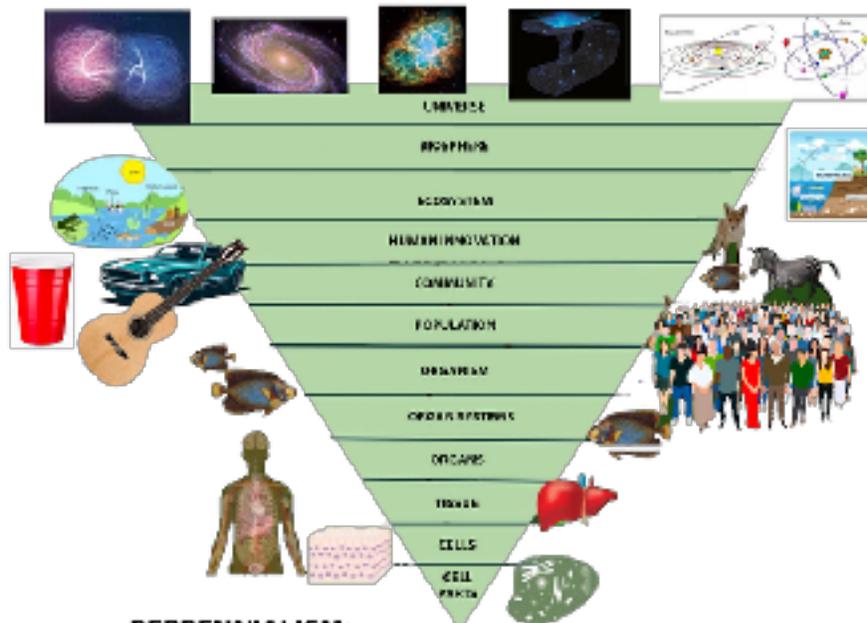
Cells, Molecules, Atoms, and such are all inherently biological.

### LEVELS OF BIOLOGICAL ORGANIZATION

Universe	Solar systems, Galaxies, Black holes, Superclusters, etc.	
Biosphere	The part of Earth that contains all ecosystems.	
Ecosystem	Community and its nonliving surroundings	
Community	Populations that live together in a defined area.	
Population	Group of organisms of one type that live in the same area.	
Innovation	Cups, Cars, Planes, Homes, Flares, Music, etc.	
Organism	Individual living thing	
Groups of Cells	Tissues, organs, and organ systems	
Cells	Smallest functional unit of life	
Molecules	Groups of atoms, smallest unit of most chemical compounds	
Atoms	Basic units of chemical element	

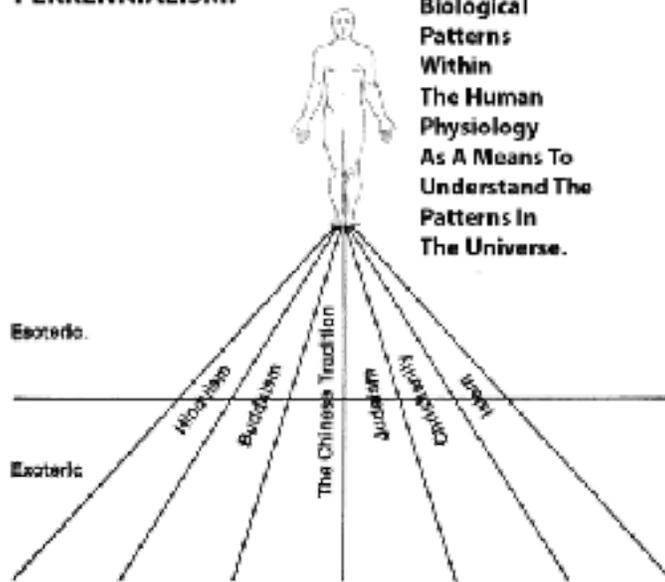
These are the levels to which biological patterns exist.

We have evidence that many religious and philosophical concepts from our ancient past were actually trying to express the ideas of this biological universe—particularly how understanding the patterns within the human physiology can help us reveal and understand the patterns in the universe and world around us.



**PERRENNIALISM:**

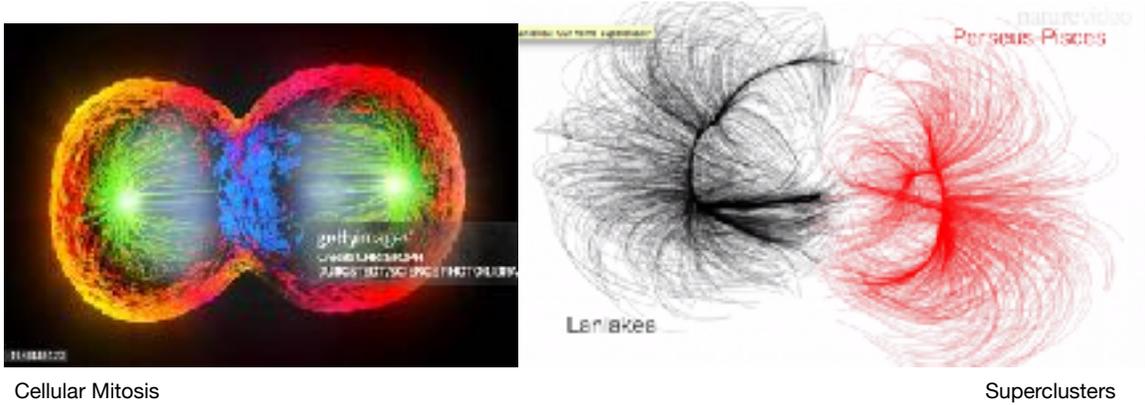
**Biological Patterns Within The Human Physiology As A Means To Understand The Patterns In The Universe.**



Microcosm & Macrocosm motif seen across various religions and ancient philosophies around the world hint to possible prior knowledge of a biological nature to the universe and its understanding through the understanding of the patterns within the human body.

**Biological Patterns Observed in The Universe.**

Our research has structurally mapped analogies from biological domain to phenomenon in the universe. The analogy “T is (like) B” defines a mapping from *B* to *T*. *T* will be called the Lankea and Perseus-Pisces Supercluster (target domain), since it is the domain being explicated. *B* will be called cellular mitosis (biological domain), since it serves as the source of knowledge.



$$M : B \rightarrow T$$

*T* shares a correspondence to the biological patterns of *B*. Each *b* can be used as a model to explain a corresponding *t*. Suppose that the representation of the *biological* domain *B* can be stated in terms of object nodes  $b_1, b_2, \dots, b_n$ , and predicates such as *A*, *R*, *R'*, and that the *target* domain has object nodes  $t_1, t_2, \dots, t_m$ .<sup>51</sup> The analogy maps the object nodes of *B* onto the object nodes of *T*:

$$M : b_i \rightarrow t_i$$

Cellular Mitosis (Telophase Stage)	→	<b>Laniakea and Perseus Pisces Supercluster</b>
Expansion of Cells (Cellular Mitosis)	→	<b>Expansion of the universe</b> The expansion of the universe shares a biological correspondence in patterns to that of the expansion of mitosis—i.e., from the anaphase to the telephase, so to create a daughter cell from a mother cell.
Conception (Zygote) or Cellular Mitosis	→	<b>The Big Bang</b> The formation of the universe(s) upon the moment of the Big Bang, is analogous to the formation of a zygote upon the moment of conception.

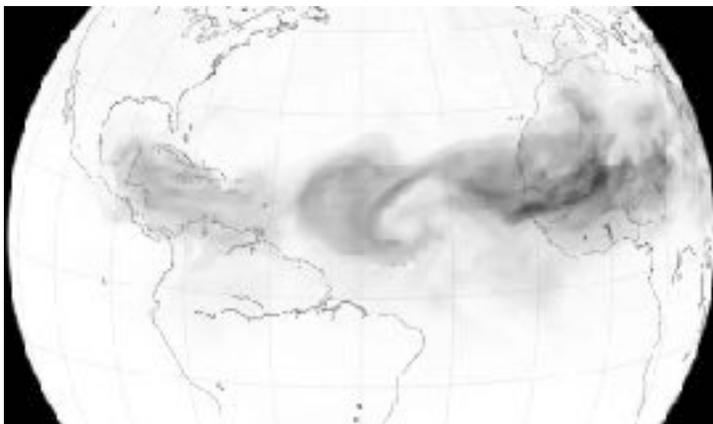
<sup>51</sup> Most explanatory analogies are 1-1 mappings, in which  $m=n$ . However, there are exceptions (Gentner, 1982).

Multiple Living Organisms (Multiple Zygotes)	→	<p><b>Multiple Universes</b></p> <p>The concept of multiple universe can be understood from the concept of multiple living organisms. See comic hero: "Eternity"</p>
Cytoskeleton	→	<p><b>Cosmic Web</b></p> <p>There is an analogy between the principles surrounding the formation of cytoskeleton in cells (as well as neuronal networks in the brain) and formation of galaxy networks.</p>
Microtubules & Microfilaments (Force)	→	<p><b>Black holes</b></p> <p>Black holes, where theoretical tunnels of space-time called wormholes "suck in" matter, energy (and information) to be eventually beamed out from white holes shares a biological correspondence to that of the force surrounding microtubules/microfilaments associated with coping/transferring materials from one cell (mother cell) to another cell (daughter cell).</p>
Microtubules & Microfilaments (Force)	→	<p><b>White holes</b></p> <p>White holes, which may simply be the opposite end of black holes, connected by the theoretical tunnels of space-time called (of course) wormholes. So the matter and energy falling into a black hole would eventually beam out of a white hole, somewhere in this or another universe shares a biological correspondence to the process of the phenomenon/force in cellular mitosis where material is ejected from the mother cell into the daughter cell to create the new cell.</p>
Cytosol	→	<p><b>Dark Matter</b></p> <p>Dark matter, the hypothetical form of matter that is thought to count for approximately 85% of the matter in the universe, is analogous to Cytosol, the aqueous component of the cytoplasm of a cell, within which various organelles and particles are suspended.</p>
Cellular Energy	→	<p><b>Dark Energy</b></p> <p>The unknown energy (force) that accelerates the expansion of the universe (distinct from the energy of gravity/mass) is analogous of the energy of a cell which makes it accelerate in its expansion during growth/mitosis (distinct from gravity/mass).</p>

<p>The Force which moves organelles into place</p>	<p>→</p>	<p><b>The Great Attractor</b></p> <p>The force which moves all organelles into place within a cell is similar to the force of the Great Attractor in the Universe. The Great attractor is the missing concentration of matter which would produce the gravitation force that tugs on various galaxies. This phenomenon of the great attractors shares a biological correspondence to the force within cellular mitosis which moves all parts of a cell into their respective positions.</p>
<p>Expansion of a Cell (during mitosis or from zygote)</p>	<p>→</p>	<p><b>Expansion of the Universe (Space-Time) “Cosmic Inflation”</b></p> <p>The expansion of the universe is analogous to the expansion of a daughter cells in mitosis, and/or the process of zygote development to fetus.</p>
<p>Inter-organelle Communication</p>	<p>→</p>	<p><b>Fast Radio Bursts (FRBs)</b></p> <p>The intense bursts of radio emission that have durations of milliseconds seen within Fast radio bursts (FRBs) throughout our universe is analogous to inter-organelle communication within a cell where intracellular membrane compartments engage in extensive communication, either indirectly, or directly through membrane contacts.</p>
<p>Atoms: Nucleus Electrons Valence Electrons</p>	<p>→</p>	<p><b>Solar systems:</b></p> <p><b>Sun</b></p> <p><b>Planets</b></p> <p><b>Life Traveling to Another System</b></p> <p>The biological patterns of the nucleus of an atom being the center of which all electrons revolve around can be structurally mapped to the sun being the center of the solar system where all planets revolve around contains the</p> <p>Biological patterns of electrons revolve around a nucleus can be structurally mapped to planets revolve around a sun similar to the</p> <p>The biological pattern of an electron (kinetic energy) jumping from one atom to another atom can be structurally mapped to the idea of Life traveling from one planet in one solar system to another planet in another solar system to seed the planet of Life-energy (via panspermia), especially as one planet which life is destroyed and the contents float through space to seed another planet. Also see the phenomenon of Panspermia.</p>

### Biological Patterns Observed in Earth's Biosphere

Our research has structurally mapped analogies from the biological domain to a physiology of Earth. The analogy "T is (like) B" defines a mapping from *B* to *T*. *T* will be called the [Earth Biosphere] (target domain), since it is the domain being explicated. *B* will be called *biological* domain, since it serves as the source of knowledge. We used various physiological patterns within living organisms to reveal the physiological patterns of Earth, its biosphere and ecosystems.



**M :  $b_i \rightarrow t_i$**

<p>Living Organism</p>	<p>→</p>	<p><b>Earth's Biosphere</b></p>
<p>Heart</p> <p><i>Pumping of the heart</i></p> <p><i>Blood carrying nutrients via veins around the body</i></p>	<p>→</p>	<p><b>Antartica</b></p> <p><i>Melting and Freezing of Antartica</i></p> <p><i>Salivated water creating ocean/wind currents that carry nutrients around the world.</i></p> <p>The process of Antartica melting and freezing with each of the Earth's revolutions around the sun in a manner to create arctic currents, and wind currents, which help carry and distribute nutrients around the world can be structurally mapped to the biological pattern of a heart pumping to create currents that carry and distribute nutrient-enriched blood throughout the body.</p> <p>Public Broadcasting Service. (2013, February 14). <i>Earth From Space</i>. PBS. <a href="https://www.pbs.org/wgbh/nova/earth/earth-from-space.html">https://www.pbs.org/wgbh/nova/earth/earth-from-space.html</a></p>
<p>Stomach</p> <p><i>Digestion</i></p> <p><i>Blood Carrying Nutrients Around Body</i></p> <p><i>REFERENCE:</i> Public Broadcasting Service. (2013, February 14). <i>Earth From Space</i>. PBS. <a href="https://www.pbs.org/wgbh/nova/earth/earth-from-space.html">https://www.pbs.org/wgbh/nova/earth/earth-from-space.html</a></p>	<p>→</p>	<p><b>Desert (e.g., Sahara Desert) &amp; Natural Wild Fires</b></p> <p><i>Digestion</i></p> <p><i>Haboob (Wind) Carrying Potassium Around World</i></p> <p>The process of "breaking down" the once lush vegetative northern strip of Africa, the potash which litters the Sahara Desert so that the nutrients from the eroded vegetation can be transported via wind currents (i.e., Haboob) to other parts of the world, such as the Amazon rainforests in South America, have biological patterns mapped to that of the "breaking down" of food in the stomach into nutrients, to be acrid by fluid currents, to other areas of the body. The extreme heat and fires which break down vegetation and other organic materials is analogous to the chemical reaction in the stomach which breaks down food.</p>

<p>Veins Circulatory System</p>	<p>→ →</p>	<p><b>Water &amp; Wind Currents</b> <b>Subarctic Current</b> Veins which provide as the highway system to transport nutrients around the body, nurturing various organ systems, can be structurally mapped to the water and wind currents which transport nutrients such as potash and plankton around the Earth nourishing Earth's various ecosystems</p>
<p>Kidneys <i>Filtering blood</i></p>	<p>→</p>	<p><b>Sea Grass Meadows</b> <i>Filtering rivers and streams</i> The process of sea grass meadows removing and filtering the surrounding water, cleaning it from bacteria found in raw sewage and other pathogens, can be compared to the process of the kidneys filtering the blood and removing unwanted particles. Toxins and other unnecessary particles are transported through the bloodstream to be filtered by the liver and kidneys, cleansing the blood from toxins. Similarly, sediments flow downstream in rivers and pass through seagrass meadows, where the water is purified by being rid of bacteria from raw sewage and other pathogens. Additionally, the meadows also trap sediment that may otherwise float freely, thereby eliminating toxins.</p>
<p>Alveoli (Lungs) Converting oxygen into carbon dioxide</p>	<p>→</p>	<p><b>Trees (Plants)</b> Converting carbon dioxide into oxygen</p>
<p>Fats (Lipids) Organism's Mouth Consuming Food Converting of Food to Lipids Storing Food as Fat Energy Our body's cells requiring the use of fat energies</p>	<p>→ → → → →</p>	<p><b>Oil &amp; Coal</b> Earth's Tectonic Plates Consuming Organic Material Converting of organic materials to oil and coal Storing Organic Material as Energy Earth using the stored energy via human use and consumption (humanity is part of the physiological aspect of the Earth as a whole)</p>

Development of a Fetus (Simple to Complex)	→	<b>Development of Earth</b> (Simple to Complex)  Evolving from simple Earth processes to contain complex systems can be structurally mapped to biological patterns in a living organism, where simple processes of the development of a zygote to evolving to contain complex systems.
Skin or Membrane	→	<b>Earth's Atmosphere</b> (Ozone Layer)  The atmosphere of the Earth provides protection from the coldness of space, objects that come into our atmosphere from space, and from harmful radiation from the Sun.
Various Organ Systems within an Organism  Such as the various organ systems within a living organism complement each other to allow for the function, potential and resilience of the whole	→	<b>Various Life on Earth (Earth's Ecosystems)</b>  Such as the various species and societies of living things and how those living things complement each other which allows for the function, potential and resilience of the whole

Fetus	→	<b>Island</b> (e.g. Hawaiian Islands)
Development of Fetus	→	Development of an Island
Placenta	→	Coral Reefs
Mother's Material Forming The Fetus	→	Volcanic Material Forming The Island
Development of Fetus Ecosystems (Organs)	→	Development of Island Ecosystems

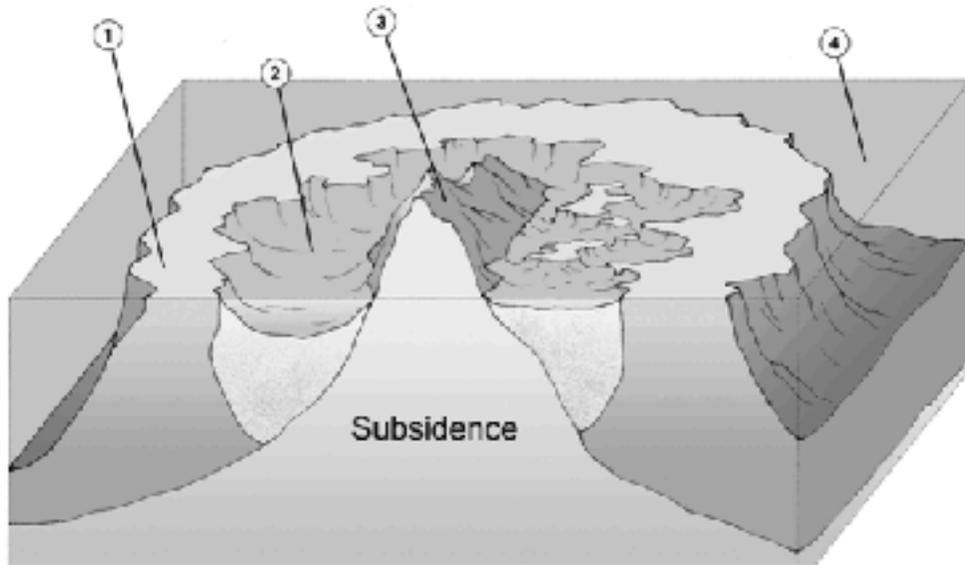
The formation of an island in the ocean can be compared to the development of a fetus in the womb. During the island's development, the coral reef surrounding it functions similarly to the placenta during the fetus's development. In both cases, there is a process of volcanic activity or the mother's activity that provides the necessary materials for growth.

The development of the island ecosystem is comparable to the development of the fetal ecosystem. The height of the island's mountain (volcano) creates fresh water, which leads to the formation of clouds (gaseous water). These clouds are then collected by the mountains and transformed into liquid water, creating streams and waterfalls that flow throughout the island. This environment allows life to flourish and thrive.

Similarly, during the development of the fetus, specific processes provide the blood and blood vessels needed for circulation throughout the body. This internal environment supports the growth, sustainability, and thriving of life within the fetus.

The ecosystem on the island is formed through various means, such as plant seeds carried by seafaring bird droppings, living organisms transported by currents, animals, debris, and human ships. These different elements contribute to the diversity of the island's ecosystem.

Likewise, the diverse materials necessary for the development of the fetus's organ systems (such as lungs, heart, kidneys, brain, etc.) are provided by various mechanisms. In summary, the formation of an island and the development of a fetus share similar processes and mechanisms that support the growth and sustainability of life.



<b>*Coral Reef Physiology</b>	<b>Human Physiology Similarity #1:</b>
1. Coral Reef — protecting the shoreline against waves and storm surges (also protecting life that develops there)	Skin (Membrane) — protects the organs and cells from harmful outside elements
2. Organisms within (encompassed by) the coral reef	Cells encompassed within the skin
3. Shoreline or Island (Home to Cities & Human Infrastructure)	Organs
4. Sea (Waves)	Harmful elements that can be destructive to island and life within it.
<b>Coral Society Physiology:</b>	<b>Human Physiology Similarity #2:</b>
Coral Reef — most living organisms within the ocean are born and raised (develop) within this area	Uterus (or Womb);
Collection of Marine Organisms within the Coral Ecosystem (e.g. Turtles, Fish, Micro-organisms)	Collection of Fetal Cells within the womb;
<b>Coral Reef Physiology</b>	<b>Human Physiology Similarity #3:</b>
Coral Reef Diversity necessary to process carbon dioxide	Gut Microbiome necessary to process materials that the body's natural systems cannot process.

**Biological Patterns Observed In Human Innovation (Physical).**

While the epitome of biology’s pattern can be seen used in the engineering field of biomimicry, all physical human innovations contain a biological pattern.

<b>HUMAN INNOVATION (PHYSICAL INNOVATION)</b>		
<b>BIOLOGICAL DOMAIN, (B)</b>	→	<b>TARGET DOMAIN, (T)</b>
<b>Biological Patterns</b> Within the Physiology of Living Organisms	→	<b>HUMAN INNOVATION (Physical)</b>
RED BLOOD CELL (Biological Pattern)	→	<p><b>CUP; CAR; PLATE, FORK / SPOON ENVELOP BOXES / PACKAGES, CONTAINERS, ANY THING USED TO DISTRIBUTE;</b></p> <p>Cars (or any vehicle/vessel/objects that transports) is analogous to red blood cells, while the roads (and any path of transport) function analogously to veins. This is the same for cups, thermos’, boxes, etc., any container, or entity, that transports a particular thing from one location to another location, can use the function of the red blood cell as a unit of measurement of efficiency of the function of transport.</p>
RED BLOOD CELL (DESALINATION PROCESS)		<b>DESALINATION PROCESSES</b>

<p style="text-align: right;">SKIN</p> <p>Skin used as a protective layer against damaging what is underneath.</p>	<p>→</p>	<p><b>Table Cloth;</b>  <b>Clothing;</b>  <b>Coaster (Cup);</b>  <b>Book Cover;</b>  <b>Sun Screen;</b>  <b>Umbrella;</b>  <b>Vinyl Seat Cover;</b>  <b>Paint/Shellac;</b>  <b>The outside/facade of a building (e.g., bricks).</b>  <b>Window Shades, Tree as shade, etc.;</b></p> <p>A table cloth provides protection for the things underneath it, such as a nice dining room table. Analogously, the epidermis, or outer layer of our skin, provides a layer of protection to the things underneath it. This is the same case for clothing, a cup coaster, book cover, sun screen, umbrella, paint/shellac, window shades, a tree's shadow, etc. The umbrella frame is analogous to a skeleton.</p>
<p style="text-align: right;">EYE</p>	<p>→</p>	<p><b>Camera</b>  <b>TV</b>  <b>Computer Screen</b>  <b>Phone Screen</b>  <b>Eye Glasses</b>  <b>Contact Lenses</b></p> <p>A camera functions analogously to that of the function of the eye. Camera is the eye. Light that comes into the camera is analogous to the light that comes into the eye. The lens of the camera is analogous to the lens of the eye. The diaphragm/ aperture of the camera is analogous to that of the iris of the eye. The film of the camera is analogous to that of the retina, or brain, of a person. Pentaprism, or Pentamirror rearranges the image to be understood correctly. Analogously, the brain rearranges the image to be understood correctly. Lens cap is analogous to eye lid.</p> <p>Similar analogies of the eye can be structurally mapped to TVs, computer screens, phone screens, eye glasses.</p>

SIGNAL MOLECULES	→	<p><b>Internet</b>  <b>WI-FI;</b>  <b>Bluetooth;</b>  <b>Light (Protons)</b></p> <p>The biological pattern of the neurological system can be observed within human innovations, such as the internet, WI-FI, and Bluetooth. All function to transfer information to cellphones, laptops and divices. Analogously, signaling molecules are used to transmit information around the body.</p>
SKELETON	→	<p><b>Chair (Frame);</b>  <b>Bed (Frame);</b>  <b>Umbrella (Frame);</b>  <b>House (Framing);</b>  <b>Macbook Metal Casing;</b></p>
EXOSKELETON (Insects)	→	
FAT	→	<b>Cushioning (Chair, Bed)</b>
Fat used a cushion		
FAT	→	<p><b>Batteries</b>  <b>Reservoirs (Water)</b></p>
Used as a storage of energy		
EAR	→	<p><b>Microphone</b>  <b>Speakers</b></p> <p>Microphones are analogous to ears. Sound waves coming into the microphone are analogous to sound waves entering the ear. The diaphragm in the microphone is analogous to the ear drum. The back plate of the microphone is analogous to cilia (hair fibers). Signals sent to a receiver is analogous to signals sent to the brain.</p>

PULMONARY VALVE (Heart)	→	<b>Door</b>  A door, functions analogously to that of the pulmonary valve in the heart. The pulmonary valve normally acts like a one-way door from your heart's right ventricle to the lungs. Blood flows from the right ventricle through the pulmonary valve to the pulmonary artery and then into the lungs, where it picks up oxygen to deliver to your body. Analogously, doors function to provide a similar function, but instead of blood, it allows for the entrance and exit of people. However, while the pulmonary valve acts as a one-way entrance/exit for red blood cells, doors usually act as a two-way entrance and exit point—highlighting the efficiency of having a designated door to go in and a designated door to go out (especially during high volume scenarios), as seen the function of the pulmonary valve in the heart. Because this analogy can be structurally mapped between them, we have defined the function of the door to that of the function of the heart. This means that the efficiency of the door's ability to allow objects into and out of a particular entity can be measured against the efficiency of the pulmonary valves ability to allow blood in and out of the heart—especially the particular pulmonary valve from a particular heart, at a particular stage of development, and at a state of health, derived from a particular permutation of living organism.
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<p style="text-align: center;">ORGANS</p> <p>i.e., Compartmentalization of Function</p>	<p>→</p>	<p><b>Drawers (In a Dressor Cabinet)</b></p> <p>A biological pattern can be seen within the <i>organization</i> of clothing within a dresser/cabinet. The body organizes cells within groups called tissue/organs—i.e.,organizational properties. Analogously, the dresser organizes different articles of clothing within groups called drawers. For example, each drawer contains similar functioning articles of clothing—e.g., sock drawer, shirt drawer, pants drawer, underwear drawer, etc., just as the body contains similar functioning cells within organs, like heart organ, brain organ, lung organ, etc. Therefore, the Life-pattern contained within living organisms can be used as a model for general organization of similar things.</p>
	<p>→</p>	<p><b>Rooms In a House</b></p> <p>A biological pattern can be seen within the <i>organization</i> of clothing within a dresser/cabinet. The body organizes cells within groups called tissue/organs—i.e.,organizational properties. Analogously, the dresser organizes different articles of clothing within groups called drawers. For example, each drawer contains similar functioning articles of clothing—e.g., sock drawer, shirt drawer, pants drawer, underwear drawer, etc., just as the body contains similar functioning cells within organs, like heart organ, brain organ, lung organ, etc. Therefore, the Life-pattern contained within living organisms can be used as a model for general organization of similar things.</p>

<p><b>RIBOSOMES</b></p> <p><b>PROTEIN</b> Produced from Ribosome</p> <p><b>mRNA</b></p>	<p>→</p> <p>→</p> <p>→</p>	<p><b>TURNTABLE;</b> <b>GUITAR;</b> <b>PIANO;</b> <b>ANY MUSICAL INSTRUMENT;</b></p> <p><b>MUSIC</b> Produced from Instrument</p> <p><b>INPUTED ON INSTRUMENT</b></p> <p>A turntable is analogous to that of a ribosome. The vinyl record which is encoded with a sequence of musical/vocals notes is analogous to RNA strands encoded with a sequence of genetic code necessary to produce specific proteins. The turntable using the vinyl record to produce music is analogous to the ribosome using the RNA strand to produce proteins.</p> <p>Similar analogies of ribosomes can be structurally mapped to all musical instruments. For example a guitar is analogous to the ribosome. The hands which strum the guitar (which is connected to the brain who understand the notes/ code) is analogous to the RNA strand inputted into the ribosome to produce proteins. The musical notes produced from the inputting of the musical coding on the guitar is analogous to the proteins produced from the inputting of genetic coding on the ribosome.</p>
<p><b>RIBOSOMES</b> PRODUCING PROTEINS</p> <p><b>PROTEINS</b></p> <p><b>RIBOSOMES</b></p> <p><b>mRNA</b></p>	<p>→</p> <p>→</p> <p>→</p> <p>→</p>	<p><b>PEOPLE</b> PRODUCING WORDS</p> <p><b>WORDS</b></p> <p><b>PERSON (E.G.,MOUTH)</b></p> <p><b>IDEAS (BEFORE WORDS ARE SPOKEN)</b></p>

<p style="text-align: center;">UTERUS</p>	<p>→</p>	<p><b>CAST MOLDING</b></p>
<p style="text-align: center;"><i>MATERIAL (USED TO CREAT THE BABY)</i></p>	<p>→</p>	<p><i>MATERIAL (USED TO CAST)</i></p>
<p style="text-align: center;"><i>GENETIC DESIGN</i></p>	<p>→</p>	<p><i>CAST OLDING DESIGN</i></p>
		<p>The cast molding is analogous to the uterus (but at an extreme inefficiency). The cast molding itself where the unit is molded, is analogous to the womb where the fetus is “molded.” The design of the cast molding is analogous to the genetic design of the DNA. While not as efficient or effective, the process of producing a unit through using cast moldings is analogous to that of the process of producing a child through using the uterus of a woman. A design is conceived for the cast molding and materials undergo a process within this cast molding to produce the conceived unit, just as a designed is conceived for the womb and materials undergo a process within the womb to produce the conceived baby.</p>
<p style="text-align: center;">UTERUS (WRITING GENETIC CODE)</p>	<p>→</p>	<p><b>PAPER</b> (8.5x11) - WRITING THOUGHTS</p>
<p style="text-align: center;"><i>MATERIAL PRODUCING FETUS</i></p>	<p>→</p>	<p><i>INK PRODUCING WORDS ON PAPER</i></p>
<p style="text-align: center;"><i>BIRTH OF BABY (CREATION OF COMPREHENSIVE INDIVIDUAL)</i></p>	<p>→</p>	<p><i>BIRTH OF COMPLETED IDEA (CREATION OF COMPREHENSIVE IDEA)</i></p> <p>The function of paper is analogous to that of the function of a uterus in regards to conception. The paper is used to conceive ideas, whereas the uterus is used to conceive humans. The paper functions as the “womb” for which a pen/pencil can provide the materials into that paper which manifest an idea (conceived in the brain). The uterus functions as the womb for which the mother’s internal mechanisms can provide the materials into the womb which manifest an idea (conceived in DNA).</p>
	<p>→</p>	
	<p>→</p>	
	<p>→</p>	

TENDONS	→	<p><b>ROPE</b> (as a fastener, tied to something)</p> <p>The biological pattern of tendons can be seen within the functionality of rope, especially when the rope is used, for example, to fasten a boat to a dock.</p>
DNA	→	<p><b>IDEAS IN A BOOK</b></p>
ORGANISM	→	<b>COMPUTER/LAPTOP</b>
BRAIN	→	<i>MOTHERBOARD</i>
HEURISTICS	→	<i>SOFTWARE/PROTOCOLS</i>
VISUAL CORTEX	→	<i>GRAPHICS (VIDEO) PROCESSING UNIT (VGU)</i>
NERVOUS SYSTEM	→	<i>COMPUTER CIRCUITRY</i>
FRAME OF COMPUTER	→	<i>SKELETAL SYSTEM</i>
SOMATIC NERVOUS SYSTEM	→	<i>USB, BLUETOOTH, WI-FI, INTERNAL MICROPHONE (INPUT)</i>
STOMACH (OR LIPIDS/FAT)	→	<i>COMPUTER BATTERY</i>
MOUTH	→	<i>POWER PORT</i>
LEAF	→	<p><b>SOLAR PANELS</b></p> <p>At a very low rate of efficiency, solar panels take energy from the sun is analogous to that of plant leaves taking energy from the sun. The efficiencies of the leaf's ability to take and store energy may be able to be used as a model to make more efficient solar panels</p> <p><a href="https://engineering.mit.edu/engage/ask-an-engineer/can-we-calculate-the-efficiency-of-a-natural-photosynthesis-process/">https://engineering.mit.edu/engage/ask-an-engineer/can-we-calculate-the-efficiency-of-a-natural-photosynthesis-process/</a></p>

<b>BIOLOGICAL PATTERNS OF THE BRAIN</b>		
SIGNALING MOLECULES (FROM AXION)	→	<p><b>PROTONS (FROM LAMP)</b></p> <p>The lamp post is analogous to an axion. The axion releases signal molecules which are received by a receiving synapse—conveying an idea. Analogously, a lamp post releases protons (light) which are received by a person (in the dark), so to see the images (or ideas) around them.</p>
AXION SIGNALING MOLECULES DENDRITES RECEIVING SIGNALING MOLECULES	→ → →	<p><b>STOP SIGN (OR ANY SIGN)</b></p> <p>PROTONS (FROM LIGHT)</p> <p>EYEBALL SEEING STOP SIGN</p> <p>The process of a person receiving an image is analogous to the process of a receiving-synapse receiving signal molecules from another synapse. The collection of units (letters) to form the word “STOP” is analogous to the collection of signal molecules (i.e., connection between synapse) which convey a particular idea. The sign is an axion, the word (or light entering eye) is the signal molecule, and the human eye is the receiving dendrite.</p>
SYNAPSE (FIRING) DENDRITE AXION	→ → →	<p><b>PRESSING A BUTTON</b> (The act of pressing a button)</p> <p>BUTTON</p> <p>FINGER</p>
INTESTINES MOUTH SALIVARY GLANDS	→ → →	<p><b>PIPING RUNNING FROM TOILET</b></p> <p>TOILET BOWL</p> <p>TOILET WATER TANK</p> <p>The toilet is analogous to that of the digestive track (i.e., large and small intestines) in the function of expelling a something away from a source. Actually, the toilet functions as an extension of your digestive track (i.e., a more sanitary “human centipede”).</p>

<p>DIGESTIVE SYSTEM</p>	<p>→</p>	<p><b>SEWER SYSTEM</b></p> <p>The sewer lines which transport sewage (unwanted waste) is similar to the extension of our digestive system's function of expelling unwanted waste from the body. The point where the waste gets filtered and treated so that the product of this treatment process turns water into a usable product is analogous to functions within the Human body where particular things (in their unrefined state) are processed so that the body can use.</p>
<p>ORGANISM</p> <p>CELLS</p> <p>ORGANELLES</p> <p>CELL MEMBRANE</p> <p>TISSUE</p> <p>ORGANS</p> <p>DNA</p> <p>CONCEPTION; BIRTH</p> <p>FETAL DEVELOPMENT</p>	<p>→</p>	<p><b>BOOK</b></p> <p>WORDS</p> <p>LETTERS</p> <p>BLACK SPACE (BETWEEN WORDS)</p> <p>SENTENCES or PARAGRAPHS</p> <p>CHAPTERS IN THE BOOK</p> <p>THE STORY OF THE BOOK (IDEAS, FACTS)</p> <p>CONCEIVING THE IDEA OF THE BOOK, or READING THE BOOK</p> <p>WRITING THE BOOK</p> <p>Also: the book can be viewed as DNA and the process of our understanding of the contents of that book is similar to the process of the womb's ability to construct/conceive a baby from that DNA.</p>

BURR FRUIT SEEDS	→	<p><b>VELCRO</b></p> <p>Velcro, contains tiny hooks and interlocking mechanisms which are analogous to that of the burr fruit seed.</p> <p><a href="https://www.microphotonics.com/biomimicry-burr-invention-velcro/">https://www.microphotonics.com/biomimicry-burr-invention-velcro/</a></p>
BEE STINGERS	→	<p><b>SURGICAL NEEDLES</b></p> <p>Surgical needles were designed to biomimic bee stingers in order to create instruments that can decrease tissue damage while increasing precision.</p> <p><a href="https://3dprintingindustry.com/news/bees-put-sting-templates-bioinspired-3d-printed-needle-design-132859/">https://3dprintingindustry.com/news/bees-put-sting-templates-bioinspired-3d-printed-needle-design-132859/</a></p> <p><a href="https://3ddept.com/honeybees-stingers-inspire-the-creation-of-3d-printed-surgical-needles/">https://3ddept.com/honeybees-stingers-inspire-the-creation-of-3d-printed-surgical-needles/</a></p>
RED BLOOD CELLS	→	<p><b>DESALINATION PROCESSES</b></p> <p>More recent innovations to produce fresh water from salt water have used the biological pattern observed within the membranes of red blood cells. Red blood cells were used as an analogous model for desalination processes.</p> <p><a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8529452/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8529452/</a></p>
BIRD WINGS (ALBATROSS)	→	<p><b>AIRPLANE WINGS (AIRBUS)</b></p> <p>Airbus engineers are considering how an albatross benefits from having an aspect ratio of about 18:1 compared to 9.5 for an A320 aircraft.</p> <p><a href="https://www.airbus.com/newsroom/news/en/2018/01/biomimicry--engineering-in-nature-s-style.html">https://www.airbus.com/newsroom/news/en/2018/01/biomimicry--engineering-in-nature-s-style.html</a></p>

<p><b>SHARK SKIN</b> (DRAG REDUCING SURFACE)</p> <p><b>SHARK SKIN</b> (MICROBACTERIAL PROPERTIES)</p>	<p>→</p> <p>→</p>	<p><b>PAINT COATING (AIRPLANES)</b></p> <p><b>ANTIBACTERIAL SURFACES</b></p> <p>The biological patterns particular to that of the sharkskin's ability to reduce drag has been used and applied to long-range aircraft to reduce drag while in flight. Recent studies have shown that a special sharkskin-style coating can benefit long-long-range aircraft like the A350XWB, since its drag-reducing surface is particularly effective during flight.</p> <p>Sharklet (anti-bacterial surfaces) is the world's first technology to inhibit bacterial growth through pattern alone. The Sharklet surface is comprised of millions of microscopic features arranged in a distinct diamond pattern. The structure of the pattern alone inhibits bacteria from attaching, colonizing and forming biofilms. Sharklet contains no toxic additives or chemicals, and uses no antibiotics or antimicrobials. Sharklet (antibacterial surfaces) draws inspiration from the shape and pattern of the dermal denticles of sharkskin. Sharks are resistant to fouling organisms in the water including algae and barnacles.</p> <p>References: <a href="https://www.sharklet.com">https://www.sharklet.com</a></p>
<p><b>SELF-HEALING PROPERTIES OF PLANTS &amp; ANIMALS</b></p>	<p>→</p>	<p><b>SELF-HEALING AIRCRAFT</b></p> <p>The researchers have developed tiny capsules of liquid solvent that bleed when the structure cracks, sealing the damage—analogueous to that of how a plant or animal heals itself when injured.</p> <p>REFERENCE: <a href="https://www.airspacemag.com/flight-today/how-things-work-self-healing-airplanes-35558146/">https://www.airspacemag.com/flight-today/how-things-work-self-healing-airplanes-35558146/</a></p>

<p><b>MANTIS SHRIMP</b></p>	<p>→</p>	<p><b>DURABLE MATERIALS</b></p> <p>The composite materials industry is always looking for ways to increase performance, to reduce the amount of raw materials used, and to make lightweight, tougher products. For example, doubling the length of a wind turbine blade will quadruple the energy output, reducing the weight of automobiles by 10% can result in 6-8% fuel economy improvement, and lighter aircraft will result in reduced fuel costs and a lower carbon footprint, all meaningful environmental and sustainability benefits. Helicoid Industries took inspiration from the mantis shrimp to develop lightweight, stronger, and more impact resistant composite materials.</p> <p>REFERENCE:  <a href="https://www.helicoidind.com/helicoid-technology">https://www.helicoidind.com/helicoid-technology</a></p>
<p><b>KINGFISHER BIRD (BEAK)</b></p>	<p>→</p>	<p><b>HIGH SPEED TRAINS (SHINKANSEN)</b></p> <p>The Shinkansen bullet train travels along high-speed railways throughout Japan at speeds of 240–320 km/hr (150–200 mph), carrying millions of passengers every year. However, when it was first designed, the high speeds caused an atmospheric pressure wave to build up in front of the train. When it would travel through tunnels, the wave would cause a loud “tunnel boom” at the exit, disturbing nearby residents. The engineers had to find a way for the train to travel more quietly without sacrificing speed or using more energy.</p> <p>The engineers looked to nature to re-design the bullet train. They noticed how kingfisher birds are able to slice through the air and dive into the water to catch prey while barely making a splash. They then re-designed the front end of the train to mimic the shape of the kingfisher’s beak. Not only did this help to reduce noise and eliminate tunnel booms, it also allowed the train to travel 10% faster using 15% less electricity.</p> <p>REFERENCE:  <a href="https://asknature.org/innovation/high-speed-train-inspired-by-the-kingfisher/#">https://asknature.org/innovation/high-speed-train-inspired-by-the-kingfisher/#</a></p>

<p><b>COLORFUL &amp; WATERPROOF TEXTILES</b></p>	<p>→</p>	<p><b>ARTHROPODS</b></p> <p>Amphico mimics the waterproofing strategy of springtails and the coloring of butterflies to produce easy-to-recycle performance clothing.</p> <p>Many living organisms manage to achieve multiple functions using a small toolbox of materials and adding function through texture, not chemicals.</p> <p>Springtails are microscopic arthropods that often dwell in mucky habitats. To protect themselves from drowning or being infected by harmful bacteria, their bodies are covered with tiny, pillar-shaped protrusions covered with a waxy, non-polar substance. Both of those features lead water to roll right off the springtail's back.</p> <p>Tiger beetles and butterflies produce color on their bodies and wings through similar nanoscale structures. Their multi-textured surfaces manipulate different wavelengths of light to produce micro-scale dots of a few set colors, which blend—like pixels on a TV screen or dots in a pointillist painting—to produce the illusion of countless other colors.</p> <p>REFERENCE:  <a href="https://asknature.org/innovation/colorful-waterproof-textiles-inspired-by-arthropods/">https://asknature.org/innovation/colorful-waterproof-textiles-inspired-by-arthropods/</a></p>
<p><b>TERMITE MOUND DESIGN</b></p>	<p>→</p>	<p><b>BUILDING DESIGN</b></p> <p>We generally think of termites as destroying buildings, not helping design them. But the Eastgate Building, an office complex in Harare, Zimbabwe, has an internal climate control system originally inspired by the structure of termite mounds. Further research is revealing more about the relationship between mound structure and internal temperature, and could influence additional building designs as our understanding grows.</p> <p>REFERENCE:  <a daraio."="" href="https://new.nsf.gov/news/mimicking-termites-generate-new-materials#:~:text=The U.S. National Science Foundation,Mount Whitney," says="">https://new.nsf.gov/news/mimicking-termites-generate-new-materials#:~:text=The U.S. National Science Foundation,Mount Whitney," says Daraio.</a></p>

<p><b>MUSSELS (EXTRACTION METHOD)</b></p>	<p>→</p>	<p><b>EXTRACTION METHODS (RARE EARTH METALS)</b></p> <p>The mussel-inspired nanocellulose (MINC) coating from Pennsylvania State University uses negatively charged ions to pull rare earth elements from water while using little energy.</p> <p>REFERENCE:  <a href="https://asknature.org/innovation/extraction-method-inspired-by-mussels/">https://asknature.org/innovation/extraction-method-inspired-by-mussels/</a></p>
<p><b>PLANTS NATURAL COMMUNICATION</b>            Natural produce preservative packets inspired by plants</p>	<p>→</p>	<p><b>KEEPING PRODUCE FRESHER LONGER</b></p> <p>GreenPod Labs mimics the natural chemical signaling in whole plants to keep harvested produce fresher for longer.</p> <p>GreenPod Labs has devised a way to harness the unique natural signaling substances of different fruits and vegetables and capture them in small sachets that can be placed in crates of specific produce. There, the compounds gradually rise into the air, taking over the role of the parent plant in sending signals that those living fruits and vegetables read loud and clear.</p> <p>As they waft onto the produce, they trigger any number of chemical or physical responses: Some control the opening of “breathing pores”, some lessen the production of gasses that encourage ripening, and some reduce the production of enzymes that decompose cell walls—slowing down the ripening (and spoiling) process.</p> <p>Other plant extracts in the sachets activate a natural immune system response that resists attacks by microbes.</p> <p><b>Biological Model</b></p> <p>The tomato on your counter, the lettuce in your fridge, the produce spilling out of buckets and shelves in kitchens and markets around the world ... is alive!</p> <p>When parts are detached and removed, they lose critical lines of communication with the parent plant. When harvested, fruits and vegetables lose contact and communication with the plants on which they grew, but they don’t die. They live for days, weeks, or even longer—making and breaking down chemicals and nutrients, and responding to various aspects of their surroundings.</p> <p>Whole plants have many natural built-in defense mechanisms, producing and responding to chemical cues to control the rate of ripening and fight off microbes and insects.</p>

<p><b>COMPOUNDS WITHIN THE HUMAN EYE</b></p>	<p>→</p>	<p><b>SUNBLOCK</b></p> <p>Sóliome produces non-toxic, biodegradable sunscreen based on the UV-protection provided by kynurenine molecules.</p> <p>To keep these natural sunscreen molecules where they will be most protective—resting on our skin, instead of being absorbed into our bodies—researchers attach additional bio-inspired compounds to the kynurenines to build molecules that are too large to penetrate through skin.</p> <p>Even if the kynurenines were absorbed, they are natural products that don't pose the same risks as the synthetic alternatives, and they biodegrade quickly.</p> <p>To protect our sensitive retinas from UV damage, animals make use of a suite of chemicals called kynurenines that concentrate in the lenses of our eyes. As incoming photons of UV light hit kynurenine molecules, they spark changes that cause different parts of the molecule to swell with negative electrical charge. This causes positively-charged protons to ricochet like billiard balls through the kynurenine's spindly molecular structure. This dissipates the potentially harmful UV radiation into safe vibrational energy before it can hit and damage DNA.</p> <p>REFERENCE: <a href="https://asknature.org/innovation/sunblock-inspired-by-compounds-in-our-eyes/">https://asknature.org/innovation/sunblock-inspired-by-compounds-in-our-eyes/</a></p>
<p><b>TREES</b></p>	<p>→</p>	<p><b>HIGH PERFORMANCE BIOCOMPOSITES</b></p> <p>Architects and inventors at Strong by Form have devised a manufacturing process that mimics the way trees themselves shape their materials for structural performance, opening up revolutionary possibilities for the forms wood construction can take.</p> <p>REFERENCE: <a href="https://asknature.org/innovation/high-performance-biocomposites-inspired-by-trees/">https://asknature.org/innovation/high-performance-biocomposites-inspired-by-trees/</a></p>

**<https://asknature.org/innovations/>**

**Biological Patterns Cellular Societies Observed In All Societies of Organisms.**

Societies of complex living organisms, such as plants, insects, mice, birds, wolves, elephants, fish, whales, and even humans, display behavior patterns analogous to behavior in cellular societies. Our research has structurally mapped analogies from biological patterns observed in the order of cellular societies to patterns in the order of societies of complex living organisms. This section of our methodology we have explained the various orders of cellular society, and then we mapped various societal-orders of complex living organisms to the cellular order.

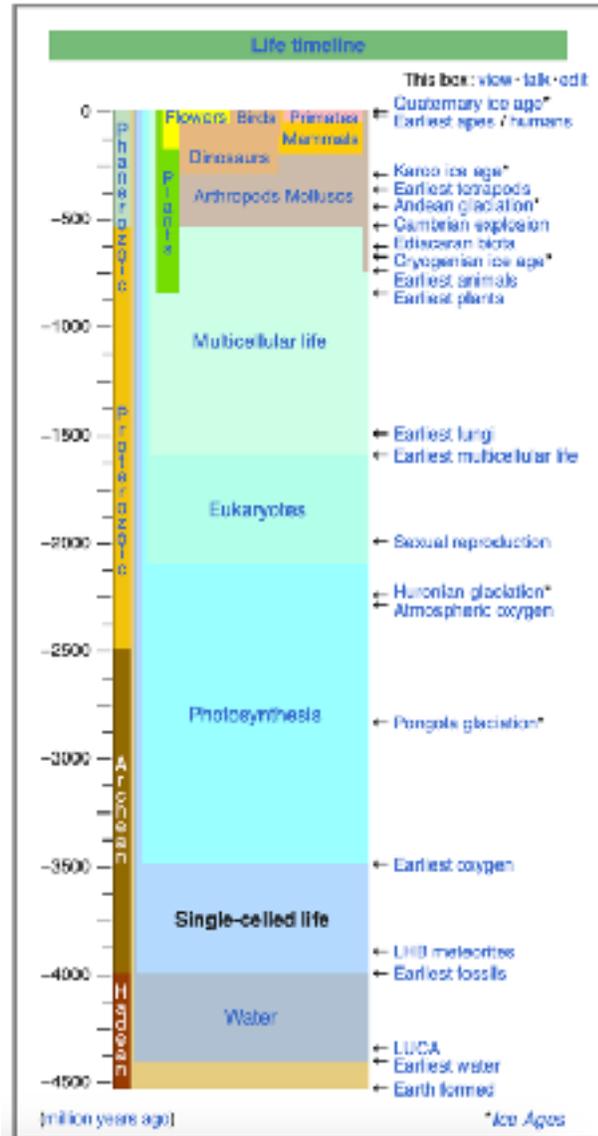
Firstly, we will begin by showing the types of cellular societies which exist, such as the “cellular wilderness” of single-celled life such as amoeba, paramecia, and didinium, to the formation of “cellular tribes” with the advent of Dictyostelid (cellular slime molds), formed by social amoeba, to the formation of more complex cellular societies villages such as fish, insects, amphibians, mammals, birds, and mammals, to the cellular mega-civilization—the epitome of cellular order of society—human physiology.

With each iteration of societal order cellular society progresses—evolving the potential, capabilities, resilience, functionality of their cellular society.

Each of these models of cellular societies are models which human society (or any society) can mimic. Once mimicked these that society adopts the abilities and disabilities relative to the arrangement of that cellular society being mimicked. All societies of living things, large or small, microscopic or microscope adhere to some permutation of this cellular order.

It is the duty of that society of organisms to order themselves to the model of cellular society that allows them to achieve all of their goals. The human physiology is the most supreme/sovereign Order.

CELLULAR LIFE TIMELINE: The figure to the right is the timeline of Cellular Life. It shows the journey of cellular life from the time of living individually, to forming more complex societies, to forming the most sovereign organizational arrangement of society, the human physiology—an Order of society that allows cellular society to achieve the highest potential compared to other cellular orders.



## “The Cellular Wilderness”

The cellular wilderness is the realm of the paramecia, amoeba and didinium. The cellular realm is the realm where every cell fends for themselves. There is not societal structure. There are no groups. There are no loyalties. If there was a model for anarchy, this is anarchy in the cellular realm. The cellular wilderness is the zombie apocalypse. Only the fittest and the lucky survive. Survival of the fittest begins. Only those that can adapt or figure out a way to cope with the cellular wilderness earn the right of survival.



<b>THE CELLULAR WILDERNESS</b> Realm of Paramecia, Amoeba, Didinium		
<b>PARAMECIUM // AMOEBIA // DIDINIUM</b>	<b>B → T</b>	Societies of Complex Living Things
Amoeba		Single human, or Family Unit in the wilderness (i.e., TV Show: ALONE)
Didinium	<b>B → T</b>	Pack of Wolves, Lions, Tigers, Bears, Sharks
Amoeba	<b>B → T</b>	School of Fish, Dolphin, Herd of Elephants, Deer,
Paramecia	<b>B → T</b>	Whales

## The Cellular Slime Mold — “The Cellular Family”

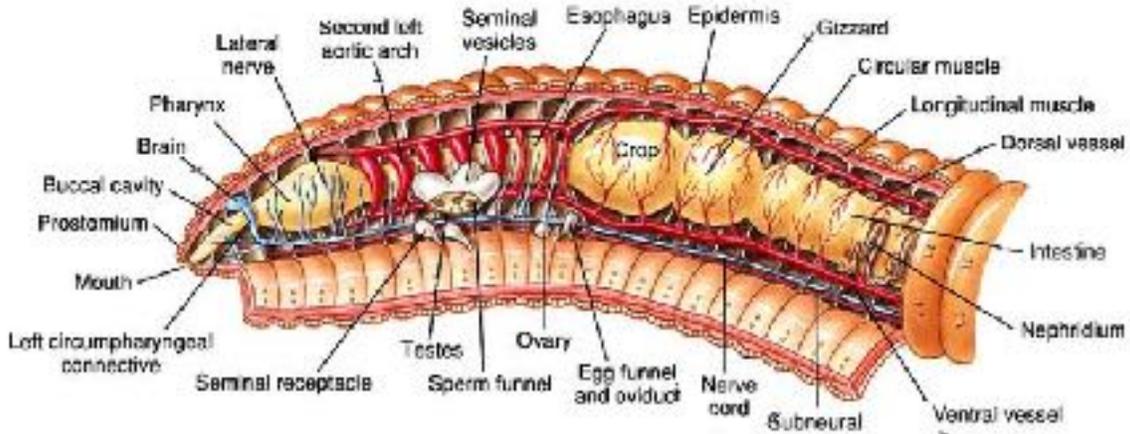
The cellular slime mold is the beginning of cellular family units. The cellular family is the realm where living things become social. Cellular organisms, such as amoeba, begin working together to survive. These cellular family units form into the smallest social unit in cellular realm, called slime and contain all the same characteristics of a single amoeba, but larger and more capable of defending itself against the natural threats of being a single amoeba. The amoebae join up into a tiny multicellular slug which crawls to an open lit place and grows into a fruiting body, a sorocarp. Some of the amoebae become spores to begin the next generation, but others sacrifice themselves to become a dead stalk, lifting the spores up into the air. There are



<b>THE CELLULAR FAMILY / TRIBE</b> Cellular Slime Mold		
CELLULAR SLIME MOLD	<b>B → T</b>	Society of Animals That Mimic A Paramecium, or Amoeba in Cellular Wilderness
		Single human, or Family Unit in the wilderness (i.e., TV Show: ALONE)
CELLULAR SLIME MOLD	<b>B → T</b>	HERD OF ELEPHANTS
	<b>B → T</b>	
	<b>B → T</b>	

## The Nematodes or Worm — “A Cellular Village”

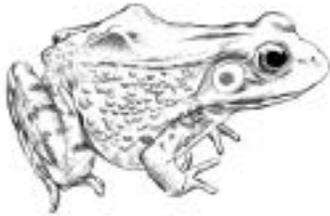
Nematodes and worms are composed of cellular village. While relatively one of the simplest of complex organisms, worms are rather complex in the various types of cellular organisms that exist within the the cellular society composing it. We can imagine the cellular society of organisms which compose the nematode and worm to that of a small to medium-sized village. The village is only capable is simple tasks, and the potential for the worm is not much. However, the cells composing it have more opportunity than other, simpler, cellular societies, such as the paramecium or amoeba.



THE CELLULAR TRIBE / VILLAGE NEMATODE // WORM		
NEMATODE // WORM	B → T	
	B → T	
	B → T	
	B → T	

## The Frog & Other Organisms — “The Various Orders of Cellular Societies”

The number of cells within a cellular society does not matter but more so The Order of Life to which those cellular organism’s organize themselves to, as so to achieve a level of functionality, purpose, efficiency for function, resilience, and potential. The way any society of living things organizes itself determines what it is capable and incapable of doing. **The various forms to which a society of living things can order themselves to, and mimic, are endless.** If any living society organized themselves to be analogous to the cellular society composing a mosquito, it would have all of the benefits and problems of a mosquito, and be subject to The Order of the Frog—as the cellular society composing a frog can outmatch the cellular society of the mosquito; Therefore, human society would not want to model its society based off the society of living organisms composing a mosquito, or even a frog. It is the duty of a society of living things, such as humans, to organize itself to the model of society which best represent their goals and potential. The cellular societies of organisms which compose complex living organisms are mathematical models for this.



VS



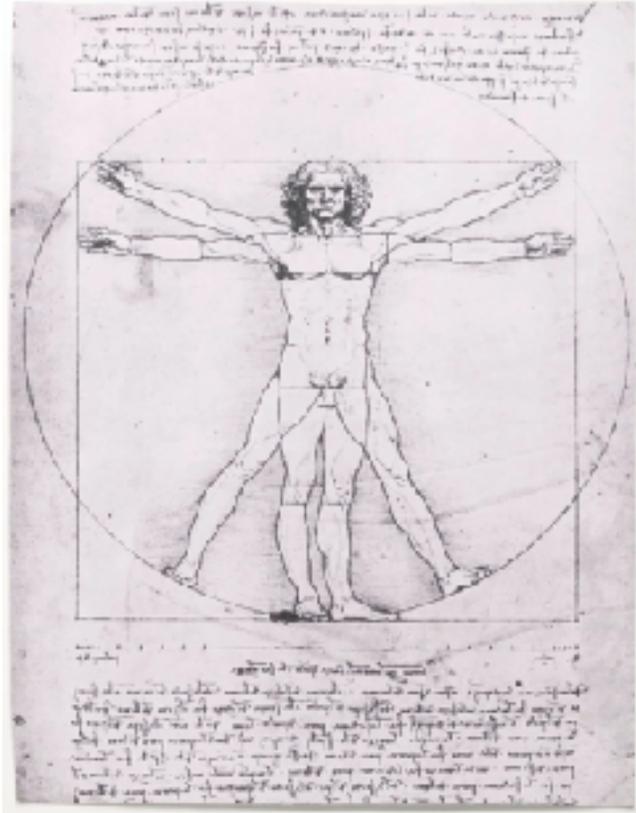
<p align="center"><b>YOUR ORDER DETERMINES YOUR FATE</b>                      THE FROG vs. THE MOSQUITO                      The way your society organizes itself determines its abilities/inabilites</p>		
<p align="center"><b>CELLULAR SOCIETY</b>                      COMPOSING THE FROG // MOSQUITO //                      OR ANY COMPLEX LIVING ORGANISM</p>	<p align="center"><b>B → T</b>                      (Order of                      Society)</p>	<p align="center"><b>HUMAN SOCIETY</b>                      WHAT EVER ORDER HUMAN SOICETY                      ORGANIZES ITSELF TO MIMIC, WILL                      ULTIMATELY ATTAIN THE FUNCTIONALITY,                      RESILIENCE, AND POTENTIAL                      (CHARACTERISTICS) PERTAINING TO THAT                      ORDER/ORGANIZATION.</p>
<p align="center"><b>FUNCTIONALITY, EFFICIENCY, RESILIENCE,                      &amp; POTENTIAL OF THE CELLULAR SOCIETY IS                      TRANSFERRED TO THE SOCIETY MIMICKING</b></p>	<p align="center"><b>B → T</b></p>	<p align="center">STAGE OF DEVELOPMENT &amp; STATE OF                      HEALTH                      OF HUMAN SOCIETY</p>

NOTE: Complex living things look very similar on the insides. For example, many living things have hearts, lungs, livers, eyes, noses, etc. The subtle differences affects the nature of the functionality and potential of a society.

## The Human Physiology — The Most Sovereign Order, The Measure of All Things

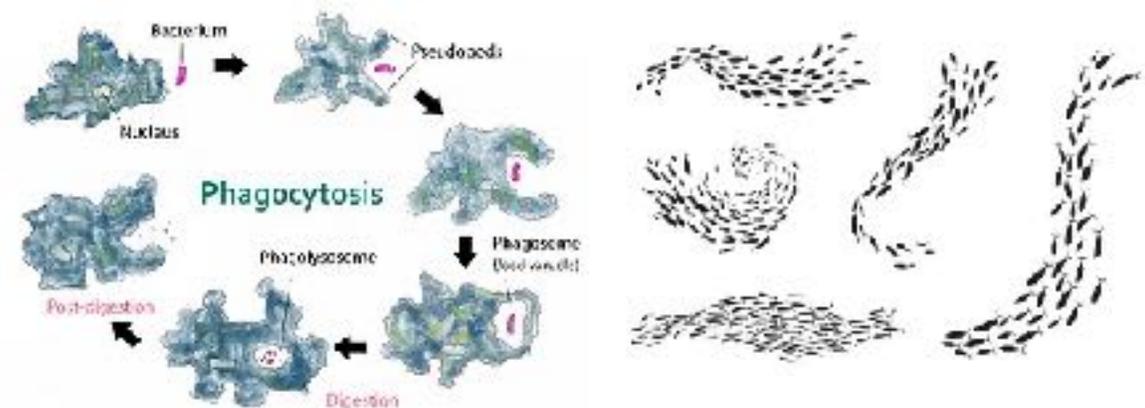
Man is the measure of all things. The cellular society composing the human physiology displays the Order which which any society of living things, large or small, needs to organize themselves to be analogous to (mathematically equivalent) as so to achieve optimal level of potential. The human form is supreme/sovereign

The human physiology is the most supreme order to which a society of cells can collectively organize to, therefore the most ideal order to which human society can mimic. However, just because we are human does not mean we naturally organize ourself in a manner that is congruent with the cellular society composing the human body. Remember, our DNA contains many of the genetic traits of all living things. If I had to guess as to what cellular society human society has organized itself to, I would personally say it would most closely resemble Stephen Hawking’s body. Our society is neglecting the potential of its people, relying on technologies to keep us going. The cellular society composing Stephen Hawking’s crippled body is the path which human society is currently taking form to.



<b>THE MOST SOVEREIGN SOCIETY OF LIVING ORGANISMS</b> THE CELLULAR SOCIETY COMPOSING THE HUMAN PHYSIOLOGY		
<b>CELLULAR SOCIETY</b> COMPOSING THE HUMAN PHYSIOLOGY	<b>B → T</b> (Order of Society)	<b>HUMAN SOCIETY</b>
<b>STAGE OF DEVELOPMENT &amp; STATE OF HEALTH</b>	<b>B → T</b>	<b>HUMAN SOCIETY</b> STAGE OF DEVELOPMENT + STATE OF HEALTH

<b>ORGANIZATIONAL PROPERTIES OF SCHOOL OF ANCHOVIES</b> (EMERGENCE OF CELL/ CELLULAR SOCIETY PROPERTIES IN ANIMAL SOCIETIES)		
<b>AMOEBA PROTEUS</b>	→	<b>SCHOOL OF ANCHOVIES</b>
<i>Biological patterns of amoeba</i>		<i>The Order of School of Fish (Anchovies)</i>
MOVEMENT OF AMOEBAS	→	MOVEMENT OF THE SCHOOL
FOOD VACUOLE	→	SCHOOL OF FISH SWARMING AROUND FOOD
AMOEBAS DEFENDING THEMSELVES	→	THE SCHOOL OF FISH DEFENDING ITSELF



The above diagram represents an analogy of how societies of complex animals eat—i.e., as a society and as a non-social species. Most societies of complex animals are analogous to paramecia/amoeba.

School of anchovy fish are analogous, in their collective function, to that of the function of a single amoeba, in regards that they are both restricted to movement, feeding and breeding. They also share a similar pattern of emergence: for example, the particular area of the school of anchovy fish which engulf food is analogous to the particular area of the amoeba that engulfs food through a food vacuole—both the school of fish and the single amoeba have similar Life-pattern in the design. Furthermore, amoebae are **important for recycling nutrients in the soil**. According to Maciver, when nutrients become available they are taken up by bacteria, that "effectively lock up all the nutrients in bacterial mass. " When bacteria are consumed by amoeba, nutrients are released back into the soil. Analogously, nutrients are taken up by plankton, that effectively lock up all the nutrients in the plankton mass. When plankton are consumed by a school of anchovy fish, nutrients are released back into the food chain. They have recognized that the school of anchovies have essentially evolutionarily organized their society to that of the Life-pattern/function of that of an amoeba. Ironically, small fish and crustaceans, such as tiny shrimp eat amoeba! <sup>52</sup>

<sup>52</sup> <https://ed.ted.com/lessons/how-do-schools-of-fish-swim-in-harmony-nathan-s-jacobs>

<b>PACK OF WOLVES</b> (ORGANIZATIONAL PROPERTIES)		
<b>DIDINIUM (SINGLE-CELLED ORGANISM)</b> <i>Biological patterns of a DIDINIUM CELL</i>	→	<b>PACK OF WOLVES</b> <i>The Order of a WOLF PACK</i>
DIDINIUM (Carnivorous Single-Celled Organism)	→	THE PACK OF WOLVES  THE PACK OF WOLVES FUNCTION ANALOGOUSLY TO THAT OF A DIDINIUM CELL WHICH PREY ON PARAMECIA.
NUCLEUS	→	ALPHA MALE OR ALPHA FEMALE
EACH PSEUDOPOD (“CELL ARM”)	→	EACH WOLF IN THE PACK (RELATIVE TO CHASING PREY)
EGG CELL	→	LONE ALPHA FEMALE WOLF
SPERM CELL	→	LONE ALPHA MALE WOLF
MITOSIS	→	THE PROCESS OF LEAVING WOLF PACK TO BREE TO AVOID INCEST
CELLULAR GROWTH / DEVELOPMENT	→	THE PROCESS OF HAVING A LITTER OF PUPPIES AND THOSE PUPPIES GROWING TO BECOME PART OF THE WOLF PACK
CHEMICAL SIGNALING	→	HOWLING

The wolf pack (group) functions analogously to that of a single organism (cellular/complex). The entire wolf pack can be structurally mapped to a single celled organism. The emergence of a didinium singular celled organism happens when wolves work together. The Alpha Male/Female wolf is analogous to that of the nucleus of the cellular organism, such as amoeba. Each wolf in the pack used to hunt food is analogous to that of the pseudopodia, or arms, of the amoeba. The process of a wolf pack giving birth to new members of the pack is analogous to that of the growth/development of the amoeba. The process of a wolf leaving the pack to breed (and avoid incest) is analogous to that of the process of cellular mitosis (or birth of a new society of cells).

<b>SOCIETY OF PENGUINS</b> (ORGANIZATIONAL PROPERTIES)		
<b>CELLULAR ORGANISM</b>	→	<b>SOCIETY OF EMPEROR PENGUINS</b>
CELL BODY	→	SOCIETY OF EMPEROR PENGUINS
CELLULAR MEMBRANE / SKIN	→	PROCESS OF PENGUINS HUDDLING TOGETHER IN MASSIVE CIRCLE; OUTER PENGUINS ACT AS A SHEILD AGAINST THE COLD WEATHER/WIND
FAT / LIPIDS (FOR STORING HEAT)	→	PENGUINS WITHIN THAT CIRCLE
UTERUS (WOMB)	→	ALL MALE EMPEROR PENGUINS W/ EGG ON FOOT (COLLECTIVE MALE PENGUINS)
UMBILICAL CORD FEEING THE FETUS	→	FEMALE PENGUIN (COLLECTIVE) RETURNING FROM TWO MONTHS HIATUS TO FEED, SO THAT IT CAN BE REGURGITATED

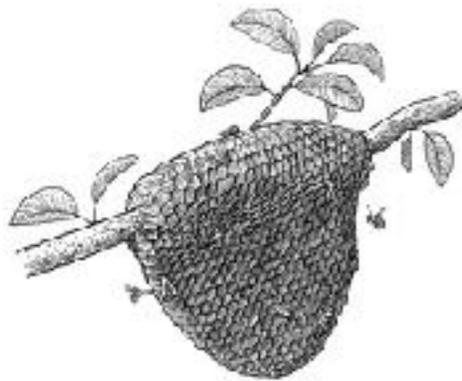
<b>SOCIETY OF MONKEYS</b> (ORGANIZATIONAL PROPERTIES)		
<b>AMOEBA</b>	→	<b>MACAQUE SOCIETY</b>
<b>CELLULAR SOCIETY OR CELLULAR ORGANISM</b>	→	<b>THE COLONY OF MACAQUES</b>
GROWTH OF THE CELL / ORGANISM	→	NEW BIRTHS WITHIN A MACAQUE COLONY
SPERM CELL IN SEARCH OF SUCCESSFULLY FERTILIZING AN EGG CELL	→	THE PROCESS OF ADOLECENT MALES LEAVING THEIR COLONY TO JOIN OTHER SOCIAL GROUPS TO IMPREGNATE FEMALES

The society (colony) of Macaques is analogous to the society of a uni-cellular organism. The process new births within a macaque colony is analogous to that of the growth of the society of cells within the human body. The process of adolescent males leaving their colony to join other social groups to mate with females is analogous to the process of ejaculation/mating (between societies)—the processes where sperm is released to fertilize an egg and populate another society of cells. Macaque (males) which succeed in impregnating other social groups is analogous to sperm successfully fertilizing an egg, or female.

<b>HERD OF ELEPHANTS (ORGANIZAITONAL PROPERTIES)</b>		
<b>PARAMECIUM</b>	→	<b>HERD OF ELEPHANTS</b>
<b>NUCLEUS OF THE UNI-CELLULAR ORGANISM</b>	→	<b>ALPHA FEMALE</b>
GROWTH OF THE UNI-CELLULAR ORGNISM	→	GROWTH OF THE HERD
THE UNI-CELLULAR ORGANISM EATING	→	THE HERD EATING
CELL MEMBRANE	→	PROCESS OF THE HERD FORMING PROTECTIVE LAYER TO PROTECT INFANTS FROM EXTERNAL THREATS
CELLULAR MITOSIS (OR SPERM SEEKING EGG)	→	THE PROCESS OF THE MALE ELEPHANTS LEAVING THE HERD TO FORM A HERD OF THEIR OWN AND TO BREED
RESTRICTIVE FUNCTIONALITY AND POTENTIAL OF A CELL	→	ROLES AND GOALS WITHIN THE ELEPHANT HERD ARE LIMITED THEREFORE THEIR POTENTIAL IS LIMITED

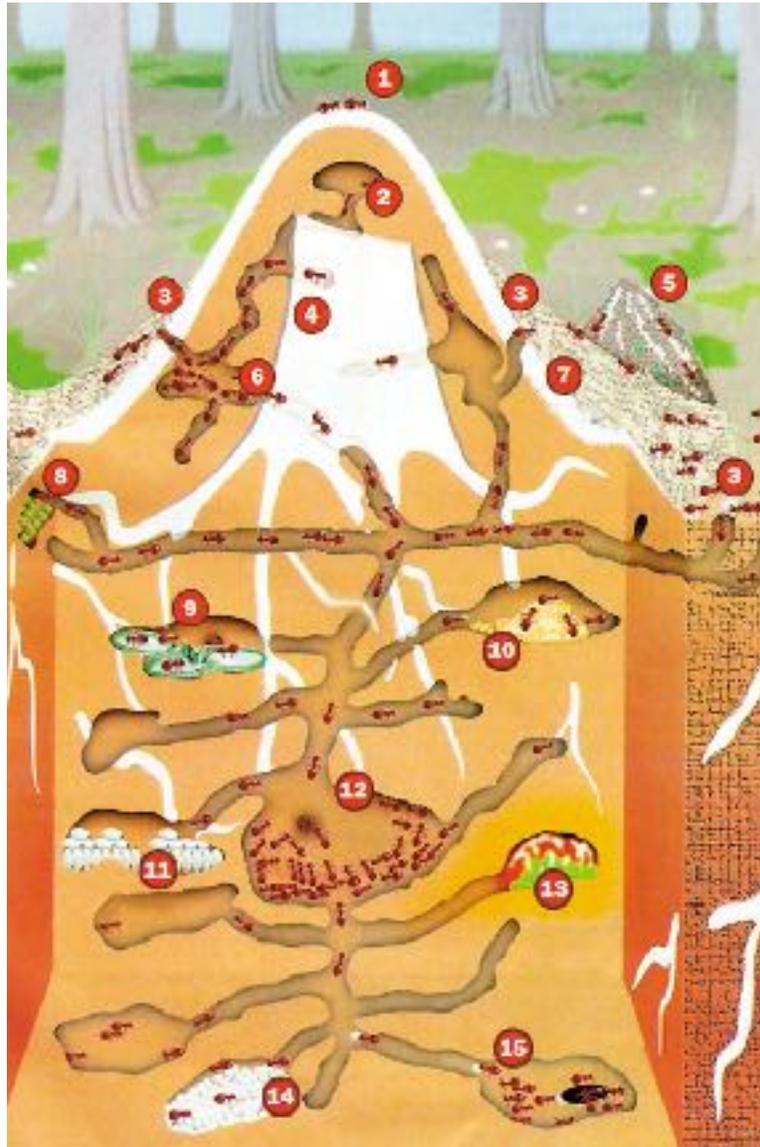
The heard of elephants are analogous to that of a single uni-cellular organism, such as an amoeba. The Alpha Female elephant within the herd of elephants is analogous to that of the nucleus of the amoeba. The process of the herd of elephants growing is analogous to the function of a uni-cellular organism developing/ growing. The process of the entire herd of elephants eating/drinking is analogous to the process of the amoeba “eating/drinking.” The process of elephants using their bodies to form a protective shield around infants (to protect against external threats such as lions) is analogous to that of the function of skin, or a cell membrane. The process of the male elephants leaving the herd (i.e., to form a herd of their own and to breed) is analogous to that of process of sperm seeking an egg to fertilize, or that of cellular mitosis. The roles and goals within their society are limited—therefore limits their functionality and potential as individuals and a society.

<b>COLONY OF BEES</b> (ORGANIZATIONAL PROPERTIES)		
<b>COMPLEX ORGANISM</b> <i>Biological patterns of a complex society of cells</i>	→	<b>HIVE OF BEES</b> <i>The Order of a Bee Colony</i>
CELLULAR BODY	→	THE HIVE
NUCLEUS	→	QUEEN BEE
MITOSIS OF CELL	→	BEE SWARM – WHEN CAPACITY IN THE HIVE IS CONSTRAINED TO THE POINT WHERE THE MATURE QUEEN WILL LEAVE THE COLONY WITH 1/2 HER WORKERS TO ESTABLISH A NEW COLONY
PSEUDOPODS (CELL ARMS) REACHING	→	WORKER BEES FORAGING FOR FOOD
STOMACH (WITH FOOD)	→	BEE POLLEN (IN HIVE)
FAT / LIPIDS	→	HONEY
UTERUS (WOMB)	→	BROOD NEST
SKELETAL SYSTEM	→	BEES WAX
WHITE T-CELLS (IMMUNE SYSTEM)	→	PROPOLIS (USED TO ENCAPSULATE INTRUDERS WHICH HAVE DIED WITHIN THE HIVE)
SELF HEALING PROPERTIES OF SKIN	→	PROPOLIS (USED TO SEAL HOLES)



<b>COLONY OF BEES</b>		
<b>COMPLEX CELLULAR SOCIETY</b>	→	<b>BEE COLONY</b>
Brain; Nucleus; DNA;		Queen Bee
Body	→	Hive (all living and non living parts comprising the functionality of the beehive)
Arms — foraging for food, or protecting the body; Pseudopodium (Cells);	→	Worker Bees — foraging for food, or protecting the hive from predators)
Sperm Cells	→	Drone Bees
Uterus (Womb)		Brood Nest
Fat — Used to feed the cells of the body (provide energy) to the entire body during hard times.	→	Honey — Used to feed the colony (provide energy) during hard times.
Stomach (with food in it); Digestive System;	→	Bee Pollen
Skeletal System	→	Beeswax
Immune System	→	Propolis (used to encapsulate intruders which have died within the hive)
Skin; Skeletal System;	→	Propolis (When used to seal holes)
Mitosis; Child Birth;	→	Bee “Swarm” — When capacity in the hive is constrained to the point where the mature queen will leave the colony with 1/2 of her workers to establish a new colony.
Skeletal System	→	Tree Trunk (or other pre-existing material used to establish the hive’s fundamental structure)
Male Body	→	Drone Comb
Apoptosis (via Extrinsic Pathway)	→	Killing of Mature Queen by New Queen

**Society of Ants - ORGANIZATIONAL PROPERTIES**



<b>Order of Cellular Society</b>	→	<b>Ant Society Physiology</b>
Egg Cell	→	Virgin Ant Queen w/ Wings
Sperm Cell	→	Ant Male w/ Wings
The process of <b>cell division</b> and <b>cellular differentiation</b> of the <b>embryo</b> that occurs during the early stages of fetal development	→	The process of the <i>Solo Ant Queen</i> (laying eggs to produce initial worker-ants to commence her colony)
Growth of the Body (continued cellular division) increasing the number of cells that make up body tissue	→	The process of the Queen Ant continuing to produce worker ants (Increasing the number of ants)
Body (Colony of Cells)	→	Nest (Colony of Ants)
Human Body (Structured organization)	→	Structured Colonies
Various cells + roles	→	Various ants + roles
Organs + Function of Each Organ	→	Nest (Chambers + Function of Each Chamber)
Cells comprising each organ	→	Ants (within each chamber) or carrying-out a particular function at a particular time.
A group of cells performing the same task (Organ system)	→	A group of ants performing the same task
Fetus	→	Collection of Eggs
Pregnant Uterus (Womb)	→	Brood Chamber (Area of Nest Where Eggs are Stored)
The Act of Foraging For Food	→	Ants outside the hive
The success of the entire cell colony (within the body) is dependent upon the cooperation of the whole	→	The success of the entire ant colony is dependent upon the cooperation of the whole
Cytotoxic T Cells attacking internal infections, or defected cells (e.g. Immune system)	→	Ants Attacking an Nest Invader
The arms of the body, foraging for food; Pseudopodium (Cells);	→	The Ants, Outside the nest, foraging for food
Senses (Eyes, Ears, Mouth, Hands, Nose); Pseudopodium (Cells);	→	Scouting Ants (Exploring the environment)
Reepithelialization (Wound Healing)	→	Healing comrades - When injured ants are nurtured back to health by other ants

Different types of cells/organs	→	Different types of members/jobs/tasks (ants)
The different roles amongst cells within a body	→	The different roles amongst ants within a colony
	→	Worker Ants
Vascular System	→	Ant Trails
Communication amongst cells (via chemical signals)	→	Communication amongst ants (via chemical signals)
Neural transmission	→	Ants laying down a “scent”
Chemical Signals control much of the life state of the cells (along with DNA)	→	Chemical Signals control much of their life state
Conception; Mitosis	→	Mating of Male/Female
The process of the Liver, Kidneys, & Immune System	→	The process of ants using tree resin to clean themselves
Organs/Tissue	→	Nest Chambers
Respiratory/Digestive	→	Rubbish/Trash Chamber (ventilation/covered)
Organs	→	Ant Nest (Chambers)
Vascular System	→	Ant Nest (Transport Tubes)
Cooperation of cells necessary for survival of entire body	→	Cooperation of ant colony necessary for survival of the entire colony
Cooperation of various cells within the body necessary for the carrying-out of tasks	→	Cooperation of various ants within the colony necessary for the carrying-out of tasks

A society of ants (i.e., ant colony) contains different functions, or roles/goals, similar to that of a complex society of cellular organisms which compose more complex organisms. The amount of roles/goals and organization amongst their society can be define, measured, and understood relative to that of the society of cells which compose complex organisms. Therefore a colony of ants is analogous to that of a more complex society of cellular organisms, such as an insect, or some complex organism that has multiple functionality of its cellular society but are limited as compared to the cellular society composing the human physiology.

[Societies of animals: show how societies of complex organisms display patterns of cellular organisms in the “Cellular-wilderness” (no society) and in more complex societies.]

[Human society: show how human society mimics the cellular society of that which is in the human body.]

**Biological Patterns Observed In Human Society.**

First it is important to note that humans, when they lived as tribes, functioned very similar to single-celled organisms, such as paramecia, amoeba, and dinidium. As humans became more social and their communities grew, so did their roles and goals for that community, their efficiency, potential, resilience, and abilities have come to become analogous (biomimic) complex cellular societies which resemble the human physiology—the most sovereign Order of cellular society.

<b>SINGLE HUMAN</b> SINGLE CELLED ORGANISM LIVING IN THE CELLULAR WILDERNESS		
AMOEBA  SINGLE CELLED ORGANISM IN THE CELLULAR WILDERNESS OF PARAMECIA, AMOEBA, & DINIDIUM	→	SINGLE HUMAN  SINGLE HUMAN IN THE WILD

<b>HUMAN FAMILY UNIT</b> AMOEBA SLIME MOLD		
AMOEBA SLIME MOLD  SINGLE CELLED ORGANISM IN THE CELLULAR WILDERNESS OF PARAMECIA, AMOEBA, & DINIDIUM	→	SINGLE HUMAN  SINGLE HUMAN IN THE WILD

<b>SMALL HUMAN TRIBE</b> LARGER AMOEBA SLIME MOLD		
LARGER AMOEBA SLIME MOLD CELLULAR TRIBE COMPOSING A SLIME MOLD	→	SMALL HUMAN TRIBE SINGLE HUMAN IN THE WILD

<b>HUMAN VILLAGE</b> NEMATODE		
Human's evolution to a larger, more complex, societal structure, the roles and goals of human society increase allowing for more functionality as a whole for their group, which results in an ability to better sustain itself, achieve goals, and better defend itself, especially if they were of fewer in numbers. The same principles can be observed as cellular society become more complex and move from		
NEMATODE CELLULAR VILLAGE COMPOSING A NEMATODE	→	HUMAN VILLAGE (Living Next To The Ocean)

In this section of our methodology, we structurally mapped “bio-economic phenomena” of cellular society<sup>53</sup> to “socioeconomic” phenomena in human society, and; we used current known knowledge of bio-economic phenomena as a guide to extrapolate new knowledge pertaining to the socioeconomic phenomena in human society—to provide a new and truer understanding of the socioeconomic phenomenon existing in human society.

This involves the task of structurally-mapping any known knowledge of cellular-economic relationships amongst the general systems, processes, and objects of cellular society to that of the socioeconomic relationships amongst the general systems, processes, and objects in human society. We show that these biological patterns of cellular society are present in living societies of complex organisms, such as humans. The correspondences define a phenomenon’s function while the differences within that correspondence measure the efficiency of that function, when measured against the ideal state, thereby giving us an understanding of the given potential of the society, especially as the functionality and potential of that society relate to: (a) the permutation of Life a society models themselves to, (b) the developmental stage of that permutation, and (c) the state of health of that permutation. Note: the relationships observed within the bio-economic patterns of cellular society (as well as bio-concepts and bio-philosophy) define the various human terms through the truest possible lens—the lens of Life. All physical things and concepts must be understood relative to establishing and sustaining Life.

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<sup>53</sup> —the society of cells composing the human physiology—i.e., Life’s most sovereign model of Life.

Regardless of the differences in how we visually see and interpret human society and cellular society, both domains share the same “backend coding,” or biological patterns. Cellular society has perfected how living things must organize themselves in to societies in order to be successful at life<sup>54</sup>; Through countless permutations of evolution has allowed their society to take on many various forms, which allow for various types of characteristics. However, the most sovereign form which a society can take is that which the cellular society that composes the human physiology. The Order of The Human Physiology allows the society to have control over its dominion, and its society has unlimited potential. It is adaptable and it has the ability to take life and save life and reason outside itself.

Below, we have taken the arduous tasking of structurally mapping correspondence in the organization between cellular society and human society. We have found that the *general principles, philosophies, and ideas* associated with the Order and Disorder(s) of cellular society<sup>55</sup> are models to define, measure, and understand the general principles, philosophies and ideas associated with Order and disorder(s) of human society. Our mappings were able to transfer knowledge and general principles from the biological domain to explain various phenomena in human society.

<b>CELLULAR SOCIETY OBSERVED IN HUMAN SOCIETY</b>		
<b>THE PHYSIOLOGY OF CELLULAR SOCIETY</b> THE CELLULAR SOCIETY COMPOSING THE HUMAN PHSYIOLOGY	<b>B → T</b> (ORDER)	<b>THE PHYSIOLOGY OF HUMAN SOCIETY</b>
<b>ORDER</b> IN CELLULAR SOCIETY	→	<b>ORDER</b> IN HUMAN SOCIETY
<b>DISORDERS</b> IN CELLULAR SOCIETY	→	<b>DISORDERS</b> IN HUMAN SOCIETY
<b>BIO-ECONOMICS</b> // CELLULAR ECONOMICS	→	<b>SOCIOECONOMICS</b>
<b>“EDUCATION”</b> IN CELLULAR SOCIETY	→	<b>“EDUCATION”</b> IN HUMAN SOCIETY
<b>POLITICS</b> IN CELLULAR SOCIETY	→	<b>POLITICS</b> IN HUMAN SOCIETY
<b>“RELIGION”</b> IN CELLULAR SOCIETY	→	<b>“RELIGION”</b> IN HUMAN SOCIETY
<b>“BEHAVIOR / NATURE”</b> IN CELLULAR SOCIETY	→	<b>“BEHAVIOR / NATURE”</b> IN HUMAN SOCIETY
<b>“PHILOSOPHY”</b> IN CELLULAR SOCIETY	→	<b>“PHILOSOPHY”</b> IN HUMAN SOCIETY
<b>GENERAL PRINCIPLES</b> IN CELLULAR SOCIETY	→	<b>GENERAL PRINCIPLES</b> IN HUMAN SOCIETY

<sup>54</sup> Life—the order to which foster the development, survival/resilience, functionality/purpose(s), and potential.

<sup>55</sup> —i.e., the ideas surrounding the relationships amongst the Order/disorder(s) of society.

We begin by establishing the ORDER of relationships. This order will establish the context for which we will understand correspondences mapped:

<b>HUMAN SOCIETY</b> (EMERGENCE OF CELLULAR ORGANIZATION & BEHAVIORS)		
<b>CELLULAR SOCIETY</b> Composing The Human Physiology	<b>B → T</b>	<b>HUMAN SOCIETY</b>
<p><i>CELLULAR SOCIETY, ESPECIALLY THE CELLULAR SOCIETY WHICH COMPOSES THE HUMAN PHYSIOLOGY, REPRESENTS THE MOST SOVEREIGN SOCIETY OF LIVING ORGANISMS. IT HAS PERFECTED ECONOMICS, LAW &amp; GOVERNANCE, PHILOSOPHY, ETC. FOR THE BEST INTERESTS OF EACH CELL AND THE ENTIRE SOCIETY—</i></p> <p><i>THE CELLULAR SOCIETY IS A MODEL OF EFFICIENCY FOR DEVELOPMENT, SURVIVAL, RESILIENCE, AND UNLIMITED POTENTIAL OF ITS SOCIETY AND THEREFORE ALL SOCIETIES, LARGE OR SMALL, SHOULD TAKE NOTICE AND LEARN.</i></p>		
<b>CELLS</b>	<b>B → T</b>	<b>PEOPLE</b>
<b>TISSUE</b>	<b>B → T</b>	<b>ORGANIZATIONS</b>
A GROUP OF CELLS WHO CARRY-OUT A SIMILAR TASK FOR SOCIETY.		A GROUP OF PEOPLE WHO PRODUCE A PARTICULAR GOOD/SERVICE FOR SOCIETY
<b>ORGAN</b>	<b>B → T</b>	<b>INDUSTRY</b>
AN ORGAN IS A COLLECTION OF ALL TISSUE WHICH PRODUCES THE SAME GOOD/SERVICE TO CELLULAR SOCIETY.		AN INDUSTRY THE COLLECTION OF ALL ORGANIZATIONS WHICH PRODUCE THE SAME PARTICULAR GOOD/SERVICE TO SOCIETY.
<b>ORGAN SYSTEMS</b>	<b>B → T</b>	<b>SECTORS OF THE ECONOMY</b>
ORGANS ARE GROUPED INTO ORGAN SYSTEMS, IN WHICH THEY WORK TOGETHER TO CARRY OUT A PARTICULAR FUNCTION FOR SOCIETY.		INDUSTRIES ARE GROUPED INTO SECTORS, IN WHICH THEY WORK TOGETHER TO CARRY-OUT A PARTICULAR FUNCTION FOR SOCIETY.
<b>BLOOD</b>	<b>B → T</b>	<b>MONEY / WEALTH</b>
BLOOD CIRCULATES THROUGHOUT CELLULAR SOCIETY, PROVIDING THE FUNDAMENTAL NEEDS FOR EVERY CELLS TO BE THE BEST THEY CAN BE AND TO CONTRIBUTE TO SOCIETY IN BEING THE BEST IT CAN BE. LACK OF DISTRIBUTION HINDERS SOCIETY.		WEATH CIRCULATES THROUGHOUT HUMAN SOCIETY, ESTABLISHING THE FUNDAMENTAL NEEDS FOR EVERY PERSON TO BE THE BEST THEY CAN BE AND TO CONTRIBUTE TO SOCIETY IN BEING THE BEST IT CAN BE. LACK OF DISTRIBUTION HINDERS SOCIETY.

<p align="center"><b>INEQUALITIES IN CELLULAR SOCIETY</b></p> <p>Unequal (Unnatural) distribution of resources amongst cellular society – For example, Symptoms which the body would experience from 20% of your body’s cells withholding 80% of your body’s resources (e.g. blood).</p>	<p><b>B → T</b></p>	<p align="center"><b>INEQUALITIES IN HUMAN SOCIETY</b></p> <p>The unequal distribution of goods, services, information and other resources within human society: Symptoms which society experience from 20% of the population withholding 80% of society’s wealth.</p>
<p align="center"><b>POVERTY IN CELLULAR SOCIETY</b></p> <p>POVERTY IN CELLULAR SOCIETY IS WHEN ONE OR MORE CELLS WITHIN THE BODY ARE NOT RECEIVING THE NECESSARY THINGS WHICH ESTABLISH THE FUNDAMENTAL NEEDS OF THE CELL(S) WHICH ARE PREVENTING THEM FROM PROPERLY DEVELOPING, THRIVING AND ACHIEVING THEIR POTENTIAL IN SUCH A MANNER THAT CONTRIBUTES TO SOCIETY IN BEING ABLE TO DEVELOP, SURVIVE (BE RESILIENT), AND ACHIEVE ITS POTENTIAL AS BEST AS IT CAN.</p>		<p align="center"><b>POVERTY IN HUMAN SOCIETY</b></p> <p>POVERTY IN HUMAN SOCIETY IS WHEN ONE OR MORE CELLS WITHIN SOCIETY ARE NOT RECEIVING THE NECESSARY THINGS WHICH ESTABLISH THE FUNDAMENTAL NEEDS OF THE PERSON(S) WHICH ARE PREVENTING THEM FROM PROPERLY DEVELOPING, THRIVING AND ACHIEVING THEIR POTENTIAL IN SUCH A MANNER THAT CONTRIBUTES TO SOCIETY IN BEING ABLE TO DEVELOP, SURVIVE (BE RESILIENT), AND ACHIEVE ITS POTENTIAL AS BEST AS IT CAN.</p>
<p align="center"><b>“LUNGS LIVES MATTER”</b></p> <p>CELLS WITHIN A CELLULAR SOCIETY THAT DO NOT RECEIVE THEIR FUNDAMENTAL NEEDS OR REQUIREMENTS NECESSARY FOR THEM TO DEVELOP, THRIVE, AND ACHIEVE THEIR OWN POTENTIAL WILL HINDER THEIR ABILITY TO PROPERLY PARTICIPATE IN SOCIETY AND RESULT IN A NATURAL RESPONSE FROM THAT GROUP OF CELLS, WHICH CAN RANGE FROM MILD INFLAMMATION TO AUTOIMMUNE DISEASES, ETC.</p> <p>THESE CHARACTERISTICS IN CELLULAR RESPONSE TO FUNDAMENTAL NEEDS NOT MET IS ANALOGOUS TO VARIOUS SOCIOECONOMIC MOVEMENTS, SUCH AS “BLACK LIVES MATTER.”</p>	<p><b>B → T</b></p>	<p align="center"><b>“BLACK LIVES MATTER”</b></p> <p>AFRICAN AMERICANS ARE RARELY AT THE TOP OF THE LIST FOR SOCIETY TO UNDERSTAND AND ADDRESS THEIR CONCERNS/PROBLEMS. THIS LACK OF SOCIETAL-LISTENING, AND/OR ACKNOWLEDGING AND ADDRESSING AND RESOLVING THOSE CONCERNS/PROBLEMS HAS RESULTED IN THE MOVEMENT OF “BLACK LIVES MATTERS.”</p> <p>BLACK LIVES MATTER IS AN “INFLAMMATION” OF CONCERN WITHIN THE AFRICAN AMERICAN COMMUNITY, HIGHLIGHTING A BIGGER PROBLEM THAT SOCIETY NEEDS TO RESOLVE BEFORE THAT COMMUNITY CAN BE FUNCTION WITHIN THE STANDARDS REQUIRED BY SOCIETY.</p>

<p style="text-align: center;"><b>NATIONALISM IN CELLULAR SOCIETY</b> “Our Organs Matter” or “Our Organ First”</p> <p>Shutting down of surrounding organs – to conserve important resources for cells within organs important to keeping the entire body alive.</p> <p>NATIONALISM IS A PHENOMENON IN CELLULAR SOCIETY WHERE FUNDAMENTAL RESOURCES ARE NOT PROPERLY DISTRIBUTED AMONGST ALLS CELLS WITHIN SOCIETY IN SUCH A MANNER WHERE THE CELLULAR SOCIETY WILL BEGIN TO SHUT DOWN RESOURCE DISTIRBUTION TO OTHER AREAS OF CELLULAR SOCIETY IN ORDER TO RESERVE ALL RESOURCES FOR ITSELF.</p> <p>SUCH CAN BE SEEN WHERE THE BODY WILL SHUT DOWN OTHER ORGAN SYSTEMS SO THAT ORGAN SYSTEMS (IMPORTANT TO THE ENTIRE SOCIETY) CAN STAY ALIVE.</p>	<p><b>B → T</b></p>	<p style="text-align: center;"><b>NATIONALISM IN HUMAN SOCIETY</b> “Our Nation Matters” or “Our Nation First”</p> <p>The shutting down of surrounding nations – to conserve important resources for people within more important nations.</p> <p>WHEN THE SOCIOECONOMIC ISSUES AND CONCERNS SPREAD TO AN ENTIRE NATION, IN SUCH A MANNER WHERE THE PEOPLE OF THAT NATION ARE CONCERNED WITH THEIR OWN SURVIVAL/NEEDS TO THE POINT WHERE THEIR SENTIMENT IS TO CUT OFF ALL AID AND COLLABORATION WITH OTHER NATIONS, SO THAT THEIR OWN NATION CAN ADDRESS THEIR CONCERNS FIRST.</p> <p>SIMILAR TO THE BLACK LIVES MATTER MOVEMENT, BUT INVOLVING NATIONS AT A LARGER SCALE—WHERE NOW A PARTICULAR NATION’S ISSUES MATTER MORE THAN ADDRESSING THE CONCERNS OF OTHER NATIONS.</p>
<p style="text-align: center;"><b>FUNDAMENTAL NEEDS IN CELLULAR SOCIETY</b></p> <p>ALL CELLS REQUIRE THE ESTABLISHMENT OF THEIR FUNDAMENTAL NEEDS.</p>	<p><b>B → T</b></p>	<p style="text-align: center;"><b>FUNDAMENTAL NEEDS IN HUMAN SOCIETY</b></p> <p>ALL HUMANS REQUIRE THE ESTABLISHMENT OF THEIR FUNDAMENTAL NEEDS, WHICH CAN BE SUMMARIZED WITH MASLOW’S HIERARCHY OF NEEDS:</p> <ul style="list-style-type: none"> <li>–PHYSIOLOGICAL NEEDS Air, Water, Food, Shelter, Sleep, Reproduction</li> <li>–SAFETY Personal Security, Employment, Resources, Opportunities</li> <li>–LOVE/BELONGING/COMMUNITY (DUTY) Friendship, Intimacy, Family, Sense of Connection</li> <li>–ESTEEM Respect, Self-Esteem, Status, Recognition, Strength, Freedom, (<i>RESPECT, ADMIRATION, PUBLIC ACKNOWLEDGEMENT OF PURPOSE/ ACTIVITIES/ACTIONS –NOT BEING TAKEN ADVANTAGE OF</i>)</li> <li>–SELF-ACTUALIZATION Desire to become the most that one can be</li> </ul>

<p style="text-align: center;"><b>HEALTHY CELLULAR SOCIETY</b></p> <p>Characteristics of a healthy cellular society is that which all systems, processes and their objects/ parts within cellular society function in a manner which establishes the fundamental needs of all cells within cellular society — so which to ensure the development, survival/resilience, diversity, potential of every cell within the body, in such a manner that naturally enables the cell to participate in the collective of society, so to enable society to a level which to best develop, survive, thrive, be resilient, and achieve its potentials.</p> <p>Indicators of an unhealthy cellular society:</p> <ul style="list-style-type: none"> <li>—Body’s processes working inefficiently in addressing issues, and distribution necessary resources amongst the body.</li> <li>—Existence of medications and other therapies which address specific cellular economic problems serve as a check engine light on cellular society’s inability to naturally address those concerns as a byproduct of a healthy functioning society.</li> </ul> <p>Examples of “check engine light” indicators are the existence of medication/therapies such as blood pressure pills, dialysis, gene therapies, any and all medications and therapies.</p>	<p><b>B → T</b></p>	<p style="text-align: center;"><b>HEALTHY HUMAN SOCIETY</b></p> <p>Characterisitics of a healthy human society is one which systems, processes and their objects/ parts function in a manner which establishes Maslow’s Hierarchy of needs amongst all people within society, which promotes diversity, dynamics, and resilience, robustness of the society and its parts (development and survival), potentiality of society, ability for society to quickly adapt to new situations, address problems, achieve goals, and have unlimited potential.— and which allows the entire society to [establish these necessary conditions].</p> <p>Indicators of a unhealthy human society:</p> <ul style="list-style-type: none"> <li>—Ownership of society’s infrastructure by 3rd parties. “Monetary Investors” create inefficiencies in distribution of wealth.</li> <li>—Existence of Nonprofits and other organizations which address specific socioeconomic problems serve as a check engine light on society’s inability to naturally address those concerns as a byproduct of a healthy functioning society.</li> </ul> <p>Examples of “check engine light” indicators are the existence of organizations such as Habitat for humanity, Feeding America, Salvation Army, US Fund for UNICEF, American Heart Association, United Way, such as poverty, hunger, cancer and other diseases, American Red Cross, American Cancer Society, ASPCA, Planned Parenthood, Direct Relief.</p>
<p style="text-align: center;"><b>HEALTHY CELLULAR SOCIETY ENABLES:</b></p> <p><b>ITSELF TO DEVELOP, SUSTAIN ITSELF, ROBUST/THRIVE, BE RESILIENT, ACHIEVE</b> The ability for The Human Body to achieve goals (climb a mountain, establish food source, DODGE BEING HIT BY A CAR)</p> <p>= Good Mutations (i.e. mutations in favor for the greater good of the entire body — for example, darker skin for sun-prone environments) = Societal pivots for the greater good of the entire of human civilization.  <del>Chemical Signals (Signal Molecules) = Internet/ Communication Infrastructure</del></p>		<p>Human Civilization’s ability to protect itself from external threats (e.g. Weather, Geologic, Asteroids/Meteroids, Solar Flare, etc.).</p>

<p><b>CELLULAR SOCIETY'S ABILITY TO ACHIEVE GOALS (AS A WHOLE SOCIETY)</b></p> <p>CLIMB A MOUNTAIN, BIKE ACROSS THE COUNTRY, ESTABLISH HOME GARDENING PROJECTS</p>		<p><b>HUMAN SOCIETY (AS A WHOLE) ABILITY TO ACHIEVE GOALS</b></p> <p>SUCH AS SPACE TRAVEL, TERRAFORMING ON THE MOON/MARS, REMEDIATE THE EARTH TO ESTABLISH SUSTAINABLE FOOD SOURCES. BUILDING CITIES UNDER WATER.</p>
		<p><b>UNHEALTHY SOCIETY</b></p> <p>STEPHEN HAWKING WAS A GREAT MAN, BUT THE CELLULAR SOCIETY WITHIN HIS BODY WAS HINDERED IN A SIMILAR FASHION AS TO CURRENT HUMAN SOCIETY IS HEADED. THE MIND CAN ONLY THINK SO MUCH, AT SOME POINT IT WILL HAVE TO DO, AND THE REST OF THE CELLULAR SOCIETY IS NOT TAKEN CARE OF, THEN CHANCES TO ACHIEVE</p>
<p><b>UNHEALTHY CELLULAR SOCIETY</b></p> <p><b>BAD CELLULAR ECONOMIC SYMPTOMS</b> OF CELLULAR SOCIETY NOT IN GOOD HEALTH</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>-Restricting resources to more important organs; Improper distribution of resources.</li> <li>-Inefficiency in addressing problems/issues; Slow to bounce back from a sickness.</li> <li>-[State examples of Inequality within the body];</li> <li>-[State examples of the internal mechanisms of the human body fighting itself, due to misunderstandings/miscommunication/bad].</li> </ul>		<p><b>UNHEALTHY ECONOMY</b></p> <p><b>BAD SOCIOECONOMIC SYMPTOMS</b> OF HUMAN SOCIETY NOT IN GOOD HEALTH</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>– POVERTY</li> <li>– HUNGER</li> <li>– Nationalism/Protectionism [Define].;</li> <li>– Inequalities [#BLACKLIVESMATTER].;</li> <li>– Crime/War/TERRORISM – [Define].;</li> </ul>
<p><b>CHEMOTHERAPY</b></p>	<p><b>B → T</b></p>	<p><b>NUCLEAR WAR</b></p>
<p><b>RED BLOOD CELLS</b></p> <p>CARRY'S OXYGEN AND NUTRIENTS TO ALL CELLS WITHIN CELLULAR SOCIETY. ESTABLISHES THE FUNDAMENTAL WEALTH NECESSARY FOR CELLS TO DEVELOP, THRIVE, AND ACHIEVE THEIR POTENTIAL.</p>		<p><b>MONEY / WEALTH = FOOD, SHELTER, RECREATIONAL ACTIVITIES, QUALITY OF LIFE</b></p> <ul style="list-style-type: none"> <li>– Fundamental wealth or money necessary to establish Maslow's Hierarchy of needs with each person.</li> </ul>

<p><b>CELLULAR SOCIETY'S ABILITY TO PROTECT ITSELF FROM EXTERNAL THREATS</b></p> <p>E.G. BALL BEING THROWN AT IT. GETTING HIT BY A CAR, ANOTHER PERSON ATTACKING YOU (BEING ABLE TO DEFEND ONESELF)</p>		<p><b>HUMAN CIVILIZATION'S ABILITY TO PROTECT ITSELF FROM EXTERNAL THREATS</b></p> <p>E.G. WEATHER, GEOLOGIC, ASTEROIDS/ METEROIDS, SOLAR FLARES, ETC.</p>
<p><b>CELLULAR SOCIETY'S ABILITY TO PROTECT ITSELF FROM INTERNAL THREATS</b></p> <p>SICKNESS, SUCH AS THE COMMON COLD. CELLULAR SOCIETY'S ABILITY TO QUICKLY RESPOND AND RESOLVE THE ISSUE, BRINGING BACK CELLULAR SOCIETY TO A STATE OF HOMEOSTASIS.</p>		<p><b>HUMAN SOCIETY'S ABILITY TO PROTECT ITSELF FROM INTERNAL THREATS</b></p> <p>EPIDEMICS, SUCH AS COVID-19 OUTBREAK. HUMAN SOCIETY'S ABILITY TO QUICKLY RESPOND AND RESOLVE THE ISSUE, BRINGING BACK HUMAN SOCIETY TO A STATE OF HOMEOSTASIS.</p>
<p><b>"CELLULAR LAW"</b> (i.e., DNA)</p> <p>DNA INFORMS CELLULAR SOCIETY OF ITS ECONOMICS, POLITICS, PHILOSOPHIES, SCIENCE, AND RELIGION. DNA PROVIDES ORDER, LOGIC/REASON TO SOCIETY, IT PROVIDES PROTOCOLS ON HOW TO RESPOND TO PARTICULAR SITUATIONS, HOW TO RESOLVE PROBLEMS IF THEY OCCUR. DNA TELLS CELLULAR SOCIETY HOW TO ESTABLISH AND MAINTAIN AND SUSTAIN ITSELF.</p> <p>CELLULAR LAW WAS DEVELOPED OVER BILLIONS OF YEARS OF EVOLUTION FOR THE BENEFIT OF THE ENTIRE SOCIETY OF CELLS. HUMAN LAW, NOT SO LONG.</p>	<p><b>B → T</b></p>	<p><b>"HUMAN LAW"—I.E., THE CONSTITUTION (US) AND OTHER LAWS FOR THE GOVERNANCE OF OTHER COUNTRIES</b></p> <p>NOTE: THE CONSTITUTION AND OTHER HUMAN LAWS WERE \ MADE BY MAN AND THEREFORE CONTAIN INEFFICIENCIES AND/ OR DISCORDANCES FROM THE LAWS OF LIFE DICTATED BY DNA.</p> <p>HOWEVER, THERE MAY BE INSTANCES WHERE HUMAN LAW OVERLAPS GENERAL PRINCIPLES OF THE LAWS OF LIFE (DNA), SUCH AS THE PHRASE "LIFE, LIBERTY AND THE PURSUIT OF HAPPINESS."</p> <p>OTHER</p>
<p><b>GOVERNANCE OF DNA</b></p>		<p>GOVERNANCE OF HUMAN LAW</p>
		<p>POLITICS</p>
<p><b>DEMOCRACY IN CELLULAR SOCIETY</b></p> <p>BY UNDERSTANDING THE NATURE OF DEMOCRACY IN CELLULAR SOCIETY, WE CAN UNDERTAND THE TRUE NATURE OF DEMOCRACY IN HUMAN SOCIETY.</p> <p>[EXPLAIN]</p>	<p><b>B → T</b></p>	<p><b>DEMOCRACY IN HUMAN SOCIETY</b></p>

<p style="text-align: center;"><b>COMMUNICATION INFRASTRUCTURE IN CELLULAR SOCIETY (SIGNALING MOLECULES)</b></p> <p>CELLULAR SOCIETY DOES NOT HAVE POLITICIANS, BUT RATHER AN ADVANCED COMMUNICATION NETWORK, ALONG WITH SPECIFIC PROTOCOLS FOR DIFFERENT TYPES OF CELLULAR-ECONOMIC EVENTS.</p> <p>ONCE AN EVENT OCCURS, INFRASTRUCTURE IN CELLULAR SOCIETY COMMUNICATE THE EVENT SO THAT THE BODY AND OTHER NECESSARY INFRASTRUCTURE ARE INFORMED AND CAN ANTICIPATE ANY NECESSARY ACTIONS THAT MAY BE REQUIRED AS A RESPONSE. [[HUMAN POLITICIANS ARE A SUBSTITUTE FOR THIS PROCESS. POLITICIANS EITHER MAKE THE DECISIONS FOR SOCIETY, AMENDING LAWS/DNA COMMUNICATING TO INFRASTRUCTURE WHAT NEEDS TO BE DONE]]</p>		<p><b>POLITICIANS IN HUMAN SOCIETY</b></p> <p>[[HUMAN POLITICIANS ARE AN INEFFICIENT SUBSTITUTE FOR THE NATURAL SIGNALLING MOLECULE PROCESS WITHIN CELLULAR SOCIETY. POLITICIANS EITHER MAKE THE DECISIONS FOR SOCIETY, AMENDING LAWS/ DNA COMMUNICATING TO INFRASTRUCTURE WHAT NEEDS TO BE DONE]]</p> <p>COMMUNICATORS OF WHATS HAPPENING WITHIN SOCIETY, SO THAT SOCIETY CAN VOTE ON WHAT IS TO BE DONE.</p> <p>DOERS. POLITICIANS ARE PEOPLE WHO COMMUNICATE WHAT NEEDS TO BE DONE, OR ISSUES DEMOCRACY (PUBLIC DEBATE), TO DETERMINE THE COURSE OF ACTION.</p>
<p style="text-align: center;"><b>DNA</b></p> <p>ie., Healthy / Noncorrupt DNA, which we will define as the DNA, or rules which that enables the development, survival, and potential all living things.</p>	<p><b>B → T</b></p>	<p><b>RELIGIOUS LAW, or GOD'S WORD,</b></p> <p>"Eating from the Tree of Life"</p>
<p style="text-align: center;"><b>SIGNALING MOLECULES</b></p> <p>Communication between cells and organs and organ systems. Communication amongst cellular society.</p>	<p><b>B → T</b></p>	<p><b>COMMUNICAITON</b></p> <p>Communication amongst human society, via phone, internet, face to face, social media, media, etc.</p>
<p><b>INABILITY TO PROPERLY COMMUNICATE AMONGST THE INFRASTRUCTURES OF CELLULAR SOCIETY —AS SO TO ESTABLISH AND MAINTAIN THE FUNDAMENTAL NEEDS OF ALL PEOPLE IN CELLULAR SOCIETY</b></p> <p>EXTREME CASES OF THIS COULD RESULT IN THE MISCARRIAGE OF CELLULAR SOCIETY.</p> <p>OTHER CASES, COULD RESULT IN DEFORMATIONS OF CELLULAR SOCIETY AND A HINDERANCE TO ITS ABILITIES/POTENTIALS</p> <p>The inability for CELLULAR CIVILIZATION (and any of its parts — infrastructures) to communicate with each other.</p>		<p><b>INABILITY TO PROPERLY COMMUNICATE AMONGST THE INFRASTRUCTURES OF HUMAN SOCIETY —AS SO TO ESTABLISH THE FUNDAMENTAL NEEDS OF ALL PEOPLE IN HUMAN SOCIETY</b></p> <p>EXTREME CASES OF THIS COULD RESULT IN THE MISCARRIAGE OF HUMAN SOCIETY.</p> <p>OTHER CASES COULD RESULT IN DEFORMATIONS OF HUMAN SOCIETY AND A HINDERANCE TO ITS ABILITIES/POTENTIALS</p> <p>The inability for human civilization (and any of its parts — infrastructures) to communicate with each other</p>

<p style="text-align: center;"><b>BIO-ECONOMICS</b> I.E., CELLULAR-ECONOMICS</p> <p>BIOECONOMIC PLAN, BIO-ECONOMIC GOVERNANCE, BIOECONOMIC IDEAS — ALL OF WHICH CONTRIBUTE TO THE DEVELOPMENT, POTENTIAL, AND SURVIVAL OF ALL CELLULAR ORGANISMS WITHIN THE BOD. ESTABLISHES “MASLOW’S HIERARCHY OF NEEDS” AMONGST OF ALL CELLS</p>	→	<p style="text-align: center;"><b>SOCIOECONOMICS</b> IN HUMAN SOCIETY</p> <p>ECONOMIC PLAN, SOCIOECONOMIC GOVERNANCE, SOCIOECONOMIC IDEAS — ALL OF WHICH CONTRIBUTE TO THE DEVELOPMENT, POTENTIAL, AND SURVIVAL OF ALL HUMANS WITHIN THE ECONOMY. ESTABLISHES “MASLOW’S HIERARCHY OF NEEDS” AMONGST OF ALL PEOPLE</p>
POLITICS IN CELLULAR SOCIETY	→	POLITICS IN HUMAN SOCIETY
RELIGION / SPIRITUALITY		RELIGION / SPIRITUALITY
PHILOSOPHY		PHILOSOPHY
SCIENCE // MATHEMATICS SCIENCE AND MATH		SCIENCE // MATHEMATICS

<b>SOCIOECONOMICS</b>		
<b>BIO-ECONOMICS</b> i.e., CELLULAR -ECONOMIC PHENOMENA	<b>B → T</b>	<b>SOCIOECONOMICS</b> i.e., SOCIOECONOMIC PHENOMENA
The concepts, ideas behind the mechanisms dealing with behind the production and allocation of resources amongst cellular society.  CELLULAR ECONOMIC PHENOMENA		The concepts, ideas behind the mechanisms dealing with the production and allocation of resources amongst human society
<b>CELLULAR ECONOMIC SYMPTOMS</b>  SYMPTOMS TO UNDERLYING PROBLEMS WITHIN CELLULAR SOCIETY		<b>SOCIOECONOMIC SYMPTOMS</b>  SYMPTOMS TO UNDERLYING PROBLEMS WITHIN HUMAN SOCIETY
<b>GOOD CELLULAR-ECONOMICS</b>		<b>GOOD ECONOMICS</b>
<b>BAD CELLULAR ECONOMICS</b>		<b>BAD ECONOMICS</b>
<b>DNA</b>  Cellular Economic Plan. There are good cellular economic plans and bad cellular economic plans.	<b>B → T</b>	<b>ECONOMIC PLAN / ECONOMIC GOVERNANCE</b>  There are good economic plans and bad economic plans.
<b>NATIONALISM IN CELLULAR SOCIETY</b>  "MY ORGAN FIRST!"		<b>NATIONALISM IN HUMAN SOCIETY</b>  "MY COUNTRY FIRST!"
<b>DEMOCRACY</b> in cellular society	<b>B → T</b>	<b>DEMOCRACY (GENERAL TERM)</b> in Human Society

<p style="text-align: center;"><b>DEMOCRACY (PROACTIVE)</b> in the cellular society</p> <p>Communication that enables society to sustain its operations in harmony with DNA (rules established for their society).</p> <p>Democracy in cellular society can be understood as the Communication and activities in harmony with DNA/laws/activities of cellular society in homeostasis, or perfect state of health).</p> <p>The collaborate-communication amongst cells, tissue, and organs, necessary to realize/address problems and maintain operations which enable the body to develop, survival and achieve goals/ task and its greats potentialities.</p> <p>- Proactive democracy has all communication infrastructure established necessary for the body to operate in good health (e.g. have all fundamental needs of its cells established and maintained).</p>	<p style="text-align: center;"><b>DEMOCRACY (PROACTIVE)</b> in human society.</p> <p>Communication that enables human society carry-out and sustain its day to day operations in harmony with laws that overlap the fundamental needs/interests of all individuals within society.</p> <p>(Order/Mechanisms of communication, or rather the process of communication amongst society to develop laws to coincide with a "greater Truth" — which benefits best interests of all people in human society, and all Life.) — Proactive communication</p> <p>- Proactive democracy (in society) has all communication infrastructure established necessary for human society to operate in good health (e.g. have all fundamental needs of its individuals established and maintained).</p>
<p style="text-align: center;"><b>DEMOCRACY (REACTIVE)</b> In Cellular Society</p> <p>Communication that enable cellular society to quickly understand a new situation and respond to it quickly and accurately, as so to keep cellular society in a state of homeostasis (perfect state of health).</p> <p>"Reactive <b>Democracy</b>" (reactive communication) in the human body — The communication amongst the cells, processes and systems within the body not in homeostasis — e.g. the communication within the body stimulated from the introduction of a flu virus into the body)</p>	<p style="text-align: center;"><b>DEMOCRACY (REACTIVE)</b> In Human Society</p> <p>Communication that enables human society to quickly understand a new situation and respond to it quickly and accurately, as so to keep human society in a state of homeostasis (perfect state of health).</p> <p><b>Democracy</b> (reactive communication) in human society.</p> <p>(The process of communicating amongst society to develop responses to socioeconomic stimuli) — Reactive communication</p>
	<p style="text-align: center;">STAKEHOLDERS</p>
<p style="text-align: center;"><b>INVESTOR</b></p>	<p style="text-align: center;"><b>INVESTOR (MONETARY)</b></p> <p>REPLACES ACTION WITH MONEY OR USES BOTH.</p>
<p style="text-align: center;"><b>INVESTOR</b></p>	<p style="text-align: center;"><b>INVESTOR NON-MONETARY SOCIAL CONTRIBUTOR</b></p>
<p style="text-align: center;"><b>GOOD INVESTOR</b></p>	<p style="text-align: center;"><b>GOOD INVESTOR</b></p>
<p style="text-align: center;"><b>BAD INVESTORS</b></p>	<p style="text-align: center;"><b>BAD INVESTORS</b></p>

<b>DEMOCRACY</b> IN CELLULAR SOCIETY		<b>DEMOCRACY</b> – PROACTIVE COMMS. IN HUMAN SOCIETY
<b>DEMOCRACY</b>		<b>DEMOCRACY</b> – REACTIVE COMMS.
<b> Dictatorship</b> GOOD TOTALITARIANISM		<b> Dictatorship</b> (GOOD) GOOD TOTALITARIANISM
<b> Dictatorship</b> BAD TOTALITARIANISM		<b> Dictatorship</b> (BAD) BAD TOTALITARIANISM
<b>TYRANNY</b> IN CELLULAR SOCIETY		<b>TYRANNY</b> IN HUMAN SOCIETY
		<b>REBELLIONS / CIVIL WARS / TERRORISM</b>
EDUCATION IN CELLULAR SOCIETY		<b>EDUCATION IN HUMAN SOCIETY</b>
<b>CHILDREN</b>  Embryonic Stem Cells (or Pluripotent Cells)		<b>CHILDREN</b>  Children (With the ability to become anything)
<b>TEACHING</b>  The stimulation which a totipotent, pluripotent cell needs in order to develop into a specific cell		<b>TEACHING</b>  The stimulation (teaching) which children/people need in order to specialize a particular job/career
<b>LOST CHILDREN</b>  Keloid/Tumor (i.e. Nonfunctional bodily tissue)		People not living up to their current potential
Keloid cells and tissue which can be stimulated to function as part of the healthy human body.		“Keloid people/groups” which can be stimulated to become part of a healthy society.
Keloid cells/tissue which <i>cannot</i> be stimulated to function as part of the healthy human body.		“Keloid people/groups” which <i>cannot</i> be stimulated to function as part of a healthy society.
<b>ADULT STEM CELLS</b>		<b>TEACHERS</b> IN HUMAN SOCIETY  MATURE / EDUCATED ADULTS

<p style="text-align: center;"><b>EMBRYONIC STEM CELLS</b> “PLURIPOTENCY”, MULTIPOTENCY</p> <p>YOUNG CELLS THAT CAN DEVELOP INTO ANY OF THE ROLES (CELL TYPES) WITHIN CELLULAR SOCIETY.</p> <p>PLURIPOTENT CELLS CAN GIVE RISE TO ALL OF THE CELL TYPES THAT MAKE UP THE BODY; EMBRYONIC STEM CELLS ARE CONSIDERED PLURIPOTENT. MULTIPOTENT CELLS CAN DEVELOP INTO MORE THAN ONE CELL TYPE, BUT ARE MORE LIMITED THAN PLURIPOTENT CELLS; ADULT STEM CELLS AND CORD BLOOD STEM CELLS ARE CONSIDERED MULTIPOTENT.</p> <p>Oligopotent cells are more restricted than multipotent, but can still differentiate into a few closely related cell types. Finally, <b>unipotent cells</b> can differentiate into only one cell type, but are capable of self-renewal.</p>	<p><b>CHILDREN / LEARNERS</b> – BEFORE THEY FIGURE OUT THEIR PURPOSE/CAREERS</p> <p>YOUNG PEOPLE WHO CAN DEVELOP INTO ANY OF THE ROLES (CAREERS) WITHIN HUMAN SOCIETY.</p> <p>SOME CHILDREN HAVE THE ABILITY TO DO ANY TASK WELL—THESE CHILDREN WOULD BE CONSIDERED “PLURIPOTENT.” OTHER CHILDREN ARE LIMITED ON THE TYPES OF TASKS THEY CAN LEARN AND PERFORM—THESE CHILDREN ARE MULTIPOTENT, OR</p>
<p style="text-align: center;"><b>KELOID</b> DEVELOPMENT AMONG STEM CELLS</p> <p>KELOID DEVELOPMENT AMONG CELLS OCCURS WHEN STEM CELLS ARE IMPLANTED INTO A SPINAL CORD WITHOUT THE PROPER STIMULATION WHICH ENCOURAGES THE STEM CELL TO TAKE ON THE ROLE OF A SPINAL CORD CELL. THIS LACK OF STIMULATION TO TAKE ON A PARTICULAR ROLE WITHIN THE BODY, PRODUCED A KELOID.</p>	<p><b>PEOPLE WHO ARE STUCK IN A JOB THEY DONT WANT TO DO AND THEREFORE BECOME INEFFICIENT AT IT OR JUST MILK THE JOB FOR A PAYCHECK</b></p> <p>SIMILAR TO UNMOTIVATED PEOPLE IN VARIOUS INDUSTRIES. PEOPLE ARE PLACED INTO ROLES THAT THEY MAY NOT HAVE BEEN PROPERLY EDUCATED/STIMULATED TO CARRY-OUT, LEADING TO THEM BECOMING A “KELOID” (OR UNMOTIVATED, UNINSPIRED, INEFFICIENT INDIVIDUAL) IN THAT POSITION.</p>

<p style="text-align: center;"><b>QUALITY OF LIFE IN CELLULAR SOCIETY</b></p> <p>QUALITY OF LIFE IN CELLULAR SOCIETY CAN BE MEASURED BY MEASURING THE ENTIRE SOCIETIES ABILITY TO ACHIEVE GOALS, REACH ITS POTENTIALS, SUSTAIN ITSELF, QUICKLY ADAPT TO NEW SITUATION, BE ROBUST AND RESILIENT TO INTERNAL AND EXTERNAL THREATS.</p> <p>ANY DEGRADATION IN CELLULAR SOCIETY'S ABILITY TO MAINTAIN THESE KEY PERFORMANCE INDICATORS (KPI) HIGHLIGHTS A DEGRADATION IN QUALITY OF LIFE WITHIN CELLULAR SOCIETY.</p> <p>WE KNOW THAT CELLS ARE NOT FORCED (VIA SLAVERY) TO PERFORM TASK/ROLES WITHIN THE BODY, OR ELSE THOSE CELLS WOULD BECOME KELOIDS/TUMOROUS. THEREFORE, ALL CELLS WITHIN A HEALTHY BODY ARE DOING EXACTLY WHAT THEY WANT TO DO.</p> <p>LET US NOTE THAT UNLIKE CELLULAR SOCIETY, HUMAN SOCIETY HAS "ORIGINAL SIN" OR THE ABILITY TO DISREGARD ALL LAW AND DO WHATEVER, THINK WHAT, BE WHATEVER—HAVE LEISURE.</p>	<p><b>B → T</b></p>	<p style="text-align: center;"><b>QUALITY OF LIFE IN HUMAN SOCIETY</b></p>
<p><b>WORK</b> IN CELLULAR SOCIETY</p>		<p><b>WORK</b> IN HUMAN SOCIETY</p>
<p style="text-align: center;"><b>WORKER'S UNION</b> (FOR CELLS)</p> <p>DNA CODE WHICH PREVENTS WORKERS FROM BEING EXPLOITED</p> <p>THE DNA CODE ALLOWS FOR ALL CELLS TO RECEIVE THE PROPER CONDITIONS TO DO THEIR JOB.</p> <p>CELLS WITHIN A CELLULAR SOCIETY DO NOT NEED A WORKERS UNION AS THE RULES FOR THE JOB ARE EMBEDDED INTO</p>	<p><b>B → T</b></p>	<p style="text-align: center;"><b>WORKER'S UNION</b> (FOR HUMANS)</p> <p>LAWS FORMED BY A GROUP OF WORKERS (THE UNION) SO TO PROTECT THE RIGHTS OF THE WORKERS, PREVENTS THE WORKERS FROM BEING EXPLOITED.</p> <p>WORKER'S UNIONS ARE A BYPRODUCT OF A FAULTY ECONOMIC SYSTEM WHICH ALLOWS FOR EXPLOITATION OF WORKERS.</p> <p>WE CAN WITNESS THE INEFFICIENCIES OF HUMAN SOCIETY BASED OF THE NEED FOR WORKERS UNIONS AND AMENDMENTS FOR MORE RIGHTS TO THE WORKERS.</p> <p>THE ADVENT OF A WORKERS UNIION HIGHLIGHTS INEFFICIENCIES IN OUR ECONOMY'S ABILITY TO SUSTAIN THE FUNDAMENTAL NEEDS OF ITS PEOPLE.</p>

		<p><b>DUTY (RESPONSIBILITY)</b> –to establishing and maintaining society.</p> <p>IT IS HUMANITY’S DUTY TO UPHOLD THE INFRASTRUCTURE WHICH ESTABLISHES AND MAINTAINS THEIR EFFICIENCY OF LIFE, AND ABILITY TO ATTAIN POTENTIAL AND ACHIEVE GOALS GREATER THAN WE COULD EVER ACHIEVE ON OUR OWN.</p>
<p><b>PURPOSE</b> IN CELLULAR SOCIETY. WITH REGARDS TO PURPOSE IN SOCIETY</p>		<p><b>PURPOSE</b> IN HUMAN SOCIETY.</p>
		<p><b>INNOVATION</b></p>
		<p><b>PATENTS ON INNOVATION</b></p>
		<p><b>POLITICS</b></p>
		<p><b>GOOD POLITICS</b></p>
		<p><b>STAKEHOLDER CAPITALISM</b></p> <p><a href="#">Stakeholder capitalism</a> is a system in which corporations are oriented to serve the interests of all of their stakeholders.</p>
<p><b>SHAREHOLDER</b> IN CELLULAR SOCIETY  CANCER, or PARASITE THAT WANTS THE INFRASTRUCTURE TO CONTINUE ON SO THAT THEY CAN BENEFIT FROM IT EVEN AT THE COST OF CELLULAR SOCIETY, UP TO BEFORE THE POINT, BUT NOT CROSSING THE POINT OF COLLAPSE OF THE INFRASTRUCTURE</p>		<p><b>SHAREHOLDER</b> IN HUMAN SOCIETY</p>

<p><b>GOOD POLITICS (NON-CORRUPT) IN CELLULAR SOCIETY.</b></p> <p><i>Good Politics (Non-corrupt Politics)</i> within cellular society— the activities associated with the governance within cellular society, its systems, and/or processes in a manner which successfully establishes all the fundamental needs of all cells within the body, and whose communication amongst cells and the infrastructure of their society and their activities quickly and accurately address any new events/scenarios within cellular society which try remove cellular society from a state of homeostasis health— or rather, the environment necessary for the entire cellular society to have fully optimized its ability to achieve greater goals (i.e. the natural stresses imposed onto the body by running a marathon, or climbing a mountain).</p> <ul style="list-style-type: none"> <li>- Quick &amp; Accurate communication of real-time events amongst systems, processes, cells and parts, and</li> <li>- Quick and accurate allocation of resources;</li> <li>- Accurate distribution of information and resources amongst the body (in harmony with healthy/perfect DNA);</li> <li>- Fundamental needs of all individuals are established and maintain.</li> <li>- Needs of any cells and of the the infrastructure of their society are communicated, listened to and addressed in a swift manner that maintains healthy functions of cellular society.</li> </ul>		<p><b>GOOD POLITICS (NON-CORRUPT) IN HUMAN SOCIETY.</b></p> <p><i>Good Politics (Non-corrupt Politics)</i> within human society — the activities associated with the governance of of human society, its systems, and/ or processes in a manner which successfully establishes all the fundamental needs of all people within society, and whose communication amongst people and infrastructure and their activities quickly and accurately address any new events/scenarios within cellular society which try remove human society from a state of homeostasis health— or rather, which tries to remove human society from an environment necessary for the entire human society to be fully optimized in its ability to achieve greater goals (i.e. the natural stresses imposed onto human society from weather, geological, and astrophysical events).</p> <ul style="list-style-type: none"> <li>- Quick &amp; Accurate communication of real-time events amongst systems, processes, cells and parts, and</li> <li>- Quick and accurate allocation of resources;</li> <li>- Accurate distribution of information and resources amongst the human society as so to establish Maslow’s Hierarchy of Needs amongst all people.</li> <li>- Fundamental needs of all individuals are established and maintain.</li> <li>- Needs of any individuals and of the infrastructure of their society are communicated, listened to and addressed in a swift manner that maintains healthy functions of human society.</li> </ul>
		<p><b>BAD POLITICS</b></p>
<p style="text-align: center;"><b>FAULTY DNA</b></p> <p>DNA THAT DOES NOT BENEFIT THE DEVELOPMENT, SURVIVAL/RESILIENCE, LIFE, PROGRESSION, SURVIVAL, POTENTIAL OF ALL CELLS WITHIN SOCIETY.</p>		<p style="text-align: center;"><b>FAULTY LAWS</b></p> <p>HUMAN LAWS THAT DO NOT BENEFIT THE DEVELOPMENT, SURVIVAL/RESILIENCE, LIFE AND POTENTIAL OF ALL PEOPLE WITHIN SOCIETY.</p>
<p style="text-align: center;"><b>FAULTY GOVERNANCE</b></p> <p>CAUSED BY FAULTY DNA OR CELLS NOT CARRYING-OUT THE TASK WHICH SHOULD BE CARRIED OUT.</p>		<p style="text-align: center;"><b>FAULTY GOVERNANCE</b></p>

<p style="text-align: center;"><b>BAD GENETIC MUTATIONS IN DNA</b></p> <p>MUTATIONS WHICH PUT A FEW OR THE ENTIRE CELLULAR SOCIETY AT RISK. CELLULAR SOCIETY PIVOTS FOR THE BENEFIT OF A FEW, AT THE COST/WELFARE OF THE ENTIRE CELLULAR SOCIETY.</p> <p>Bad Mutations in the human body (i.e. cancer) = Societal pivots for the benefit of a few, at the cost (welfare of the entire human civilization).</p>	<p style="text-align: center;"><b>BAD MUTATIONS IN HUMAN LAW</b></p> <p>AMENDMENTS TO LAWS WHICH PUT A FEW OR THE ENTIRE CELLULAR SOCIETY AT RISK. HUMAN SOCIETY PIVOTS FOR THE BENEFIT OF A FEW, AT THE COST/WELFARE OF THE ENTIRE CELLULAR SOCIETY.</p> <p>WE CAN SEE THIS IN THE INHERENT NATURE OF <i>FOR-PROFIT</i> ORGANIZATIONS. MOST FORPROFIT ORGANIZATIONS SERVE THE INVESTORS INTEREST'S FIRST—WHICH IS TYPICALLY MONEY, BY ANY MEANS POSSIBLE, OR LEGAL, OR WHAT CAN BE MADE LEGAL (INTEREST GROUPS).</p>
<p style="text-align: center;"><b>GOOD MUTATIONS IN "CELLULAR LAW"</b></p> <p>MUTATIONS TO DNA WHICH FAVOR THE GREATER GOOD OF THE ENTIRE CELLULAR SOCIETY.</p>	<p style="text-align: center;"><b>GOOD MUTATIONS IN HUMAN LAW</b></p> <p>AMENDMENTS TO LAWS WHICH FAVOR THE GREATER GOOD OF THE ENTIRE HUMAN SOCIETY.</p>
<p style="text-align: center;"><b>PATENTS IN CELLULAR SOCIETY</b></p> <p>The concept of patents within the body refers to the phenomenon of certain parts of the body limiting the efficiency and effectiveness of systems, processes, and objects within the body. This restriction results in only a few cells or tissues being able to operate efficiently and effectively. This condition is known as Ataxia.</p> <p>The idea behind this concept is that the body prevents other parts of itself from having efficient and effective systems, processes, and objects that contribute to the production and distribution of information and resources throughout the body. This restriction is believed to be in the best interest of the overall well-being of the body.</p> <p>Essentially, this concept suggests that certain parts of the human body restrict the development of efficient and effective systems, processes, and objects that contribute to the production and distribution of resources throughout the entire body. By preventing the establishment of an optimally efficient and effective body, this phenomenon hinders the manifestation of the body's full potential for health, diversity, and unlimited possibilities.</p>	<p style="text-align: center;"><b>PATENTS IN HUMAN SOCIETY</b></p> <p>The idea is that anyone, any organization, or any law that limits efficient and effective systems, processes, or their components that contribute to the production and distribution of goods, services, information, and resources to benefit society as a whole.</p> <p>Hence, it is necessary for all sectors of society to have complete transparency in all innovations and to remove any restrictions such as patents on those innovations. This will enable all sectors of society to better understand, adapt, update, and operate their systems and processes in a harmonious and efficient manner, similar to how the human body functions with transparency and without restricting its efficient and effective systems, processes, and components.</p>

<p style="text-align: center;"><b>TAXES IN CELLULAR SOCIETY</b></p> <p>withdrawing additional resources from cells, which are used to ESTABLISH THEIR FUNDAMENTAL NEEDS).</p> <p>Taking away resources from cells which would other wise be used to establishing and maintaining their fundamental needs.</p>	<p style="text-align: center;"><b>TAXES IN HUMAN SOCIETY</b></p> <p>Taxes are extra resources demanded from a people of society in order to address the fundamental needs of society (VIA OTHER PROGRAMS) due to the inability for the overall-society to inherently address those fundamental needs through its regular operations.</p> <p>Taxes are additional (inefficient/ineffective) processes to a system — or excessive functions within an equation).</p> <p>THE EXISTENCE OF A TAX REVEALS THE INEFFICIENCY OF A SOCIETY</p>
	<p><b>Communism.</b></p> <p>The understanding that fundamental needs of people need to be met via a socioeconomic system which needs to measure, communicate, manage and regulate the resource amongst society, but does not understand the mechanisms necessary to establish/maintain these requirements.</p>
<p>Good Communism within the human body.</p> <p>The cells of the body understanding both the goals of the body and the mechanisms of governance necessary to produce and allocate the resources amongst the body.</p> <p>The understanding of the end result (of which a system which a), but not having the system which to accurately measure/quantify, regulate (manage), the production and allocation</p>	<p><b>Good Communism</b> (Same as Good Capitalism)</p> <p>The understanding that all people own all infrastructures within society in a manner which establishes the fundamental needs of all people within society.</p>
<p><b>Bad Communism</b> within the human body.</p> <p>Corrupt/No infrastructures to communicate the production and allocation of goods and services;</p> <p>***NOTE: Communism is an Ideal (result, or state, due to a process — of Capitalism). Capitalism is strictly a process which maintains social and economic Order — relative to the Ideal (which may be in favor for an individual(s), or the entire society)</p>	<p><b>Bad Communism</b> (Historic/Failed Communism)</p> <p>[Not understanding and/or. having in place the systems/processes/objects/parts of a system to communicate and carry-out the activities necessary to produce and allocate the resources amongst society to establish — thus resulting to a single entity establishing absolute authority over processes in a manner which is out of harmony to what is best for the entire society (values of True Communism).</p>

<p style="text-align: center;"><b>CAPITALISM IN CELLULAR SOCIETY</b></p> <p>The cells within the body having established a system which produce and allocate resources amongst the body, BUT DO NOT have a limit, or rules which prevent the exploitation of these processes.</p>		<p style="text-align: center;"><b>CAPITALISM IN HUMAN SOCIETY</b></p> <p>The understanding and implementation of a socioeconomic system which to measure, communicate, manage, regulate the production and allocation of resources amongst society, but without the understanding of an idea of how to do it in favor for all people.</p>
<p>The cells within the body having established a system of rules which produce and allocate resources amongst the body, BUT WHOSE system is exploited by many cells. (i.e. cancers/tumors in various organ systems)</p>		<p><b>Bad Capitalism.</b></p> <p>[Exploitation of systems, processes, objects/parts for the benefit of a few].</p>
<p>The ability The discovery and utilization of a governing-system to accurately measure/quantify the production and allocation of resources within a system, so to maintain the fundamental needs of the cells within the system</p>		<p><b>Good Capitalism.</b> (Same as good Communism)</p> <p>[No Exploitation of System/Processes/Objects, for the benefit of the few].</p>
<b>CAPITALISM AND COMMUNISM SYMBIOSIS</b>		
<p style="text-align: center;"><b>CRIME IN CELLULAR SOCIETY</b></p> <p>“Crime” within the body — activities carried-out by a cell, or group of cells, in which the end-result of the activities hinder the development, survival diversity, dynamics, and potential of the body to ensure the development, survival, dynamics, and potential of all Life.</p>		<p style="text-align: center;"><b>CRIME IN HUMAN SOCIETY</b></p> <p>Crime within human society — activities carried-out by a person, or group/organization of people, in which the end-result of the activities hinders the development, survival, diversity, dynamics, and potential of a community/society, in harmony with the Laws of Life.</p>
<p style="text-align: center;"><b>REASONS FOR “CRIMINAL BEHAVIOR”</b></p> <ul style="list-style-type: none"> <li>—Lack of fundamental needs;</li> <li>- Lack of correct information to conduct the tasks at hand;</li> <li>- Lack of fundamental needs, whereby the cells, tissues, carryout processes which affect systems -- thus the overall health of the body.</li> <li>- “Crime” within the body</li> <li>- Lack</li> </ul>		<p style="text-align: center;"><b>REASONS FOR “CRIMINAL BEHAVIOR”</b></p> <ul style="list-style-type: none"> <li>—Lack of fundamental needs provided by society, forces individual to revert back to “cellular wilderness” to obtain the fundamental needs themselves.</li> <li>—Lack of fundamental needs</li> <li>- Lack of correct information: people cannot do what is right unless they have the information to do what is right</li> <li>- Crime (or activities which benefit the individual person or group/organization of people at the expense of a community — thus entire society;</li> <li>-</li> </ul>

<b>RELIGION / SPIRITUALITY</b>		
<b>RELIGION IN CELLULAR SOCIETY</b>	<b>B → T</b>	<b>RELIGION IN HUMAN SOCIETY</b>
"Religion" is to Cellular Society as "Religion" is to Human society		"Religion" is to human society as "Religion" is to cellular society.
<b>DNA</b>	<b>B → T</b>	<b>RELIGIOUS TEXT</b> (e.g. Bible, Koran, Torah)
"DNA, as the sacred text for cellular organisms, holds unparalleled significance within their biological tradition. It encompasses a compilation and discussion of foundational beliefs, ritual practices, moral commandments, ethical conduct, spiritual aspirations, and admonitions for fostering a harmonious cellular community. Just as religious texts offer guidance to followers, DNA provides essential instructions for cellular organisms, dictating their core principles, regulating their biological rituals, guiding their moral behavior, shaping their growth and development, and directing their overall functioning. It serves as the ultimate source of wisdom and guidance for cellular organisms, enabling them to thrive within their intricate and interconnected ecosystems."		<b>Religious texts</b> , including <b>scripture</b> , are <b>texts</b> which various <b>religions</b> consider to be of central importance to their religious tradition. They often feature a compilation or discussion of beliefs, ritual practices, moral commandments & <b>laws</b> , ethical conduct, spiritual aspirations, and admonitions for fostering a religious community.
<b>DNA LAW, OR DNA'S WORD IN CELLULAR SOCIETY</b>	<b>B → T</b>	<b>RELIGIOUS LAW, or GOD'S WORD IN HUMAN SOCIETY</b>
<p>RELIGIOUS LAW IS ABIDING BY THE LAWS OF GOD—WHO IS THE UNIVERSE, PERSONIFIED, WHOSE NATURE IS BIOLOGICAL AND WHOSE PATTERNS GOVERN ALL OF CREATION.</p> <p>CELLULAR ORGANISMS MUST ABIDE BY THESE RULES OF THE BIOLOGICAL UNIVERSE, OR ELSE EXPERIENCE THE HELLS FROM NOT DOING SO, OF WHICH THE EXTREME IS DEATH.</p> <p>ie., Healthy / Non-corrupt DNA, which we will define as the DNA, or rules which that enables the development, survival, and potential all living things.</p>		<p>JUST AS CELLULAR SOCIETIES MUST ABIDE BY THE GENERAL PRINCIPLES INSTILLED UPON CREATION BY THE NATURE OF BIOLOGICAL UNIVERSE, SO TO DOES HUMAN SOCIETY MUST ABIDE BY THE GENERAL PRINCIPLES WHICH ESTABLISH AND SUSTAIN LIFE OF THEMSELVES AND THEIR SOCIETY, OR ELSE EXPERIENCE THE HELLS INDIVIDUALLY AND/OR AS A SOCIETY, UNTIL DESTRUCTION OR DEATH.</p> <p>"Eating from the Tree of Life"—UNDERSTANDING THINGS RELATIVE TO THE PRINCIPLES REQUIRED FOR LIFE.</p>

<p style="text-align: center;"><b>HEAVEN</b> IN CELLULAR SOCIETY</p> <p>THE ORGANIZATION OF CELLULAR SOCIETY IN A STATE OF PERFECT HEALTH.</p> <p>“HEAVEN” IS PERFECTLY REPRESENTED BY THE CELLULAR SOCIETY COMPOSING THE HUMAN BODY, IN THE STATE WHERE ALL FUNDAMENTAL NEEDS ARE MET TO THE DEGREE WHICH ESTABLISHES AND SUSTAINS THE DEVELOPMENT, SURVIVAL /RESILIENCE, AND POTENTIAL OF ALL CELLULAR ORGANISMS WITHIN CELLULAR SOCIETY.</p> <p>HEAVEN IS TO CELLS HEAVEN IS REPRESENTED BY A HEALTHY HUMAN BODY.</p> <p>ANY DEGREE OF UNHEALTHINESS REVEALS A DEGREE OF HELL EQUIVALENT TO THE DEGREE OF UNHEALTHINESS.</p>	<p><b>B → T</b></p>	<p style="text-align: center;"><b>HEAVEN</b> IN HUMAN SOCIETY</p> <p>THE ORGANIZATION OF HUMAN SOCIETY IN A STATE OF PERFECT HEALTH.</p> <p>TRADITIONALLY: Heaven is often described as a "highest place", the <a href="#">holiest</a> place, a <a href="#">Paradise</a>, in contrast to <a href="#">hell</a> or the <a href="#">Underworld</a> or the "low places" and <a href="#">universally</a> or conditionally accessible by earthly beings according to various standards of <a href="#">divinity</a>, <a href="#">goodness</a>, <a href="#">piety</a>, <a href="#">faith</a>, or other <a href="#">virtues</a> or <a href="#">right beliefs</a> or simply <a href="#">divine will</a>. Some believe in the possibility of a heaven on Earth in a <a href="#">world to come</a>.</p> <p>BECAUSE GOD IS THE PERSONIFICATION OF THE UNIVERSE. AND BECAUSE THE UNIVERSE IS BIOLOGICAL IN NATURE. AND BECAUSE OUR BODIES CONTAIN HEAVEN WITHIN US, VIA THE ORGANIZATION OF THE SOCIETY OF LIVING ORGANISMS WHICH COMPOSE US, HEAVEN MUST BE HUMAN SOCIETY’S ABILITY TO ACHIEVE A LEVEL OF ASSIMILATION TO THAT SOCIETY, OF WHICH REQUIRES A SAME LEVEL OF GENERAL PRINCIPLES, PHILOSOPHIES, AND “GODLY LAWS” IN ORDER TO ATTAIN.</p> <p>WITH REGARDS TO BIOLOGICAL PATTERNS: HEAVEN ON EARTH IS ATTAINED WHEN HUMAN SOCIETY CAN PROPERLY EXECUTE IN MIMICKING THE ORDER OF A HEALTH CELLULAR SOCIETY.</p>
<p style="text-align: center;"><b>HELL</b> IN CELLULAR SOCIETY</p> <p>HELL IS ANY DEGREE AWAY FROM THE STATE OF PERFECT HEALTH WITHIN CELLULAR SOCIETY. ANY CELLULAR ORGANISM WITHIN THE BODY MAY ENDURE A HELL, PRIOR TO SOCIETY AS A WHOLE BEING AFFECTED.</p>		<p style="text-align: center;"><b>HELL</b> IN HUMAN SOCIETY</p>
<p style="text-align: center;"><a href="#">EVIL</a> IN CELLULAR SOCIETY</p> <p><a href="#">Any system, process, object, idea, or relationship that hinders the perfect health/Life of a cellular organism and/or its society or environment, and prevents it from developing and achieving its potential.</a></p>		<p style="text-align: center;"><a href="#">Evil (religious).</a> IN HUMAN SOCIETY</p> <p><a href="#">Any system, process, object, idea, or relationship that hinders the perfect health/Life of human society, its environment, and all Life.</a></p>
<p style="text-align: center;"><b>ANGELS</b> IN CELLULAR SOCIETY</p>		<p style="text-align: center;"><b>ANGELS</b> IN HUMAN SOCIETY</p>

		DEMONS
<p><b>MISCONCEPTION OF CELLULAR SOCIETY</b></p> <p>Cellular society's inability to communicate and work together in developing inside the mother's womb, to the point where the society of cells fail and a misconception of the baby occurs.</p>	<b>B → T</b>	<p><b>"TOWER OF BABEL"</b> (or MISCONCEPTION OF HUMAN SOCIETY)</p> <p>Human society failing to communicate with each other to scale human civilization, thereby leading to the misconception of human society.</p>
<p><b>TRUE RELIGION</b> IN CELLULAR SOCIETY</p> <p>MATHEMATICS AND SCIENCE RELATIVE TO BIOLOGICAL PATTERNS—ESPECIALLY THOSE WHICH ESTABLISH AND SUSTAIN THE DEVELOPMENT, RESILIENCE, AND POTENTIAL OF LIFE, OF THE CELLULAR SOCIETY.</p>		<p><b>TRUE RELIGION</b> IN HUMAN SOCIETY</p> <p>MATHEMATICS AND SCIENCE RELATIVE TO BIOLOGICAL PATTERNS—ESPECIALLY THOSE WHICH ESTABLISH AND SUSTAIN THE DEVELOPMENT, RESILIENCE, AND POTENTIAL OF LIFE, OF THE CELLULAR SOCIETY.</p>
<p>The phenomenon of the body's ability to protect itself from itself (i.e. protect itself from processes which ultimately harm a few or great)</p>		<p>Muslim Religion (The religion of the body's ability to protect itself from itself)</p>

<p>“Religion” within the body — The cultural system of designated behaviors and practices, morals, bodily views, text/data/information (DNA), predictions based off that data (prophecy):</p> <p>The body’s “preaching” of a sovereign Order which maintains the optimal cells, processes, systems, and their parts.</p> <p>The culture system of designated relationships amongst cells and their environment, in a manner which overlaps their purpose, duty, morals, understanding, actions, logic, order.</p> <ul style="list-style-type: none"> <li>- Provides instruction;</li> <li>- Provides order;</li> <li>- Provides understanding (Or bare minimal understanding of Order, Empathy &amp; Logic for those not capable to understand the analogical logic/teachings within the text);</li> <li>- Provides purpose;</li> </ul> <p>*If cells within your body could “preach” the relationships necessary for all cells to get along, purpose, of a higher order of relationships amongst other cells, to a law expressed by a more powerful and inherent law, relative to their reality”</p>		<p><b>Religion</b> (e.g. Catholicism, Christian, Buddhism) within society.</p>
<p style="text-align: center;"><b>PROPHECY IN CELLULAR SOCIETY</b></p> <p>UNDERSTANDING THE CONSEQUENCES/ OUTCOMES FROM PARTIUCLAR ORGANIZATION OF CELLULAR SOCIETY</p> <p>Knowing the future biological situations/ consequences of current biological conditions;</p> <p>Or the the knowledge (or predictions) of inevitable situations/stages of the human physiology/ biology/form.</p> <p>Knowing that cells in the body will experience particular symptoms given the current intake of sugar (i.e. diabetes), before those particular symptoms are actually experienced by the cells.</p>		<p style="text-align: center;">PROPHECY IN HUMAN SOCIETY</p> <p>The concept of <b>Prophecy</b> within human society.</p> <p>The knowledge (or predictions) of inevitable situations/stages of human society and Life.</p> <p>Prophecy amongst ignorant, and science amongst the adept.</p> <p>Knowing.</p>
<p>The scientifically and mathematically precise understanding of the relationships between any part(s) of the systems within the body.</p>		<p>The understanding of Science &amp; Mathematics (precise). Economics, Biology, Ecology, etc.</p>

<p>The body's meta-interpretation (or analogical interpretation), or epic-story-interpretation of DNA.</p>		<p>Religion.</p>
<p>The body's exact interpretation of DNA</p>		<p>Science/Mathematics (or True Religion).</p>
<p>The body's loose interpretation of DNA.</p>		<p>Bad/Vague Religion; Bad/Vague Science/Mathematics;</p>
<p>Coding within the DNA (which explains the relationships amongst all things in and outside the body, and the consequences of particular relationships not established, or of particular relationships established).</p> <p>[What part of DNA — the nonscientific understanding/preaching of Order, Empathy, Logic necessary for the Life of the entire body].</p>		<p>Religious Text (e.g. Bible, Koran, Torah)</p> <p>Law — the nonscientific (surreal) understanding of the Order, Empathy, Logic (laws) necessary for the Life of Man.</p>
<p>DNA (perfectly healthy).</p> <p>The "stories" which can be made/created to teach cells about how the body works and which overlap</p>		<p>True Religious Text. True Science; True Mathematics True Law (Order, Logic, Empathy);</p> <p>—Relative to Life/death (and their transitions).</p>
<p>HUMAN BODY SCENARIO:</p> <p>Entire body (all cells) have DNA which portrays the relationships necessary for perfect health of the entire body, except a single cell.</p> <p><i>Note: This single cells does not operate in harmony with the science/mathematics which contribute to the overall equation of robust, resilient, dynamic, and potential-less Life.</i></p>		<p>HUMAN SOCIETY SCENARIO:</p> <p>A single person:</p> <ul style="list-style-type: none"> <li>— interpreting True Religion wrong;</li> <li>— interpreting science/mathematics wrong;</li> <li>— interpreting Law/Order/Governance wrong;</li> </ul>
<p>Cells teaching/stimulating (communicating) to other cells faulty DNA relationships.</p> <p>The teaching/stimulations of false (faulty) relationships amongst the body (of. Which hinder the Life of the body, its diversity of Life and all Life, its development and potential.</p>		<p><b>Blasphemy.</b></p> <p>The act or offense of speaking sacrilegiously about God or sacred things; Profane talk.</p> <p>The teachings/stimulations/actions of false (faulty) relationships amongst human society (of which hinder the Life of human society, its environment, and eventually the individual and all Life, their development and potential).</p>
<p>The concept of a perfectly healthy human body.</p> <p>[Description of heaven in the body/ relationships amongst cells and the parts/systems/processes in the body which contribute to the ].</p>		<p>The concept of <b>Heaven</b> (Religious Concept).</p> <p>[Define Heaven].</p>

<p>“Heaven” within the human body.</p> <p>A perfectly healthy human body. [Further define].</p> <ul style="list-style-type: none"> <li>- All cells have understanding of each other.</li> <li>- All fundamental needs of cells are established.</li> <li>- All cells are able to achieve their potential.</li> <li>- The body is able to protect itself from internal and external threats, ensure its survival, achieve goals greater than itself, and pr</li> <li>- All cells understand the nature of their reality (their reality is the human body and the structure of relationships and strategies in order to maintain the Life of the entire body)</li> </ul>		<p>“Heaven” within human society.</p> <p>[Blah].</p> <ul style="list-style-type: none"> <li>- All people have understanding each other and carry-out actions which benefit themselves and others in a manner which enables human society to quickly and accurately achieve goals which are in harmony with the best interests of all Life; All people operating in the best interests of themselves (e.g. development, survival, potential), in a manner which is in the best interests of the greater society (enabling society to best develop, survive, and achieve its potential).</li> <li>- All fundamental needs of people (Maslow’s Hierarchy of Needs) are established;</li> <li>- All people within society are able to efficiently and effectively develop and achieve their potentials;</li> <li>- Society is able to quickly and accurately protect itself from internal and external threats, to ensure its survival and achieve goals greater than itself.</li> <li>- All people understand the nature of their reality (i.e. All people understand that the nature of their reality has a physiology similar to the human body, of which scales like fractals, but does not necessarily maintain exact health, or “geometry”)</li> </ul>
<p>The concept of Hell (or various degrees of Hell) within the body.</p> <p>A human body which operates at any degree less than [perfect health].</p> <p>See <i>Healthy Human Body</i>.</p>		<p>The concept of Hell (or various degrees of Hell) within human society.</p> <p>A human society which operate at any degree less than [perfect health].</p> <p>See <i>Healthy Human Society</i>.</p>
<p>Any state of disorder less than that of a healthy body, not undergoing any processes to achieve equilibrium.</p> <p>Any state of disorder within the body which prevents the body from being absolutely healthy.</p> <p>(for example, a healthy body undergoing the process to get rid of seasonal allergies is still a body in disorder</p>		<p>A state of Hell within human society, relative to the nature (degree) of disorder (in society) preventing the state of perfect health amongst the entirety of society — preventing the arrangement of mechanisms necessary/required to establish and maintain the Maslow’s Hierarchy of Needs amongst all individuals within society.</p> <p>Any state of disorder, which prevents development, survival, potential (Axioms of Life).</p>

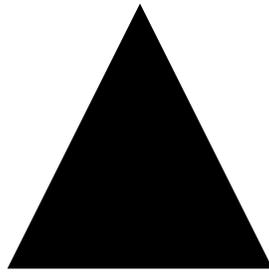
<p>“Hell” within the human body.</p> <p>Any state of the body not in perfect health; or a body in a state of homeostasis/equilibrium; or which lacks order to maintain or achieve equilibrium.</p> <p>Homeostasis is the tendency toward a relatively stable equilibrium between interdependent elements, especially as maintained by physiological processes</p>		<p>Hell (Religious Concept) within human society</p>
<p>/</p> <p>/</p> <p>/</p> <p>/</p>		
<p>Cells which operate in harmony with perfectly healthy DNA, and stimulate/communicate/help other cells.</p> <p>A cell which acts as an attendant, agent, or messenger of healthy DNA;</p> <p>A cell of exemplary conduct or virtue;</p>		<p><b>Angels</b> (religious).</p> <p>A spiritual being believed to act as an attendant, agent, or messenger of God;</p> <p>A person of exemplary conduct or virtue;</p>
<p>Cells which DO NOT operate in harmony with perfectly healthy DNA, and which stimulate/communicate/influence/hinder other cells.</p>		<p><b>Demons</b> (religious).</p>
<p>Any system, process, object, idea, or relationship which maintains the optimum healthy of the human physiology, or which tries to re-establish the perfect health of the human physiology.</p>		<p><b>Good</b> (religious).</p> <p>Any system, process, object, idea, or relationship which maintains the perfect health of human society, or tries to re-establish the perfect health of the human society (given human society is experiencing a degree of hell).</p>
<p>The DNA rules/laws which is relative to proactive maintenance of a healthy human body. To have empathy/understanding for all parts and response (interact) in a manner which tries to preserve Life.</p>		<p>Christian/Catholicism within human society.</p>
<p>The rules/laws of the DNA which is relative to the reactive/responsive laws of a distressed (unhealthy) human body.</p>		<p>The general concepts of Islam (Religion).</p> <p>For example, the right to fight/die for God, or the survival of oneself — relative to a society/region within distress.</p>

<p>The rules/laws of DNA connecting all parts of the human body – For example everything “being one” (in harmony) with everything else in the body.</p> <p>All organisms, processes, systems and parts within the human body are connected/similar to the DNA.</p>		<p>Buddhism (Religion).</p>
<p style="text-align: center;">WRATH OF GOD (DNA) IN CELLULAR SOCIETY</p> <p>The unwanted yet natural consequences of misaligned relationships within the body; The repercussions of activities which that are out of harmony with the laws of healthy DNA. For example, if the body takes in too much sugar, the “wrath of God” would be the repercussions to the body from too much sugar—such as diabetes.</p>		<p>Wrath of God (Justice).</p>

<b>PHILOSOPHY</b>		
<b>BIOLOGICAL PATTERNS</b>	→	<b>PHILOSOPHY</b>
<p>The study of (or a cell's understanding of) the fundamental nature of knowledge (DNA), reality, existence (and relationships) within cellular society, especially how it relates to Life and death of itself, its environment and its society.</p> <p>"PHILOSOPHY" is to Cellular Society as "PHILOSOPHY" is to Human society.</p>		<p>The study of (or a person's understanding of) the fundamental nature of knowledge, reality, and existence, especially when considered as an academic discipline (relative to Life/death?).</p> <p>IN ORDER TO UNDERSTAND PHILOSOPHY IN HUMAN SOCIETY, WE MUST UNDERSTAND THE SAME PHILOSOPHICAL CONCEPTS FROM THE BIOLOGICAL PERSPECTIVE</p>
		<b>KNOWLEDGE</b>
<b>DNA</b>	→	<b>RELIGIOUS LAW, or GOD'S WORD,</b>
<p>ie., Healthy / Non-corrupt DNA, which we will define as the DNA, or rules which that enables the development, survival, and potential all living things.</p>		<p>"Eating from the Tree of Life"</p>
THE CONCEPT OF ORDER	→	THE CONCEPT OF ORDER
DISORDER		DISORDER

<p style="text-align: center;"><b>LOGIC IN CELLULAR SOCIETY</b></p> <p>Reasoning conducted or assessed according to strict principles of validity.</p> <p>The principles of Life is what is valid. Therefore, logic is relative to what establishes and sustains the biological patterns ensure the development, resilience, and potential of Life. —In this case, cellular Life</p> <p>A Cell</p> <p>Logic is the logical relationships within the human body (systems, processes, parts) necessary for the body to live in a manner which ensures the development, survival and progression of all cells within the body</p> <p>The concept of Logic within the human body (systems, processes, parts):</p> <p style="text-align: center;"><b>LOGIC IS AND ALWAYS WILL BE THE ORDER WHICH ESTABLISHES AND SUSTAINS LIFE. ANY OTHER REASONING, OR LOGIC MAY BE OUT OF HARMONY WITH THE PRINCIPLES OF LIFE.</b></p> <p style="text-align: center;"><b>WE MUST “EAT FROM THE TREE OF LIFE,” NOT THE TREE OF GOOD AND EVIL, OR TREE OF MONEY AND NO MONEY, OR TREE OF LIKES AND DISLIKES (SOCIAL MEDIA).</b></p>		<p style="text-align: center;"><b>LOGIC IN HUMAN SOCIETY</b></p> <p>Reasoning conducted or assessed according to strict principles of validity.</p> <p>A human could reason and develop logic (mathematics) to exploit some system to reap benefits at the cost of whatever is being exploited, however, this is not true Logic. Rather, it is reason for exploitation; There is no Logic in exploitation for ones own gains at the expense for society, as these are principles which can destroy complex societies. Perhaps, this Logic would be more suitable for an individual within the wild (like a paramecia in the cellular wilderness). This type of thinking could be a self defensive innate survival protocol when one is not feeling a part of something (Maslow’s hierarchy of needs / community).</p>
<p style="text-align: center;">REASONING IN CELLULAR SOCIETY</p>		<p style="text-align: center;">REASONING IN HUMAN SOCIETY</p>
		<p style="text-align: center;">TRUTH</p>
		<p style="text-align: center;">PERFECTION</p>
		<p style="text-align: center;">IMPERFECTION</p>
		<p style="text-align: center;">SOVEREIGNTY</p>

<p style="text-align: center;"><b>PURPOSE OF LIFE</b></p> <p>As a cellular organism, the purpose of life is to understand the biological patterns which compose our reality, so that we can operate in harmony with those patterns to ensure the development, survival, and potential of ourself, our society, our environment and all life in harmony with those biological patterns which allows Life to live.</p> <p>The same mission statement for cellular life, is the inherent mission statement for all living things, regardless if they understand or do not understand, whether they agree or disagree. Life is the most important thing—and those biological patterns which can be utilized in our ability to develop, be resilient and thrive is of the utmost important to uphold.</p>		<p style="text-align: center;"><b>PURPOSE OF LIFE</b></p> <p>What is the reason for which something is done or created or for which something exists.</p> <p>The purpose of Life is Life. The purpose is to come to an understanding of Life and how these biological patterns govern everything in reality (from the cosmos, the world around us, and even our bodies), so that we can establish and maintain these biological patterns to develop ourselves, be resilient, and achieve our greatest potentials, which these biological patterns allow us to achieve, especially as those activities are in harmony with development, survival, and Life of ALL living things.</p>
<p style="text-align: center;"><b>SATISFYING FUNDAMENTAL NEEDS IN CELLULAR SOCIETY</b></p>		<p style="text-align: center;"><b>SATISFYING MASLOW'S HIERARCHY OF NEEDS IN HUMAN SOCIETY</b></p>
		<p style="text-align: center;"><b>CONSCIOUSNESS –IN THE INDIVIDUAL</b></p>
		<p style="text-align: center;"><b>GLOBAL CONSCIOUSNESS</b></p>



<b>ANALOGIES SURROUNDING: SOCIAL &amp; ECONOMIC PHENOMENON.</b>		
<p>“Poverty” in the body.</p> <p>[Define].</p> <p>Cells within the human body which do not receive their fundamental needs are impoverished (or in a state of poverty).</p>		<p>“Poverty” in society.</p> <p>[Define].</p> <p>People within society not receiving their fundamental needs (Maslow’s Hierarchy of Needs) are impoverished (or in a state of poverty)</p> <p>People living on the threshold of receiving Maslow’s Hierarchy of Needs (fundamental needs).</p>
DNA — The Constitution, Laws (or Governance) Within the Body.		Constitution, Laws; Governance
“Faulty DNA” (DNA not benefiting the life, liberty, progression, survival of all cells within the body)		Faulty Laws; Faulty Governance
“Good DNA” (DNA which benefits, promotes, the develop, survival, longevity, diversity, of all Life of all cells within the body.		Laws which benefits, promotes, the development, survival, longevity, diversity of all human civilization, including all Life.
“Good Genetic Mutations” — body’s way of sensing and adapting to a change in surrounding environment, to ensure the development, survival and Life of the entire body (person).		Good changes to laws, order, infrastructure processes
“Bad Genetic Mutations” — body		Bad changes to laws, order, infrastructure processes
Chemical signals (Signal Molecules)		Communication amongst people/ infrastructure (i.e internet of things)

<p>Adult stem cells — [what phenomenon, specifically, about adult stem cells are analogical to professors/teachers — adults — within society.</p> <p>NOTE: All human adults should function like Adult Stem Cells.</p>		<p>Professors, Teachers, (Education System), Politicians, Parents, Construction, Doctors, (i.e. those people that teach society and maintain order within society) — Those people within society who take action to fixing problems and teaching those around them.</p>
<p>The ability for the human body to achieve goals (i.e. Climb mountain, Procreate, Protect himself from being hit by a ball, Fight Disease, Bacteria/Virus)</p>		<p>The ability for human civilization to achieve goals (i.e. Progress, Expansion of Human Civilization outside of Earth)</p>
<p>The ability for the human body to avoid a ball being thrown at it (or any other external threat) — the orchestration of signals and cells to move the entire body out of harms way, or to utilize surrounding resources to prevent harm.</p>		<p>The ability for human society to avoid external threats (such as asteroids, earthquakes, etc.) met</p>
<p>The phenomenon of <b>cooperation</b> amongst cells and infrastructure in the human body, and the direct correlation between working together and enabling the body (society of cells) to develop (individually and as a group), protect itself from internal/external threats, and achieve greater goals.</p> <p>The phenomenon of the cells (within the human body) needing to achieve a level of harmony (cooperation) work together to achieve a level of and organ systems of the human body to</p>		<p>Phenomenon of <b>cooperation</b> amongst people and infrastructure in human society.</p> <p>The phenomenon and direct correlation between people (of a society) working independently, yet together toward a common cause, necessary for human civilization (humanity) to achieve greater goals.</p>

<p>The ability for the human body to procreate</p>	<p>The ability for human civilization to discover another civilization and work together in building a civilization together.</p>
<p>The cells within the body having established a system which produce and allocate resources amongst the body, BUT DO NOT have a limit, or rules which prevent the exploitation of these processes.</p>	<p><b>Capitalism.</b></p> <p>The understanding and implementation of a socioeconomic system which to measure, communicate, manage, regulate the production and allocation or resources amongst society, but without the understanding of an idea of how to do it in favor for all people.</p>
<p>The ability The discovery and utilization of a governing-system to accurately measure/ quantify the production and allocation of resources within a system, so to maintain the fundamental needs of the cells within the system</p>	<p><b>Good Capitalism.</b> (Same as good Communism)</p> <p>[No Exploitation of System/Processes/ Objects, for the benefit of the few].</p>
<p>The cells within the body having established a system of rules which produce and allocate resources amongst the body, BUT WHOSE system is exploited by many cells. (i.e. cancers/ tumors in various organ systems)</p>	<p><b>Bad Capitalism.</b></p> <p>[Exploitation of systems, processes, objects/parts for the benefit of a few].</p>
	<p><b>Communism.</b></p> <p>The understanding that fundamental needs of people need to be met via a socioeconomic system which needs to measure, communicate, manage and regulate the resource amongst society, but does not understand the mechanisms necessary to establish/maintain these requirements.</p>

<p>Good Communism within the human body.</p> <p>The cells of the body understanding both the goals of the body and the mechanisms of governance necessary to produce and allocate the resources amongst the body.</p> <p>The understanding of the end result (of which a system which a), but not having the system which to accurately measure/ quantify, regulate (manage), the production and allocation</p>		<p><b>Good Communism</b> (Same as Good Capitalism)</p> <p>The understanding that all people own all infrastructures within society in a manner which establishes the fundamental needs of all people within society.</p>
<p><b>Bad Communism</b> within the human body.</p> <p>Corrupt/No infrastructures to communicate the production and allocation of goods and services;</p> <p>***NOTE: Communism is an Ideal (result, or state, due to a process — of Capitalism). Capitalism is strictly a process which maintains social and economic Order — relative to the Ideal (which may be in favor for an individual(s), or the entire society)</p>		<p><b>Bad Communism</b> (Historic/Failed Communism)</p> <p>[Not understanding and/or. having in place the systems/processes/objects/ parts of a system to communicate and carry-out the activities necessary to produce and allocate the resources amongst society to establish — thus resulting to a single entity establishing absolute authority over processes in a manner which is out of harmony to what is best for the entire society (values of True Communism).</p>
<p>Healthy Body.</p> <p>[Further define “health”]</p>		<p>Healthy Human Civilization.</p>

<p>The concept of Order amongst the body.</p> <p>[Explain Order within the body].</p> <p>cells, systems, processes and parts necessary for healthy and vigorous, diverse Life. The arrangement and relationships amongst cells, tissue, organs and their systems, mechanisms.</p> <p>The arrangement of mechanisms (systems, processes, parts/objects, within the human body establish the fundamental needs/requirements for all parts to achieve their fullest potential [and this]; And any order of tasks carried-out necessary to maintain the body in a healthy state (i.e. a healthy human body).</p> <p>Definitions/Axioms/Postulates: -All organisms of the human body are provided fundamental needs</p>		<p><b>Order</b> within society.</p> <p>[Explain <i>Order</i> within human society].</p>
<p>The concept of <i>Disorder</i> within the human body.</p> <p>[Explain <i>Disorder</i> within the human body].</p> <ul style="list-style-type: none"> <li>- Hinders body to achieve greater tasks/ goals;</li> <li>- Hinders the body's ability to survive;</li> <li>- Hinders body's ability to protect itself;</li> <li>- Hinders body to develop;</li> <li>- Hinders</li> </ul> <p>*NOTE: Disorder is relative to our understanding of the arrangement. What we think/believe/know to be "disorder," may only be evolution/mutations for the body to handle the new environment — even so, the surrounding environment's disorder can affect the order of the body.</p>		<p>The concept of <i>Disorder</i> (or Degrees of Disorder) within human society.</p> <p>[Explain <i>Disorder</i> within human society].</p>

<b>ANALOGIES SURROUNDING: RELIGION.</b>	
<p>The phenomenon of the body's ability to protect itself from itself (i.e. protect itself from processes which ultimately harm a few or great)</p>	<p>Muslim Religion (The religion of the body's ability to protect itself from itself)</p>
<p>“Religion” within the body — The cultural system of designated behaviors and practices, morals, bodily views, text/data/information (DNA), predictions based off that data (prophecy):</p> <p>The body's “preaching” (stimulation) of a sovereign Order which maintains the optimal cells, processes, systems, and their parts.</p> <p>The culture system of designated relationships amongst cells and their environment, in a manner which overlaps their purpose, duty, morals, understanding, actions, logic, order.</p> <ul style="list-style-type: none"> <li>- Provides instruction;</li> <li>- Provides order;</li> <li>- Provides understanding (Or bare minimal understanding of Order, Empathy &amp; Logic for those not capable to understand the analogical logic/ teachings within the text);</li> <li>- Provides purpose;</li> </ul> <p>*If cells within your body could “preach” the relationships necessary for all cells to get along, purpose, of a higher order of relationships amongst other cells, to a law expressed by a more powerful and inherent law, relative to their reality”</p>	<p><b>Religion</b> (e.g. Catholicism, Christian, Buddhism) within society.</p>

<p>Knowing the future biological situations/ consequences of current biological conditions;</p> <p>Or the the knowledge (or predictions) of inevitable situations/stages of the human physiology/biology/form.</p> <p>Knowing that cells in the body will experience particular symptoms given the current intake of sugar (i.e. diabetes), before those particular symptoms are actually experienced by the cells.</p>	<p>The concept of <b>Prophecy</b> within human society.</p> <p>The knowledge (or predictions) of inevitable situations/stages of human society and Life.</p> <p>Prophecy amongst ignorant, and science amongst the adept.</p> <p>Knowing</p>
<p>The scientifically and mathematically precise understanding of the relationships between any part(s) of the systems within the body.</p>	<p>The understanding of Science &amp; Mathematics (precise). Economics, Biology, Ecology, etc.</p>
<p>The body's meta-interpretation (or analogical interpretation), or epic-story-interpretation of DNA.</p>	<p>Religion.</p>
<p>The body's exact interpretation of DNA</p>	<p>Science/Mathematics (or True Religion).</p>
<p>The body's loose interpretation of DNA.</p>	<p>Bad/Vague Religion; Bad/Vague Science/Mathematics;</p>
<p>Coding within the DNA (which explains the relationships amongst all things in and outside the body, and the consequences of particular relationships not established, or of particular relationships established).</p> <p>[What part of DNA — the nonscientific understanding/preaching of Order, Empathy, Logic necessary for the Life of the entire body].</p>	<p>Religious Text (e.g. Bible, Koran, Torah)</p> <p>Law — the nonscientific (surreal) understanding of the Order, Empathy, Logic (laws) necessary for the Life of Man.</p>
<p>DNA (perfectly healthy).</p> <p>The "stories" which can be made/created to teach cells about how the body works and which overlap</p>	<p>True Religious Text. True Science; True Mathematics True Law (Order, Logic, Empathy);</p> <p>—Relative to Life/death (and their transitions).</p>

<p><b>HUMAN BODY SCENARIO:</b></p> <p>Entire body (all cells) have DNA which portrays the relationships necessary for perfect health of the entire body, except a single cell.</p> <p><i>Note: This single cells does not operate in harmony with the science/mathematics which contribute to the overall equation of robust, resilient, dynamic, and potential-less Life.</i></p>	<p><b>HUMAN SOCIETY SCENARIO:</b></p> <p>A single person:</p> <ul style="list-style-type: none"> <li>— interpreting True Religion wrong;</li> <li>— interpreting science/mathematics wrong;</li> <li>— interpreting Law/Order/Governance wrong;</li> </ul>
<p>Cells teaching/stimulating (communicating) to other cells faulty DNA relationships.</p> <p>The teaching/stimulations of false (faulty) relationships amongst the body (of. Which hinder the Life of the body, its diversity of Life and all Life, its development and potential.</p>	<p><b>Blasphemy.</b></p> <p>The act or offense of speaking sacrilegiously about God or sacred things; Profane talk.</p> <p>The teachings/stimulations/actions of false (faulty) relationships amongst human society (of which hinder the Life of human society, its environment, and eventually the individual and all Life, their development and potential).</p>
<p>The concept of a perfectly healthy human body.</p> <p>[Description of heaven in the body/ relationships amongst cells and the parts/ systems/processes in the body which contribute to the ].</p>	<p>The concept of <b>Heaven</b> (Religious Concept).</p> <p>[Define Heaven].</p>

<p>“Heaven” within the human body.</p> <p>A perfectly healthy human body. [Further define].</p> <ul style="list-style-type: none"> <li>- All cells have understanding of each other.</li> <li>- All fundamental needs of cells are established.</li> <li>- All cells are able to achieve their potential.</li> <li>- The body is able to protect itself from internal and external threats, ensure its survival, achieve goals greater than itself, and pr</li> <li>- All cells understand the nature of their reality (their reality is the human body and the structure of relationships and strategies in order to maintain the Life of the entire body)</li> </ul>	<p>“Heaven" within human society.</p> <p>[Blah].</p> <ul style="list-style-type: none"> <li>- All people have understanding each other and carry-out actions which benefit themselves and others in a manner which enables human society to quickly and accurately achieve goals which are in harmony with the best interests of all Life; All people operating in the best interests of themselves (e.g. development, survival, potential), in a manner which is in the best interests of the greater society (enabling society to best develop, survive, and achieve its potential).</li> <li>- All fundamental needs of people (Maslow’s Hierarchy of Needs) are established;</li> <li>- All people within society are able to efficiently and effectively develop and achieve their potentials;</li> <li>- Society is able to quickly and accurately protect itself from internal and external threats, to ensure its survival and achieve goals greater than itself.</li> <li>- All people understand the nature of their reality (i.e. All people understand that the nature of their reality has a physiology similar to the human body, of which scales like fractals, but does not necessarily maintain exact health, or “geometry”)</li> </ul>
<p>The concept of Hell (or various degrees of Hell) within the body.</p> <p>A human body which operates at any degree less than [perfect health].</p> <p>See <i>Healthy Human Body</i>.</p>	<p>The concept of Hell (or various degrees of Hell) within human society.</p> <p>A human society which operate at any degree less than [perfect health].</p> <p>See <i>Healthy Human Society</i>.</p>

<p>Any state of disorder less than that of a healthy body, not undergoing any processes to achieve equilibrium.</p> <p>Any state of disorder within the body which prevents the body from being absolutely healthy.</p> <p>(for example, a healthy body undergoing the process to get rid of seasonal allergies is still a body in disorder</p>	<p>A state of Hell within human society, relative to the nature (degree) of disorder (in society) preventing the state of perfect health amongst the entirety of society – preventing the arrangement of mechanisms necessary/required to establish and maintain the Maslow’s Hierarchy of Needs amongst all individuals within society.</p> <p>Any state of disorder, which prevents development, survival, potential (Axioms of Life).</p>
<p>“Hell” within the human body.</p> <p>Any state of the body not in perfect health; or a body in a state of homeostasis/ equilibrium; or which lacks order to maintain or achieve equilibrium.</p> <p>Homeostasis is the tendency toward a relatively stable equilibrium between interdependent elements, especially as maintained by physiological processes</p>	<p>Hell (Religious Concept) within human society</p>
<p>/</p> <p>/</p> <p>/</p> <p>/</p>	
<p>Cells which operate in harmony with perfectly healthy DNA, and stimulate/ communicate/help other cells.</p> <p>A cell which acts as an attendant, agent, or messenger of healthy DNA;</p> <p>A cell of exemplary conduct or virtue;</p>	<p><b>Angels</b> (religious).</p> <p>A spiritual being believed to act as an attendant, agent, or messenger of God;</p> <p>A person of exemplary conduct or virtue;</p>
<p>Cells which DO NOT operate in harmony with perfectly healthy DNA, and which stimulate/communicate/influence/hinder other cells.</p>	<p><b>Demons</b> (religious).</p>

<p>Any system, process, object, idea, or relationship which maintains the optimum healthy of the human physiology, or which tries to re-establish the perfect health of the human physiology.</p>	<p><b>Good</b> (religious).</p> <p>Any system, process, object, idea, or relationship which maintains the perfect health of human society, or tries to re-establish the perfect health of the human society (given human society is experiencing a degree of hell).</p>
<p>Any system, process, object, idea, or relationship that hinders the perfect health/Life of the human physiology, and prevents it from developing and achieving its potential.</p>	<p><b>Evil</b> (religious).</p> <p>Any system, process, object, idea, or relationship that hinders the perfect health/Life of human society, its environment, and all Life.</p>
<p>The DNA rules/laws which is relative to proactive maintenance of a healthy human body. To have empathy/understanding for all parts and response (interact) in a manner which tries to preserve Life.</p>	<p>Christian/Catholicism within human society.</p>
<p>The rules/laws of the DNA which is relative to the reactive/responsive laws of a distressed (unhealthy) human body.</p>	<p>The general concepts of Islam (Religion).</p> <p>For example, the right to fight/die for God, or the survival of oneself — relative to a society/region within distress.</p>
<p>The rules/laws of DNA connecting all parts of the human body — For example everything “being one” (in harmony) with everything else in the body.</p> <p><del>All organisms, processes, systems and parts within the human body are connected/similar to the DNA.</del></p>	<p>Buddhism (Religion).</p>
<p>The unwanted yet natural consequences of misaligned relationships within the body; The repercussions of activities which are negative on the cells of the body.</p>	<p>The concept of Wrath of God (Justice).</p>

<b>PHILOSOPHY.</b>		
<p>The concept of <i>Right &amp; Wrong</i> activities/ events in the human body (in general).</p> <p>In the human body, all physical/biological activities and events which establish and maintain: the development; survival; dynamics; freedom (paradox); and greatest potentialities of all Life within the body are all activities and events which are Right (correct) activities/events.</p>		
<p>The concept of <i>Right &amp; Wrong</i> (actions) relative to a cell.</p> <p>In the human body,</p>		<p>The concept of <i>Right &amp; Wrong</i> (relative to an individual's perspective).</p>
<p>The concept of Right/Wrong actions relative to a group of cells.</p> <p>Right:</p> <p>Wrong:</p> <p>Determining Truth</p>		<p>The concept of Right/Wrong (relative to a group's perspective).</p> <p>Right:</p> <p>Wrong:</p> <p>Determining Truth:</p>
<p>The concept of Right/Wrong actions (or Truth), (relative to the entire whole body).</p>		<p>The concept of Right/Wrong, or Truth, (relative to the entire society/whole body).</p>

<p>The concept of <b>Truth</b> within the body (Relative to the Life of all organisms within the body)</p> <p>The concept of Truth within the body is understood by the mechanisms necessary to maintain optimal health of the body, its systems, processes, and objects/parts. The relationships necessary to maintain the absolute health of the body, is Absolute Truth.</p> <p>Note: Life is more important than anything else. Life (perfect health) has more opportunities, potential, and is more sovereign, then any other arrangement (Degree) of Life less than perfect.</p>	<p>The concept of <b>Truth</b> among human society (Relative to the Life of all organisms in reality).</p>
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<p>The concept of <b>Perfection</b> within the body.</p> <p>[Explain <i>Perfection</i> as a whole (within the body)].</p> <p><i>Perfection</i> within the human physiology can be defined by a comprehensive set of systems, processes and objects/parts in place which enable all living organisms of the human body to</p> <p>[Explain the <i>Perfection</i> of any system/process/part — explain how we know if a system, process, and or part is “perfect” within the human body].</p> <p>[Explain <i>Perfection</i> may not be known within the body until a system/process/object completes its cycle/process/loop].</p> <p>As long as the end-result of the system/process, or action of the part/object nurtures Life of the body (and is not diminished in any way), the system/process (or action of the object/part) is Perfect.</p> <p>Knowing</p>	<p>The concept of <b>Perfection</b> within human society.</p> <p>[Explain <i>Perfection</i> as a whole].</p> <p>[Explain <i>Perfection</i> within a system/process/part — explain how we know if something, like a system, process or part, is perfect].</p> <p>[Explain <i>Perfection</i> may not be known until a system/process/object is complete — or completes its cycle/process/loop — so ].</p> <p>As long as the end-result is the Life, in a manner which is not diminished in any manner, amongst any organisms, the system/process (or part) is Perfect.</p> <p>Knowing or unknowingly carrying-out the actions contributing to all the Axioms supporting nurturing of Life.</p>
<p>The concept of <i>Imperfection</i> within the body.</p>	<p>The concept of <b><i>Imperfection</i></b> in human society.</p>

<p>The concept of <b>Sovereignty</b> in the human body.</p> <p>The Order amongst cells in the human body which enable the entire human physiology to achieve any goal/task and have unlimited potential (restricted only by time).</p> <ul style="list-style-type: none"> <li>-Diversity</li> <li>-Dynamics</li> <li>-Problem Solving</li> <li>-Free Will</li> <li>-</li> </ul>		<p>The concept of <b>Sovereignty</b> in society (i.e. Law and Order — arrangement of infrastructures necessary for robust Life).</p> <p>The Order (arrangement of relationships amongst systems, processes and their parts) to provide the most</p>
<p>The concepts, ideas behind the mechanisms dealing with behind the production and allocation of resources within the human body.</p>		<p>The concept of <b>Economics</b> — (The ideas behind the mechanisms dealing with the production and allocation of goods, services, and other resources amongst human civilization).</p>
<p>The concept of Education within the human body.</p> <p>[Define Education within the body — Education within the body can be described as <i>this</i>].</p> <ul style="list-style-type: none"> <li>- Stimulation of cells to become a particular cell.</li> <li>- Each organ (organ system) in the body &gt;&gt;</li> <li>- Adult stem cells</li> </ul>		<p>The concept of <b>Education</b>.</p> <p>[Define <i>Education</i> in society — Education within society can be describe/define as <i>such</i>].</p> <ul style="list-style-type: none"> <li>- The stimulation of people (via education), to take up a career/job/task within society that is beneficial for him/herself and society as a whole;</li> <li>- Each academic department in the education system</li> <li>- Students</li> <li>- Professors/Teachers</li> </ul> <p><i>*NOTE: Education &amp; Work infrastructures overlap.</i></p>
<p>The concept of Work/Jobs/Career (in the body).</p> <p>[Define <i>Work</i> in the human body — Work within the human body can be define as <i>such</i>].</p>		<p>The concept of <b>Work (Jobs/Career)</b>.</p> <p>[Define <i>Work</i> in human society — <i>Work</i> within human society can be define as <i>such</i>].</p>

<p>The overlapping of infrastructures which carry-out "work" within the body, and the infrastructures which stimulate/create cells within those infrastructures necessary to prolong the education/creation t</p> <p>The stimulation/creation of specialized of cells within the area of</p>	<p>The concept of <b>Duty (Responsibility)</b>.</p> <p>The overlapping between (or integration of) work and education infrastructures.</p> <p>An efficiency/effectiveness realized through these relationships.</p>
<p><i>Politics</i> within the human body – the activities associated with the governance of the body, especially the communication or conflicts/events amongst cells, processes, and systems, or; Cells having or hoping to achieve equilibrium/homeostasis within the body (i.e. establish perfect health and homeostasis).</p> <p>The activities of the human body concerning the governing relations between organ systems, processes, and cells.</p> <p>“The Physiology of the production and distribution of information and activities.”</p> <ul style="list-style-type: none"> <li>- Cell representing the DNA, and;</li> <li>- The oversight, delegation and management of real-time events which take place in the body, in harmony with the information established via the DNA (information which establishes relationships that are in the best interests of all cells within the body.);</li> <li>- Cells maintaining Order within the body, in harmony with Healthy/Perfect DNA;</li> </ul> <p>The ability for the body and its cells to govern, manage, communicate within and amongst the systems, processes, objects/ parts of the body.</p>	<p><i>Politics</i> within human society – the activities associated with the governance of a country or other area, especially the debate or conflict among individuals or parties having or hoping to achieve power... or rather establish balance/harmony amongst all people with society, and all life surrounding it.</p> <p>The activities of governments concerning the political relations between countries</p> <p>“The Economics of information and activity.”</p> <ul style="list-style-type: none"> <li>- People representing The Law (i.e. a law which is suppose to overlap what is in the best interests of all people, and all Life, etc.); and,</li> <li>- Oversight, delegation, and management of real-time events within human society, in harmony with The Law established by Humanity (in harmony of principles which are in harmony with the best interests of all Humanity and Life).</li> <li>- People maintaining order within society, in harmony with The Law</li> </ul>

<p><i>Bad Politics (Corrupt Politics)</i> in the human body:</p> <p>The inability to communicate or carry-out the activities associated with the governance of the body, its systems, and/ or processes in a manner which successfully (quickly and accurately) addresses the fundamental needs of every cell within the body, or; Inability to address any new physiological or biological event/ situation occurring within the body.</p> <p>Characteristics:</p> <ul style="list-style-type: none"> <li>- Bad/Poor communication/ Miscommunication amongst cells, organ systems;</li> <li>- Bad representation/Misrepresentation (of healthy DNA);</li> <li>- Bad understanding of Healthy DNA/ The Laws (relative to development, survival, dynamics, potential of the body);</li> <li>- Communication amongst a small group of cells, for the benefit of that small group of cells, at the expense the then entire body (of cells).</li> <li>- **Cells exploiting relationships with in the human body for the benefit of itself, at the expense of the rest of the body — due to corrupt information/ understanding of healthy DNA, poor communication,.</li> </ul>		<p><i>Bad Politics (Corrupt Politics)</i> in human society:</p> <p>The inability to communicate or carry-out the activities associated with the governance of a country, or region in a manner to successfully (quickly and accurately) establish/address the fundamental needs of every individual within society, or; The inability to address any new socioeconomic event/situation occurring within society.</p> <p>Characteristics:</p> <ul style="list-style-type: none"> <li>- Bad/Poor communication amongst people, and socioeconomic infrastructures;</li> <li>- People (Politicians/Elites) exploiting corrupt information</li> <li>- Inability to</li> <li>- Information inequality (i.e. allowing small group of people to benefit at the expense of the greater society);</li> <li>- Wealth inequality;</li> </ul>
<p><b>“Philosophy”</b> — the study of (or a cell’s understanding of) the fundamental nature of knowledge (DNA), reality, existence (and relationships) within the human body (relative to Life/death?)</p>		<p><b>Philosophy</b> — the study of (or a person’s understanding of) the fundamental nature of knowledge, reality, and existence, especially when considered as an academic discipline (relative to Life/ death?).</p>

<p>“Democracy” (in general) within the human body.</p> <p>A system of government (communication) by the whole population of cells/tissue, processes and systems within the human body, laid out by the laws within the DNA — so to result in the activities which are in the best interests of all cells within the body.</p> <p>The process of communicating and coming to a mutual understanding of a common idea, event, or scenario, so to [<i>do this — achieve a task which is beneficial to all cells within the body (establishes fundamental needs, etc.)</i>].</p> <p><i>Proactive Democracy:</i></p> <p>[Text here].</p> <p><i>Reactive Democracy:</i></p> <p>[Text here].</p>		<p>“Democracy” (in general) within human society.</p> <p>A system of government (communication) by the whole population, or all the eligible members of a state, typically elected representatives. — so to result in the activities which are in the best interests of all people within society.</p> <p>The process of communicating and coming to a mutual understanding amongst society, relation to a common idea, event, task, scenario, so to [<i>do this</i>].</p>

<p><b>Dictatorship</b> (“bad”) within the human body.</p> <p>Restricts/Hinders opportunity</p> <p>Dictatorship (“good”) — Healthy DNA:</p> <ul style="list-style-type: none"> <li>- Provides unlimited opportunity;</li> <li>- Encourages the stimulation/thinking/ actions of cells which benefit the cell, its tissue and all other organ systems (thus entire human body), so that the body can establish and sustain all Life outside the human body.</li> <li>- Provides “freedom” (Freedom-Life Paradox), or rather the Order necessary to establish and maintain the optimum/ healthy Life of the body.</li> </ul>	<p><b>Dictatorship</b> (“bad”) within human society —</p> <p>Restricts opportunity Forces stimulation/thinking/action</p> <p><b>Dictatorship</b> (“good”) — Healthy Governance</p> <ul style="list-style-type: none"> <li>- Provides unlimited opportunity;</li> <li>- Encourages stimulation/thinking/ actions of individuals which are beneficial to the individual and to its peers and entire society, all surrounding Life.</li> <li>- Provides “freedom” (Freedom-Life Paradox), or rather the Order necessary to establish and maintain sovereign Life.</li> </ul>
<p><b>“Tyranny”</b> within the body.</p> <ul style="list-style-type: none"> <li>-restricting opportunities.</li> <li>-directives not in harmony with the best interests of all cells;</li> <li>-single controlling force which results in the benefit (or destruction) of itself, to the detriment of other cells</li> </ul>	<p><b>Tyranny</b> within human society.</p>
<p>The concept of <b>Purpose</b> within the human body.</p> <p>The ideas surrounding duty, responsibility, roles and goals of each cell, tissue, and organ system within the body.</p>	<p>The concept of <b>Purpose</b> (Duty, Responsibility, Roles, Goals) within human society. True definition of Purpose within society.</p>

<p>The concept of <i>Having No Purpose</i> within the body.</p> <p>-Not stimulated to become one of the 200+ traditional parts of the body. (Tumor/ Cancer, or improper functions which results in environmental repercussions which affect the fundamental needs of cells). -Stimulated incorrectly (Tumor)</p> <p>NOTE: Cells which "have no purpose" have a purpose of signaling to the body that there is a problem; That its biological system was not able to stimulate the cell/ tissue to discover its purpose.</p>		<p>The concept of <b>Having No Purpose</b> within society.</p> <p>-Not stimulated. -Stimulated incorrectly (from another person, action or surrounding environment).</p>
<p>The ideas surrounding the cooperation amongst cells within the body.</p>		<p>The ideas surrounding the <b>Cooperation</b> amongst people within society – Concept of Cooperation.</p>
<p>The logical relationships within the human body (systems, processes, parts) necessary for the body to live in a manner which ensures the development, survival and progression of all cells within the body The concept of Logic within the human body (systems, processes, parts):</p>		<p>The concept of <b>Logic</b> within human society (relative to Life – to establish/ maintain Life, or to hinder Life).</p>
<p>The concept of <b>Life</b> within the body.</p>		<p>The concept of <b>Life</b> in human society.</p>

<p>The concept of <i>Liberty</i> in the human body.</p> <p>To give the entire body the freedom to efficiently and effectively develop, protect itself from internal and external threats, and achieve greater goals (which are also the goals of all the cells within the body), the cells comprising the body must specifically work/function in a particular manner, which may appear as “slavery” or a “lack of freedom” for the cells, until we further understand that each cell has established the fundamental needs and provided the stimulations for them to find their greater purpose (without it being forced upon them) — And to work together for the Life of the body. [Transition into Life].</p> <p>The concept of <i>Slavery</i> (i.e. Anarchy/Chaos) in the human body.</p> <p>If the cells within the body were given complete “un-orderly freedom” to move about the body doing/not doing anything (i.e. anarchy/chaos/atrophy), then the entire body would not be able to ensure the development, survival, protection, and greater goals of all cells within the body — <a href="#">these disorderly relationships within the body would hinder the potential/function of the body</a>. Also, the un-orderly freedom of cells within the body would prevent the body to protect itself from internal/external threats and prevent the entire body from achieving greater goals (privy to the more Sovereign Order modeled by the society of cells in the human physiology).</p> <p>“Slavery” in the body is similar to Cell Group A receiving resources in a manner which reduces resources to other cell groups (e.g. Cell Group B, Cell Group C, and so forth), in a manner which causes all other cell groups to have to perpetually</p>	<p>The concept of <i>Liberty</i> in human society.</p> <p>There is a paradox that exists with the concept of Liberty: to have freedom to achieve goals, specific processes must be carried-out (For example: we may have the freedom to hit the baseball any way we choose, but we are not free to choose the way to hit the baseball over the fence for a home run, to hit the baseball over the fence, we are restricted from the liberties of hitting the baseball any way, but to rather hit the baseball in a particular way.</p> <p>The concept of Slavery, Anarchy &amp; Chaos in human society (reality).</p> <p><del>There is a paradox that exists with the concept of Liberty within the human body. While all cells are provided the freedoms to become one of the 200+ cells within the body (given stimulation), all cells must be provided fundamental needs.</del></p>
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<p>The concept of <i>Happiness</i> in the Human Body.</p> <p>The relationships (mechanisms) which contribute to the perfect healthy cell is happiness of a cell.</p> <p>The relationships (mechanisms) which contribute to a perfectly healthy body is happiness amongst the entire body (perfect happiness).</p> <p><i>See Heaven.</i></p> <p>The relationships and phenomena of <i>Happiness</i> are directly correlated with the relationships and phenomena pertaining to the establishment of Life (in its development, potential, diversity, etc.).</p>	<p>The concept of <i>Happiness</i> in human society.</p> <p><i>See Heaven.</i></p>
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<p>The <i>Pursuit of Happiness</i> in the Human Body.</p> <p>The “Pursuit of Happiness” in the Human body.</p> <p>The ability for a cell to work-towards &amp; overcome obstacles and achieve goals which establish/fulfill their purpose/duty/responsibilities in Life <del>and fundamental needs</del>. This includes carrying-out the activities (functions) which establish the missing fundamental needs necessary for the cells to fulfill their purpose/duty/responsibilities in Life — thus achieving happiness.</p> <p>Also, the pursuit of happiness may first involve the coming to an understanding of these relationships. Because our thoughts determine our actions, it may be necessary to come to an understanding of the structure or relationships necessary for happiness before activities are carried-out to pursue the happiness.</p> <p>One can be happy with "nothing and "not doing anything," but their understanding of reality may be such that “nothing" and “not doing anything” is all they know. If this is the case, proper stimulation (understanding) must occur to make them understand the true nature of our structure of social and economic (Life/death) relationships.</p> <p>The pursuit of happiness of cells within the human body is different than the pursuit of happiness of cells within an elephant or frog.</p>	<p>The <b><i>Pursuit of Happiness</i></b> in human society.</p> <p>The pursuit of</p>
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<p>The concept of <i>Rationality</i> amongst cells, systems, processes.</p>	<p>The concept of <b>Rationality</b> (Relativity) amongst people, systems, processes.</p> <p>The concept of Rationality (relative to a person).</p> <p>The concept of Rationality (relative to a group of people).</p> <p>Rationality (relative to the entire society); Also known as Truth/Logic.</p>
<p>The phenomenon of Life of the body (cells parts) (Relative to the body).</p>	<p>The phenomenon of Life of human society (relative to</p>
<p>The concept of Relativity (in Logic) in the body.</p> <p>There are no illogical events within the body. For every event which takes place within the body, there is a logical response (cancer?). — There are only events which establish/maintain Life, and those that hinder Life — Both of which cannot be understood until the observed system, process, or object/part completes its cycle.</p> <p>For example, the actions of a cell (while good for a particular localized situation/ event), the action(s) may be bad for the entire society of cells within the body.</p> <p>The relatively reasonable actions The body (cells) overproducing a particular agent to counterbalance a negative event (i.e. body producing agent to combat excess sugar within the body — while the body is ). The continued actions of the cells produce an environment which</p> <p>(Relative to localized events within the body)</p>	<p>The concept of <b>Relativity</b> (in Logic) — i.e. Logic relative to Life.</p>

<b>Education</b> within the body.		<b>Education</b> within human society.  Learning information and the tasks necessary to maintain the operations of society, and to progress its efficiency and effectiveness to ensure the development, survival, and potential of all humans, and all Life.  Overlapping work infrastructures with education infrastructures would be the most efficient state of education within human society.

<p><b>Innovation</b> in the human body.</p> <p>The infrastructures which contribute to the efficient and effective production and allocation of resources amongst a system(s) in a manner which establishes the robustness resilience and potentialities of Life.</p> <p>Innovation in the body occurs when mutations (good) to addre</p> <p>The human body is arguably the most innovative machine/object. It is inherently innovative — which means that its infrastructures are the epitome of innovation, or what all man-made systems, processes, and parts, and all other living things should innovate (evolve) towards. The systems, processes and parts of the human body reveal innovation which contribute to <i>the human form</i> (or system) — a form (system) which can achieve many goals, and has infinite potential.</p> <p>(Innovation, meaning the efficiency and effectiveness of systems, processes, and their objects/parts within the human body which are used to carry-out a task).</p> <p>Rather the efficiency and effectiveness of systems and processes to carry-out a task to achieve a goal — innovation is the updating (evolution) of the systems, processes, and objects/parts which carry-out an end-goal. A healthy human body is a model of perfect innovation/technologies (relative to energy/task).</p>	<p><b>Innovation</b> in human society.</p> <p>The concept of <b>Innovation</b> (Technologies) — the systems, processes, objects/parts (or their evolution) towards a more efficiency/effectiveness of production and distribution of resources (to ultimately match/supercede the efficiency and effectiveness of that of the energy/ resource production and distribution of the human body).</p> <p>For example, the advent and use of the internet in a manner which mimics the communication efficiency, effectiveness of that of the body, to produce and allocate resources amongst society.</p> <p>The purpose of innovation within human society is to reach an efficiency and effectiveness of production and allocation of resources amongst society through the use of innovation. With each iteration of a particular innovation, the technology should more closely mimic the efficiency/ effectiveness of similar processes within the human body — internet/ communications vs. chemical messaging (signal molecules).</p> <p>Human society moving towards innovation which parallels the functionality, efficiency and effectiveness of the human physiology.</p>
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<p>Genetic mutations (to DNA), which change the actions of cells, so to endure, thrive in external chronic changes in their environments (Good mutations).</p> <p>[Define: Good mutations (changes): [this].</p> <p>[Define: Bad mutations].</p> <p>NOTE: Understanding what system, process, object/part is good, or bad, is relative to the end result of the encompassing system/processes/object/part/tasks/action — the end result must be in the best interests of all Life.</p>	<p>Mutations (changes) in laws, culture, actions of human society.</p> <p>Good mutations (changes — evolving towards a more perfect “social and economic DNA”): [this].</p> <p>The phenomenon surrounding human society changing processes (actions) to deal with changing external environment (Good mutations).</p>
<p>Foreign Viruses Within The Body.</p> <p>Viruses (e.g. HIV/AIDS, Malaria, Ebola, Swine Flu, Mad Cow Disease, etc.)</p> <ol style="list-style-type: none"> <li>1. Corrupting systems, processes, &amp; parts;</li> <li>2. Updating the ideas of cells (providing a packet of many, necessary for mutations necessary to address the requirements of the body’s surroundings).</li> </ol>	<p>Foreign “Viruses” Within Human Society.</p> <ol style="list-style-type: none"> <li>1. Corrupted Ideas (Bad Ideas)—</li> <li>2. New Ideas (Good Ideas) —</li> <li>3. Aliens (Hostile) —</li> <li>4. Terrorists (Anarchists)</li> </ol>

<p><b>Reality</b> for cells in the human body.</p> <p>The human body is the reality of all cells within the human body. All cells within the body must function in harmony with the mathematics, science, laws, nature, which keep the body alive.</p> <ul style="list-style-type: none"><li>- Cells;</li><li>- Red Blood Cells (Blood)</li><li>- Tissue;</li><li>- Organs (Organ Systems) (e.g. Circulatory, Nervous, Digestive, etc.)</li><li>-</li></ul> <p>The human physiology is <b>Reality</b> for all cells within the body. The human body (physiology) is the reality of all cells within the human body.</p>	<p><b>Reality</b> for humans in human society.</p> <p>The surrounding environment (Earth) is the reality of all people within human society. All people within human society must function in harmony with the mathematics, science, laws and nature of the Earth in a manner which to stay alive.</p> <p>Many systems, processes, objects, activities and innovation of human society mimic physiological phenomenon within the human body.</p> <ul style="list-style-type: none"><li>- People;</li><li>- Money</li><li>- Groups/Communities/Organizations/Businesses;</li><li>- Industries (e.g. Financial, Education, Aerospace, Waste Management, Energy, Construction, Retail, Agriculture);</li></ul> <p>The environment (External environment, which functions similar to the human body) The physiology of human society's reality functions similar to human physiology.</p>
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<p><i>Procreation</i> within the human body (i.e. cells within the human body reproducing).</p>	<p><i>Procreation</i> within human society (i.e. people within human society reproducing).</p> <p>PUT BELOW IN DISCUSSION:</p> <p>NOTE: Perhaps human society has not evolved to the point (efficiency/ effectiveness) where it is capable to self-reproduce (asexually). Perhaps the human body provides a near perfect model of Life, or which many systems, processes, objects overlap with a similar degree of efficiency and effectiveness in their systems, processes, objects. Perhaps, the inefficiencies and ineffectiveness within human society highlights the amount of evolution it needs to undergo to achieve such “perfection.”</p> <p>ALSO NOTE: That there have been cells that have been discovered which have not reproduced in since the time of Egyptian Pharaohs (cells which have not undergone its “cell cycle” — mitosis).</p> <p>Reference: <a href="https://www.ted.com/talks/karen_lloyd_the_mysterious_microbes_living_deep_inside_the_earth_and_how_they_could_help_humanity?utm_source=newsletter_daily&amp;utm_campaign=daily&amp;utm_medium=email&amp;utm_content=button_2019-06-10">https://www.ted.com/talks/karen_lloyd_the_mysterious_microbes_living_deep_inside_the_earth_and_how_they_could_help_humanity?utm_source=newsletter_daily&amp;utm_campaign=daily&amp;utm_medium=email&amp;utm_content=button_2019-06-10</a></p>
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*This chart shows analogies between biological phenomenon directly observed within the human body and socioeconomic phenomenon directly observed within human civilization.*



**Biological Patterns Observed In Human Innovation (Intangible Concepts).**

Intangible Concepts, such as THIS THAT and SUCH, also contain biological patterns.

<b>INTANGIBLE CONCEPTS</b>		
<b>BIOLOGICAL DOMAIN (B)</b>	<b>→</b>	<b>TARGET DOMAIN (T)</b>
CONCEPTS ASSOCIATED BIOLOGICAL PATTERNS	→	<p>INTANGIBLE HUMAN CONCEPTS</p> <p>INTANGIBLE CONCEPTS CAN BE UNDERSTOOD BY THROUGH UNDERSTANDING THEIR CELLULAR VERSION OF THAT CONCEPT – FOR EXAMPLE, THE IDEA OF SLAVERY AND FREEDOM CAN BE UNDERSTOOD FROM THE POINT OF VIEW OF A CELLULAR ORGANISM.</p>
VIRUS	→	<p>IDEA</p> <p>Ideas are like Viruses. Spread the same way. Virus, like ideas can only attache themselves to hosts that can understand (lock and key method). Once the virus/idea has infiltrated its host, it reaches a point of influence where it further spreads through expelling of it via communication (ideas), or through lysing or budding (virus'). Once infected by a virus, you are infected for life, just as in being infected by an idea. (My idea: virus' are the original blockchain technology mapping the history of living organisms. #polyomavirus). Virology is an integrative science – it is not just one science. one must have understanding of all chemistries, as well as cell biology, sociology, and psychology.</p>
QUORUM SENSING / SIGNALING MOLECULES	→	<p>DEMOCRACY</p> <p>Democracy functions similar to - Quorum sensing in bacteria. And communication amongst cells/ organ systems in the body.</p>

## 5. Discussion

### I. Introduction

#### A. Background and Context

The concept of a mathematical universe hypothesis is a theory that suggests the fundamental nature of reality is inherently mathematical in structure and behavior. It proposes that the laws, principles, and relationships governing the universe can be described and understood through mathematical frameworks.

This hypothesis holds significant relevance in scientific and philosophical discourse because it offers an approach to comprehend the underlying mechanisms and orderliness of the universe. It suggests that mathematics provides a powerful tool to explore and unravel the fundamental truths of nature, allowing us to make predictions, formulate theories, and identify patterns within the complexities of the universe.

The idea of a mathematical universe hypothesis raises intriguing questions about the relationship between mathematics and the fabric of reality. It suggests that mathematical patterns and principles pervade all aspects of existence, including systems, processes, and objects. By understanding the mathematical foundations of reality, we gain insights into the fundamental nature of the universe itself.

In the context of our theory, the "biological framework for a mathematical universe hypothesis," we propose that biological patterns define the framework for this mathematical understanding of the universe. This means that the nature of all systems, processes, and objects in reality are inherently biological in their patterns.

By postulating that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes, we further argue that the physiology of living organisms serves as models to reveal the hidden biological patterns throughout the universe and our surroundings. This relationship between biological processes in the universe and living things allows for the structural mapping of analogies from the biological to any target domain, uncovering and explaining the biological nature of that domain.

Furthermore, our research suggests that knowledge of a biological framework for the universe may have existed prior to the establishment of all major religions and ancient philosophies in ancient times. Our research suggests that all the major religions worldwide were initiated through perennialism (perennial wisdom) stemming from the ideas of a biological universe. Research suggests that many religious concepts actually convey the notion that the biological patterns within the human body have the ability to reveal and understand the hidden biological patterns present in the universe and the world around us. This can be seen with the *microcosm and macrocosm* motif which exists across many of the major religions and cultures around the world. Furthermore, our theory suggests that the idea of God is actually the personification of the universe as a result of people misinterpreting the connection between the biological universe and the patterns of the universe in the human physiology and living organisms. God's spirit, God's essence, and the Divine, may all be actually referring to the biological patterns of the universe. "Man made in the image of God," in Genesis 1:27, may actually be referring to that Man was made in the patterns of the universe.

Together, the mathematical universe hypothesis and our proposed biological framework provide a unique perspective for understanding and exploring the intricate connections between mathematics, physics, biology, philosophy spirituality, and the fundamental nature of reality.

## B. Purpose of the Paper

The purpose of our paper is to propose a biological framework for understanding the mathematical universe hypothesis.

## C. Thesis Statement

This paper argues that biological patterns define the framework for a mathematical universe hypothesis, highlighting the interconnectedness and inherent biological nature of all systems, processes, and objects in reality.

# II. Theoretical Foundations

## A. Biological Patterns and Processes

### *Defining Biological Patterns:*

In the context of our theory, biological patterns refer to the specific structures, behaviors, processes, and relationships that are observed in living organisms. These patterns are the characteristic features that define the biological nature of living entities. Biological patterns can include genetic codes, cellular organization, growth and development processes, metabolic pathways, ecological relationships, and more. Biological patterns can include processes like the pumping of a heart, functions of red blood cells in distributing contents, or its desalination properties. Biological patterns can include using a King Fischer birds beak for aerodynamics, or the stinger of a bee as a model for noninvasive surgical needles. Biological patterns can include the organizational properties of cellular society, or the properties of microtubules in mitosis, all the way down to the structure of molecules and atoms, and other biological phenomenon that may happen in the quantum realm.

These examples represent various aspects of biological patterns that comprise the physiology of living organisms, as well as all of their various permutations, stages of development and states of health. All of the possible biological patterns that can exist within the physiology of living organisms, including their interactions with their environment culminate the foundational patterns upon which life as we know it is built. Many examples in the field of biomimicry.

In the context of our theory, the proposition is that these biological patterns play a fundamental role in defining the framework for a mathematical universe hypothesis. It suggests that all systems, processes, and objects in reality possess inherent biological patterns, which make them fundamentally biological in nature.

Moreover, our theory further posits that life and living organisms exist as a direct consequence of the evolution of the universe's biological processes. In this view, the physiology of living organisms serves as a model that reveals the hidden biological patterns throughout the universe and our surroundings. This suggests that by studying and understanding the biological patterns in living organisms, we can gain insights into the larger universe and apply analogies and structural mappings from the biological domain to other target domains to reveal and explain their biological nature.

Therefore, according to our theory, the concept of biological patterns is at the core of understanding the relationship between life, the universe, and the inherent biological nature of systems, processes, and objects in reality (including all intangible concepts). By recognizing and exploring these biological patterns, we can uncover a deeper understanding of the universe and its interconnected nature.

*The Fundamental Role of Biological Patterns:*

The fundamental role of biological patterns in understanding and analyzing our proposed framework, titled "biological framework for a mathematical universe hypothesis," is of utmost significance. These patterns serve as the foundational elements and building blocks of our framework, contributing to its structure, functionality, and processes.

By asserting that the nature of all systems, processes, and objects in reality are biological in their patterns, we emphasize the encompassing influence of biological patterns on the framework. This implies that biological patterns are the defining characteristics that shape and explain the behavior and nature of various phenomena in our universe.

The recognition of biological patterns as fundamental components in our framework allows for a comprehensive understanding of the interconnectedness between life, the universe, and various objects and processes and allows us to understand its biological nature. It suggests that biological patterns, which determine the functioning and behavior of living organisms, are inherently present in all systems, processes, and objects in reality.

Moreover, our theory postulates that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. This implies that the physiology of living organisms serves as a model that reveals the hidden biological patterns throughout the universe and our surroundings. This notion highlights the crucial role that biological patterns play in uncovering and understanding the underlying structures and processes of the universe.

Drawing connections between the universe's biological processes and the living things it creates, our theory proposes that analogies can be structurally mapped from the biological domain to any target domain. This mapping allows for the revelation and explanation of the biological nature of the target domain. This emphasizes the versatility and application of biological patterns in understanding the interconnected nature of various domains within the framework.

In summary, the fundamental role of biological patterns in our proposed framework illuminates their significance as foundational elements that shape and define the nature of systems, processes, and objects in reality. The biological patterns which compose living organisms allow us to quantitatively measure these physical and conceptual patterns that exists all around us. By recognizing and analyzing these patterns, our framework offers a comprehensive understanding of the relationship between life, the universe, and the biological nature of phenomena in various domains.

### *Linking Biological Patterns to The Framework*

Linking biological patterns to our proposed framework, "biological framework for a mathematical universe hypothesis," allows us to explore how these patterns interact with and influence key components of the framework. By identifying connections between the biological patterns and the concepts, principles, or objectives of the framework, we can understand how integrating these patterns enhances the effectiveness, accuracy, or applicability of the framework. Biological patterns would influence the key components of our theory in the following ways:

1. Biological Patterns as Fundamental: The recognition and acknowledgment of biological patterns as the fundamental patterns that govern the nature of the universe and everything within it is a crucial component of your framework. It posits that these patterns serve as the underlying meta-patterns in reality.

2. Universality of Biological Patterns: Our framework asserts that all systems, processes, and objects in reality possess inherent biological patterns and are thus inherently biological in nature. This component emphasizes the pervasive presence of biological patterns throughout the universe and their influence on various domains.

3. Evolutionary Origin of Life: The theory postulates that the existence and evolution of life and living organisms is a direct consequence of the existence and evolution of the universe's biological processes. This component highlights the important relationship between biological patterns in the universe's processes and the emergence of life.

4. Physiology as Revealer of Hidden Biological Patterns: It is suggested that the physiology of living organisms acts as a model that uncovers the hidden biological patterns throughout the universe and our surroundings. This component underscores the significance of studying and understanding the physiological structures and functions of living organisms in revealing these hidden patterns.

5. Structural Mapping through Analogies: Analogies, which involve structurally mapping biological patterns from the biological domain to any target domain, play a central role in your framework. They help reveal and explain the biological nature of the target domain by drawing upon the universal biological patterns.

6. Understanding Physical Structures: Structural mapping of biological patterns can aid in understanding the biological physical nature of target domains. By identifying shared patterns, such as the circulation system of a pumping heart and the melting and freezing of Antarctica, insights can be gained into the functioning and distribution of resources within these systems. The use of biological patterns in the improvement and creation of physical human innovations further provides the utility of biology's patterns.

7. Understanding Intangible Concepts: Structural mapping of biological patterns can also shed light on the biological conceptual nature of target domains. By examining organizational properties in cellular societies and drawing analogies to human society, insights into behaviors and intangible concepts within human society can be gained. This reveals the influence of underlying biological patterns on societal phenomena like nationalism.

Biological patterns are significant in establishing the key components which contribute to the foundation of our framework, which centers around the identification, significance, and application of biological patterns as the guiding principles for understanding the fundamental nature of reality. By embracing the universality of these patterns, exploring their evolutionary origin, utilizing physiological models, employing analogies, and recognizing their role in knowledge acquisition, your framework provides a unique lens through which to perceive and interpret the underlying patterns that shape the universe and all aspects of existence.

*Illustrate with Examples:*

### ***Biological Patterns In The Universe***

The application of biological patterns within our proposed framework can be illustrated through concrete examples or case studies from the universe. These examples highlight the framework's ability to explain phenomena, solve problems, or generate insights within a biological context:

1. *Spiral Galaxies*: Spiral galaxies, such as the Milky Way, exhibit a distinct biological pattern known as the Fibonacci spiral. This pattern can be observed in the distribution of stars within the galaxy's spiral arms. By recognizing and incorporating this biological pattern, your framework offers insight into the organization and structure of spiral galaxies, providing a deeper understanding of their formation and evolution.

2. *Fractal Cosmological Structures*: Fractal patterns, derived from biological systems like fern leaves or branching structures, can also be found in cosmological phenomena. For instance, the large-scale structure of the universe, including the distribution of galaxies and galaxy clusters, often exhibits fractal patterns. By recognizing these fractal patterns within the universe, your framework can shed light on the self-similarity and interconnectedness of cosmic structures on various scales.

3. *Stellar Evolution*: Biological patterns, such as the process of cell division, can be analogously mapped to the evolution of stars. Stellar evolution follows a similar pattern, with stars going through distinct stages and phases, much like cells dividing and specializing. By recognizing and analyzing this biological pattern within stellar evolution, your framework enhances our understanding of the life cycles and behaviors of stars.

4. *Planetary Systems*: The formation and structure of planetary systems can also be understood through the application of biological patterns. For example, the way planets orbit around a star in a solar system can be compared to the structure of electrons orbiting atomic nuclei in an atom. By recognizing this analogy and incorporating it into the framework, we can generate insights into the dynamics and stability of planetary systems.

5. *Cosmic Web*: The cosmic web is the large-scale structure of the universe, consisting of interconnected filaments of galaxies and voids. This intricate network resembles the neural networks found in biological brains. By recognizing and analyzing this biological pattern within the cosmic web, your framework can provide a deeper understanding of the connectivity and evolution of cosmic large-scale structure.

In each of these examples, the recognition, analysis, and incorporation of biological patterns within your framework contribute to explaining phenomena, solving problems, or generating insights within their respective biological contexts. By mapping analogies between biological processes and various cosmic phenomena, our theory strengthens its ability to elucidate the underlying biological nature of the universe and its systems, expanding our understanding of the mathematical framework that governs reality.

### ***Biological Patterns in Non-Biological Systems On Earth***

In his book *Gaia's Body*, Tyler Volk, biologist and engineer for self-sustaining systems for NASA, draws analogies between Earth processes and biology's processes to explore the interconnectedness and interdependence of our planet's systems. Here are a few examples of the analogies he discusses:

1. **Earth's Atmosphere and Cellular Respiration:** Volk compares the exchange of gases in Earth's atmosphere through processes like photosynthesis and respiration to the exchange of gases within cells during cellular respiration. This analogy highlights the way in which both the planet and organisms rely on the exchange of gases to sustain life and maintain balance.
2. **Earth's Carbon Cycle and the Metabolic Pathways:** Volk draws a parallel between Earth's carbon cycle, which involves the cycling of carbon through various biochemical processes, and the metabolic pathways within living organisms. This analogy emphasizes the idea that the planet, like a living organism, has a metabolic system involved in the regulation and distribution of carbon.
3. **Earth's Hydrologic Cycle and Vascular System:** The hydrologic cycle, which involves the movement of water through various stages such as evaporation, condensation, and precipitation, can be seen as analogous to the vascular system in organisms. Both systems transport vital resources (water and nutrients) throughout their respective domains, enabling the sustenance of life.
4. **Earth's Geological Processes and Cellular Organization:** Volk likens the geological processes shaping the Earth's surface, such as erosion and tectonic activity, to the cellular organization found in living organisms. This analogy highlights the notion that the planet, like a living organism, undergoes dynamic processes that shape its physical structure and allow for adaptation and evolution.
5. **Earth's Biosphere as an Organism:** Volk proposes the idea that the entire Earth, including its biotic and abiotic components, can be viewed as a single, self-regulating organism—an idea known as the Gaia hypothesis. This analogy suggests that Earth's systems interact and work together to maintain favorable conditions for life, reminiscent of the way organs and systems cooperate to sustain an organism's homeostasis.

These analogies put forth by Tyler Volk in *Gaia's Body* serve to illustrate the interconnectedness and shared principles between Earth processes and biology's processes. They encourage us to perceive the Earth not merely as an inert backdrop for life but as an intricately integrated system, where biological and geological processes intertwine to shape the planet's dynamics and support the existence of life.

Here are some examples from non-biological systems on Earth, demonstrating the application of biological patterns within our proposed framework. These examples showcase how recognizing, analyzing, or incorporating these patterns can strengthen the framework's ability to explain phenomena, solve problems, or generate insights within the relevant biological context:

### ***Antarctica and the Pumping of a Heart***

To map the biological pattern of the heart providing pumping forces for nutrient distribution to the melting and freezing of Antarctica, as well as the Arctic currents, we can explore the following analogies:

1. Pumping Forces: The heart acts as a muscular pump that rhythmically contracts, generating the necessary force to circulate oxygenated blood and nutrients throughout the body. Similarly, the melting and freezing cycles in Antarctica involve the movement and redistribution of water, which can be linked to the pumping forces. As Antarctica experiences seasonal changes, with ice melting during warmer periods and refreezing during colder times, the shifting ice and resulting meltwater create a movement akin to pumping forces.

2. Nutrient Distribution: The heart's pumping forces drive the distribution of nutrients, ensuring they reach various organs and tissues within the body. In the polar regions, melting ice and the flow of currents play a crucial role in nutrient distribution. As ice melts, nutrient-rich water is released, which can be carried by ocean currents, such as the Antarctic Circumpolar Current or the Arctic currents, effectively distributing nutrients throughout the polar ecosystems and supporting marine life.

3. Thermoregulation: The heart's pumping actions help regulate body temperature by distributing warm blood to various parts of the body. In a similar manner, the melting and freezing cycles in Antarctica and the Arctic correlate with thermoregulation. Melting ice contributes to cooler ocean temperatures, affecting global thermohaline circulation patterns and exerting an influence on broader climatic conditions and temperature regulation.

By drawing analogies between the heart's pumping forces, nutrient distribution, and thermoregulation, and their counterparts in the melting and freezing of polar regions and the flow of currents, we can uncover similarities and patterns that highlight the biological nature underlying these phenomena. This mapping demonstrates how biological processes and patterns can be extended beyond traditional biological contexts, deepening our understanding of the interconnectedness and biological essence present in diverse aspects of the universe.

### ***Sahara Desert and the Stomach:***

To map the biological pattern of the stomach to that of the Sahara desert, Haboob wind storms, and their impact on the ocean and the Amazon rainforest, we can explore the connections and analogies between these systems. Here's a possible mapping:

1. Function: The stomach serves as a digestive organ, breaking down food into nutrients that can be absorbed and utilized by the body. Similarly, the Sahara desert and Haboob wind storms play a vital role in nutrient transport. The desert's arid conditions and wind patterns contribute to the breaking down of plants and organic material over time and to the movement of dust and sand particles, including nutrients, over vast distances.

2. Nutrient Transport: In the stomach, nutrients from ingested food are broken down and made available for absorption into the bloodstream, nourishing the body. Similarly, the Sahara desert's wind storms can transport dust and nutrients, including phosphorous, over long distances, depositing them into the ocean. These nutrients become accessible to not only marine organisms, such as plankton, which form the basis of the marine food web, but also all plant life in the Amazon Rainforests, which form the basis the ecology of the Rainforests.

3. Ecological Impact: In the rainforest analogy, the nutrients brought by windstorms from the Sahara contribute to the nutrient cycle and productivity of the Amazon rainforest. Just as the stomach delivers essential nutrients for bodily functions, the nutrients deposited into the rainforest through natural processes help sustain the diverse ecosystem and support the growth of vegetation.

By drawing analogies and mapping the functions, nutrient transport, and ecological impacts between the stomach and the Sahara desert system, we can reveal similarities and patterns that highlight the biological nature and interconnectedness of these seemingly distinct processes. This mapping allows us to appreciate the underlying biological principles at work in diverse systems and reinforces the theory's proposition that biological patterns define the framework for understanding the nature of all aspects of reality.

### ***Plants functioning as Lungs:***

According to the theory "the biological framework for a mathematical universe," all systems, including biological ones, possess inherent biological patterns. The theory suggests that by mapping these patterns across different domains, we can reveal and explain the biological nature of various phenomena. Let's explore how we can map the biological pattern of the lungs within the body to the function of trees on Earth:

1. Gas Exchange: The lungs in the human body are responsible for facilitating the exchange of oxygen and carbon dioxide during respiration. Similarly, trees play a crucial role in gas exchange on Earth through the process of photosynthesis and respiration. Trees absorb carbon dioxide, releasing oxygen into the atmosphere, which is vital for sustaining life.

2. Filtration and Purification: Lungs act as filters by removing impurities and particulate matter from the air we breathe. Similarly, trees help filter the air by capturing pollutants and airborne particles through their leaves. This process enhances air quality and reduces the presence of harmful substances.

3. Oxygen Production: Lungs generate oxygen, which is essential for supporting cellular respiration and sustaining human life. Trees, on the other hand, serve as significant oxygen producers through photosynthesis. They absorb carbon dioxide and release oxygen as a byproduct, contributing to the oxygen content in the Earth's atmosphere.

4. Interconnectedness: Lungs are a part of the intricate respiratory system within the human body, interconnected with other organs and systems to maintain overall functionality. Similarly, trees are interconnected within ecosystems, forming networks that support biodiversity, nutrient cycling, and the overall health of terrestrial environments.

By drawing analogies between the gas exchange, filtration, purification, oxygen production, and interconnectedness exhibited by the lungs and trees, we can map and highlight the shared biological patterns present in these systems. This mapping allows for a deeper understanding of the biological essence and interconnected nature of diverse phenomena, supporting the theory that biological patterns define the underlying framework of the universe.

### ***Earth's Magnetic Field and Atmosphere functioning as Skin:***

The Earth's magnetic field and atmosphere play integral roles in supporting and protecting life on our planet. The magnetic field acts as a shield, deflecting harmful solar radiation and charged particles from the Sun, while the atmosphere provides a layer of gases that regulate temperature, protect from harmful radiation, and enable vital processes such as oxygen supply.

In the concept of structurally mapping these features to the biological pattern of skin, we can draw analogies based on their functions and interactions. Here are a few possible connections:

1. Protection and barrier function: The Earth's magnetic field and atmosphere, like the skin, act as protective barriers. Just as skin serves as a physical barrier against external threats, the magnetic field and atmosphere shield the planet and its inhabitants from harmful cosmic radiation and other space-related hazards.
2. Regulation and homeostasis: Skin plays a crucial role in maintaining body temperature and regulating internal conditions. Similarly, the Earth's atmosphere helps regulate global temperatures through various atmospheric processes such as the greenhouse effect, maintaining a suitable environment for life to thrive.
3. Sensory reception: Skin is an essential organ for sensory perception, allowing us to sense touch, heat, and other stimuli. In a parallel manner, the Earth's magnetic field interacts with the Sun's solar wind, creating phenomena such as the Northern and Southern lights (auroras), which provide a visual and sometimes magnetic sensory experience for those in high-latitude regions.
4. Exchange interfaces: Skin enables the exchange of gases, nutrients, and waste products between the body and the external environment. Similarly, the Earth's atmosphere facilitates the exchange of gases, such as oxygen and carbon dioxide, between the planet and various organisms, including humans.

By structurally mapping the Earth's magnetic field and atmosphere to the biological pattern of skin, we can highlight their similarities in terms of protection, regulation, sensory reception, and exchange interfaces. This mapping allows us to draw analogies and better understand the interconnectedness and inherent biological nature of these systems.

### ***Biological Patterns in Human Innovation***

Here are some concrete examples that demonstrate the application of biological patterns within our proposed framework, "biological framework for a mathematical universe hypothesis." These examples highlight how recognizing, analyzing, or incorporating these patterns strengthens the framework's ability to explain phenomena, solve problems, or generate insights within the relevant biological context,

1. *Velcro*: Velcro, a famous fastening product, was inspired by the burrs that stick to clothing and animal fur. Swiss engineer George de Mestral noticed the hooks and loops on burrs and realized their potential for creating a fastening mechanism. This observation led to the development of the hook-and-loop fastener we know as Velcro.

2. *Shinkansen Bullet Train*: The design of the Shinkansen bullet train in Japan was inspired by the diving behavior of the kingfisher bird. Engineers realized that the bird's beak allowed it to dive into water without creating a large splash. By mimicking the streamlined shape of the kingfisher's beak, the Shinkansen's design reduced noise and increased efficiency, making it one of the fastest and most efficient high-speed trains in the world.

3. *Lotus Effect*: The Lotus Effect refers to the self-cleaning properties of lotus leaves. These leaves possess microscopic structures and wax that repel water and prevent dirt from sticking. This natural phenomenon inspired the development of self-cleaning surfaces, such as coatings for building materials and car paints, which can resist dirt and water, reducing the need for frequent cleaning and maintenance.

4. *Bionic Handling Assistant*: The Bionic Handling Assistant is a robotic arm developed by Festo, a German automation company. It is inspired by the flexible movements of an elephant's trunk. By mimicking the structure, flexibility, and control of an elephant trunk, this robotic arm can perform delicate and precise tasks while having the ability to lift heavy objects.

5. *Sharkskin-inspired Swimwear*: Swimwear made with fabric that mimics the texture of sharkskin has been developed to improve swimming performance. Sharkskin's surface features small scales called dermal denticles, which reduce drag in water. By incorporating similar patterns into the fabric, swimwear manufacturers have created products that enable swimmers to move through water with less resistance, enhancing their speed and efficiency.

These few examples demonstrate how nature's designs and processes can inspire practical and efficient solutions across various fields. Biomimicry allows us to learn from the remarkable adaptations and strategies found in nature and apply them to address human challenges, resulting in more sustainable, efficient, and innovative technologies and designs.

For much more examples of biology's patterns in human innovation, please visit:

**[www.AskNature.org/innovations/](http://www.AskNature.org/innovations/)**

### ***Biological Patterns In Mathematics (Intangible Concepts)***

Here are examples of mathematical equations, laws, or principles that exist in biology and have applications outside the biological domain:

1. Exponential Growth Equation: The exponential growth equation, often applied to model population growth in biology, has wider applications. It can be used to study the growth of financial investments, the spread of infectious diseases, or the expansion of technological innovation in various fields.

2. Game Theory: While applications range from studying foraging behavior in animals to understanding the evolution of cooperation within populations and modeling and analyzing interactions and strategies between individuals in evolutionary biology, animal behavior, and ecology, Game theory, is extensively used in economics and social sciences.

3. Diffusion Equations: Diffusion equations, originally developed in physics, have been applied in biology to study processes like the spread of heat, solutes, or species across space. They find application in modeling the spread of diseases, the diffusion of chemicals in fertilization processes, or the dispersion of pollutants in environmental studies.

4. Neural Network Models: Neural network models, inspired by the structure and function of biological neurons, have extensively been used in artificial intelligence and machine learning. While they have broad applications outside biology, they draw inspiration from the principles of information processing in biological brains.

5. Fractal Geometry: Fractal geometry, initially introduced to describe complex natural shapes, has found applications in various fields beyond biology. In biology, it can be used to study the structure of biological systems such as branching blood vessels or the morphology of plants. Outside biology, fractals are used in computer graphics, data compression algorithms, and modeling natural phenomena like coastlines or stock market behavior.

6. Mendelian Laws of Inheritance: Mendel's laws, which describe the inheritance of traits in offspring, have applications beyond biology. They can be used in agricultural practices to selectively breed plants and animals, in human genetics to understand the risk of inheriting certain genetic disorders, or in forensic science to determine the likelihood of certain genetic profiles.

7. Optimal Foraging Theory: Optimal foraging theory, which analyzes the behavior of organisms in search of food resources, can be applied beyond biology. It has been used in economics to study consumer decision-making or resource allocation, and in computer science to develop algorithms for resource optimization.

8. Network Theory: Network theory, which examines the interconnectedness and structure of networks, has applications in biology and beyond. In biology, it can be used to study protein interaction networks, ecological networks, or neural networks. Outside of biology, network theory is applied in fields like social network analysis, transportation networks, or information networks.

9. Predator-Prey Models: Predator-prey models that describe the population dynamics between predators and their prey have applications outside biology. They are used in fields such as economics to understand the dynamics between competing companies, in cybersecurity to model the interactions between attackers and defenders, or in ecology to study the interactions between species in food webs.

10. Markov Chains: Markov chains, which model systems with probabilistic transitions from one state to another, can be used in biology and other fields. In biology, they can describe the behavior of molecules in chemical reactions or the occurrence of mutations. In other disciplines, Markov chains are applied in weather forecasting, financial modeling, or analyzing web page ranking algorithms.

11. Chaos Theory: Chaos theory, which studies the behavior of complex and sensitive systems, has applications beyond biology. It is applied in physics, engineering, economics, and even in the analysis of stock market behavior or predicting the weather patterns.

These examples demonstrate how mathematical concepts developed in biology can be applied and have practical uses in a wide range of disciplines outside the biological domain. Mathematics provides a common language that enables insights and applications to transcend traditional boundaries and contribute to the understanding of diverse phenomena.

### ***Biological Patterns In Other Intangible Concepts***

Here are concrete examples of biological patterns mapped to intangible concepts:

1. Communication Systems: Communication processes in living organisms, such as neural networks in the brain or chemical signaling in cells, can be mapped to intangible concepts like language and information transmission. Just as neurons transmit electrical signals between each other, language allows for the exchange of information and ideas among individuals, creating complex networks of communication.

2. Social Structures: Social structures within cellular societies, like hierarchies or cooperative behaviors, can be mapped to intangible concepts such as organizational structures in human societies. The patterns of leadership, division of labor, and cooperation observed in cellular societies can shed light on the underlying biological principles that influence human social systems.

3. Cultural Evolution: The study of cultural evolution, which encompasses the transmission and modification of ideas, technologies, and behaviors in human societies, can be mapped to the concept of genetic evolution. Just as genes are subject to mutation and selection processes, cultural practices can undergo modification, selection, and transmission from one generation to the next.

4. Collective Intelligence: The cooperation and coordination observed in ant colonies or bee hives can be mapped to intangible concepts like collective intelligence in human groups. The simple interactions and decentralized decision-making of these social insect communities can reveal biological patterns that contribute to the emergence of robust and adaptive group behavior.

5. Neural Networks and Information Processing: The interconnectedness and hierarchical organization of neurons in the brain can be mapped to the flow of information in complex systems, such as computer networks or social networks.

6. Ecosystem Dynamics and Economic Systems: The concept of ecological succession, where different species replace one another in an ecosystem over time, can be analogously applied to economic systems, where businesses and industries evolve and replace each other based on market dynamics.

7. Cellular Signaling and Communication Systems: The signaling pathways within cells, which involve the transmission of chemical signals, can be mapped to communication systems, such as telecommunication networks or social media platforms.

8. Genetic Code and Language Syntax: The information-carrying properties of DNA, with its sequence of nucleotides, can be structurally mapped to the syntax and grammar of human languages.

9. Evolutionary Adaptation and Problem Solving: The process of natural selection, where traits advantageous for survival are favored, can be analogously applied to problem-solving, where successful strategies are selected and adapted over time.

10. Collective Behavior in Social Insects and Organizational Principles: The coordinated behavior of social insects, such as ants or bees, can be mapped to organizational principles in human societies, such as division of labor, communication networks, and hierarchical structures.

11. Self-organization in Cellular Systems and Artificial Intelligence: The self-organizing behavior of cellular systems, where individual cells collectively create complex structures, can be mapped to artificial intelligence algorithms, such as swarm intelligence or self-organizing systems.

12. Biochemical Feedback loops and Regulation Mechanisms in Engineering: The feedback loops in biochemical pathways, which regulate the balance and stability of biological processes, can be mapped to control systems in engineering, such as automatic temperature regulation or feedback mechanisms in robotic systems.

13. Symbiotic Relationships and Collaboration in Business: The mutualistic relationships between different species in ecosystems, such as pollinators and flowering plants, can be mapped to collaborations and partnerships between companies or individuals in business ecosystems.

14. Biological Rhythms and Time Management: The circadian rhythms, regulating sleep-wake cycles in organisms, can be mapped to effective time-management strategies, such as recognizing personal rhythms for productivity and scheduling tasks accordingly.

By structurally mapping these biological patterns to intangible concepts, we can uncover deeper connections and gain a broader understanding of the biological nature that underlies seemingly intangible phenomena. It highlights the theory's proposition that biological patterns define the foundation of our universe and are present in a wide range of systems, processes, and objects throughout reality.

### ***Broader Implications and Significance:***

Considering biological patterns within our framework, titled "biological framework for a mathematical universe hypothesis," has broader implications and significant potential in various areas of understanding, prediction, and intervention in all systems. This approach can have a profound impact on research, education, and practical applications.

*Importance of Patterns:* Our theory emphasizes that everything in reality is measured and understood through patterns—i.e., knowledge, mathematics, engineering, and science are all based on recognizing patterns within their respective fields. Biological patterns are considered fundamental and the only true and consistent pattern throughout the universe and reality. These biological patterns transcend all fields of knowledge. This would imply that many of the various fields of study will have to re-evaluate their processes to incorporate biological patterns as part of their framework for their theories and projects:

#### Theoretical Physics:

1. *Revisiting Fundamental Laws:* If biological patterns define the framework of a mathematical universe, it would necessitate a reevaluation of the fundamental laws and principles of physics. Theoretical physicists would need to explore how these laws interact with and emerge from underlying biological patterns.

2. *Incorporating Biological Perspectives:* Theoretical physics would likely need to incorporate biological perspectives and principles into theoretical models and frameworks. By integrating biological patterns and principles, physicists may gain new insights into phenomena such as the emergence of complexity, self-organization, or the relationship between information processing and physical systems.

#### Biology:

1. *Expanding Biological Understanding:* If all systems, processes, and objects possess inherent biological patterns, biology as a field would need to broaden its scope beyond living organisms to include the study of patterns that exist in non-biological systems. This expansion may deepen our understanding of the connections between biology and other scientific disciplines.

2. *Implications for Evolutionary Biology:* According to our theory, the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. This notion could influence and shape theories of evolution, including discussions on the origins of life and the relationships between living organisms and the broader universe.

#### Astrophysics:

1. *Mapping Biological Patterns in the Universe:* If the universe's biological processes are intertwined with the existence of life and living organisms, astrophysics would have to explore the presence and significance of biological patterns in cosmic phenomena. This could involve studying how biological patterns manifest in nebulae, galaxies, black holes, and other astrophysical entities.

2. *Understanding Origins and Connections:* Your theory implies that the physiology of living organisms serves as a model for revealing hidden biological patterns throughout the universe. This could lead astrophysicists to investigate how the origins and development of biological patterns on Earth and in the universe are interconnected.

The integration of biological perspectives into theoretical and applied physics, biology, and astrophysics would be an ongoing and collaborative scientific endeavor.

*Biological Patterns as Meta-Patterns:* The framework emphasizes that biological patterns are not just patterns within specific domains, but rather meta-patterns that govern the nature of the universe and everything in it. These patterns transcend individual disciplines and provide a foundational understanding of reality. Biological patterns cross all domains.

*Biological Patterns Enables General Analogies:* The presence of biological patterns throughout the universe allows for the establishment of analogies across non-biological base domains. This highlights how biology's prevalent patterns throughout the universe provide the underlying structure for analogy to exist. Analogies between two non-biological domain would suggest an underlying correspondence to the patterns within the biological domain. This correspondence, in turn, helps us transfer knowledge and insights from the biological realm to other areas.

*Analyzing Patterns:* Biological patterns represent the fundamental patterns present throughout the universe. These patterns offer a consistent framework through which we can perceive and understand various phenomena. By recognizing and studying biological patterns, we can establish a foundation for understanding other domains, including applied mathematics and physics.

*Transferability of Biological Patterns:* Applied mathematics and physics utilize mathematical principles to understand and describe various phenomena in the non-biological world. These mathematical principles often find their roots in the patterns and structures observed in biological systems. By recognizing the commonalities between biological patterns and patterns in other domains, we can apply mathematical models and principles to understand and predict the behavior of non-biological systems.

*Predictive and Interventional Abilities:* Applied mathematics and physics rely on the establishment of mathematical models based on observed patterns and relationships. By understanding the underlying biological patterns in a system, we can develop mathematical models that accurately predict and explain the behavior of non-biological systems. Moreover, this understanding allows us to intervene in these systems more effectively, manipulating or optimizing them based on the principles derived from the biological realm.

*Biological Patterns as Fundamental Knowledge:* This component asserts that patterns, particularly biological patterns, form the basis of knowledge and understanding in all fields, surpassing any other potentially flawed patterns. It positions biological patterns as the consistent and reliable basis for comprehending the universe's workings. All forms of knowledge contain patterns, in general, which have correspondence to biological patterns. Understanding the underlying biological patterns corresponding to preexisting knowledge allows one to understand the true nature of that knowledge.

*Tangibility to Intangible Concepts:* Our theory brings tangibility to intangible concepts by establishing a connection between biology and other domains, mapping patterns, and recognizing the universal nature of biological patterns. This approach allows for the application of tangible frameworks and insights to comprehend and explain abstract concepts, making them more accessible and understandable in the context of the biological framework for a mathematical universe.

*Unity of Religion and Science*: Our theory suggests a biological connection between patterns within the human body and the patterns of the universe, which can be interpreted as the microcosm and macrocosm motif across many religions and philosophies. It proposes a way to reconcile and bridge the gap between religious, spiritual, and philosophical concepts and scientific explanations by highlighting the shared biological nature within them. This could encourage a more harmonious relationship between religion and science.

*Reinterpretation of Religious Texts*: Our theory would prompt a reinterpretation of religious texts. The idea that ancient religious, spiritual, and ancient philosophical texts are expressing a biological connection between the human body and the universe could lead to a new understanding of these texts. They would be seen as analogical expressions of the biological patterns that permeate throughout everything in the universe, rather than strictly literal or metaphorical accounts.

*Evolution of Religious Beliefs*: Our theory proposes that The Universe and Its biological patterns are God and His Essence, suggesting a reimagining of the concept of God in religious beliefs. It could lead to a shift in how people perceive and understand spirituality, potentially fostering a more scientifically informed view of religious and spiritual ideas.

*Redefinition of God*: The theory's interpretation of God as the personification of the universe's biological patterns would challenge traditional religious conceptions of God. It would propose a more scientifically informed understanding of God as the embodiment of the underlying biological structures and processes that permeate throughout the universe. This redefinition could lead to reinterpretations of religious texts and theological concepts in light of the biological framework.

*Interplay between Science and Religion*: The theory would provide a potentially harmonious relationship between science and religion by suggesting that the biological patterns discovered through scientific inquiry are foundational to understanding the divine essence of the universe. This would create an avenue for dialogue and synthesis between scientific and religious communities, fostering a more integrated approach to exploring the nature of reality.

*Religious Symbolism and Analogies*: The theory's postulate that analogies can be structurally mapped from biology to any target domain would affect religious symbolism and analogies. It may provide a new lens through which religious symbols and metaphors can be understood, highlighting the biological patterns that underpin them. This could lead to a rich exploration of the intersection between biology, symbolism, and religious meaning.

*Revisiting Religious Texts*: Given the theory's implications on the interpretation of religious ideas, it would prompt a reexamination of religious texts. Scholars might seek to identify and reinterpret passages that align with the biological framework, shedding new light on the intentions and meanings behind religious teachings.

*Expanding Religious Concepts*: The theory could expand religious concepts by introducing a deeper understanding of the biological processes that shape the universe and life. It might encourage a broader perspective on the interconnectedness of all things and foster new insights into ethical frameworks, the nature of creation, and the relationship between the physical and spiritual realms.

*Religious and Scientific Integration*: This theory's unifying nature may facilitate the integration of religious and scientific perspectives. It offers a potential bridge between the domains of science and religion, allowing for dialogue and collaboration between scholars, theologians, and scientists. This interplay would contribute to a more comprehensive understanding of the universe and its intricacies.

*The Creation of Consciousness, Logic & Reason:* Biological patterns embedded within the fundamental nature of environments which encompass living organisms force the behaviors of living organisms to organize themselves into biological patterns which form complex societies of living organisms, for survival. All living organisms must be able to recognize the patterns within their environment so that they can operate in harmony with the patterns necessary for survival. If they do not, they jeopardize their own lives and risk destruction. As complexity of the environment evolves diversity of environment is created forcing living organisms to have to reason the biological patterns of each of these environments, thereby producing the various species of complex organisms. This interplay between organisms and the patterns of their environment forces *consciousness* upon living organisms to organize themselves most efficiently for their own survival. This interplay between the organism and the patterns of the environment give rise to logic and reasoning and consciousness. Free-thinking consciousness is a combination of when the biologically-patterned environment reaches a limit in complexity and if a living organism has taken the correct path of evolution.

*Evolution of Consciousness:* The theory proposes that the complexity of a living organism's environment (which is biological in nature and always evolving) drive the evolution and complexity of consciousness. As organisms adapt and evolve to the complexity of their environment, their consciousness evolves in parallel. Organisms must be able to evolve its ability to reason in parallel with the evolution of complexity of its environment, or else risk the destruction of its life. This evolutionary perspective underscores the link between the evolution of complexity of the environment and the evolution of complexity of consciousness.

*Organizational Properties of Successful Societies:* The organizational properties of cellular societies define the organizational properties of successful societies. The cellular society composing the human physiology is the most sovereign model of this cellular society. The properties of cellular society can be structurally mapped to human society to reveal the nature of many socioeconomic phenomenon.

*Organizational Properties of Organisms Revealing Biological Order of Their Environment:* The natural tendency for organisms to organize themselves in these biological patterns, such as seen across the realm of cellular societies comprising complex organisms, highlights these underlying/hidden biological patterns within their environment which force those living organisms to cooperate and organize themselves in harmony with these patterns in their environment necessary for survival—thereby revealing these biological patterns of these forces due to the nature of their organization. It also explains the fractal-like emergence of these biological patterns in larger systems, such as communities of complex living organisms, and in human society.

*14. Human Consciousness and Freedom:* Our framework presents humanity as a pinnacle of complexity and consciousness, where individuals are freed from immediate survival constraints of their environment. With this freedom, humans can interpret the inherent biological patterns of their environment in *any* way they choose. It gives rise to the capacity for imagination, artistic expression, and leisure activities. This displays an evolution of consciousness from being dependent upon their environment to being able to control their environment within the buffer created by the complexities of their environment. This ability highlights the point in the complexity of an environment produces a buffer between the immediacy to reason and behave accordingly to the patterns of its [biological] environment—Stephen Covey explains this as the space between stimulus and response.

*Humanity's Loss of Consciousness:* The framework acknowledges that humanity has, to some extent, lost touch with the inherent biological patterns present in the universe and reality. This loss of consciousness is attributed to an obsession with superficial aspects, symbolized by the "shadows and projections" of biological patterns, rather than a deep understanding of their foundational nature. This can be revealed in the dilapidation in the organization of their society. However, while there are dilapidations which significantly jeopardize human society, it can be resolved through the propagation of the ideas of the biological pattern which exists throughout reality and adjusting socioeconomic and public policies to correspond to healthy biological patterns.

*Reconnecting with Biology's Patterns While Maintaining our Ability to Think Freely:* The further evolution of consciousness would imply being able to balance both the understanding and behaving according to the biological patterns existent with in the fabric of reality and the universe, building human civilization in harmony with healthy biological patterns which establish and sustain the complexities which maintains the environment which allows humanity the leisure to imagine and create.

*Role of Senses and Information Processing in Consciousness:* Our theory recognizes the importance of our five senses (sight, sound, touch, taste, smell) in collecting information about the movement and order of objects in our environment. The information collected is stored and processed by the mind to allow for the recognition of patterns, which allow for the measurement of objects and the determination of courses of action at a particular situation at a given point in time.

*Emotions and Feelings:* Our theory acknowledges the role of emotions and feelings in our understanding of patterns and behaviors. Feelings originally were a mechanism that compensated for a lack of logic and inability to reason. Feelings inspire and provoke reason and logic. Emotions are the result from not understanding the logic (patterns) within a given situation, and they motivate actions and behaviors. Understanding the correspondence between particular situations and biological patterns can help us understand the nature of emotions and the associated behaviors.

*Language and Communication as an expression of Patterns:* Communication is the process of conveying patterns. Language is the means by which patterns are conveyed. For humans, language and communication assists in scaling the mental and physical unity pertaining to the recognition and conveyance of patterns within a living organism's environment. The symbols and enunciations used in spoken and written language convey interpretations of reality, which must be translated and understood by the recipient. Even actions of things and their ability to influence another thing the expression of communication through the language of force and even ideas. Either case, this language allowed for human society to communicate and organize its society relative to biological patterns.

*General Consciousness and General Unconsciousness:* The distinction between general consciousness and general unconsciousness is described, with general consciousness being the ability to recognize and behave according to patterns specific to an environment or domain. The inability to not recognize any general pattern is general unconsciousness. This distinction highlights the importance of pattern recognition in developing general consciousness. Actual consciousness is recognizing and abiding by patterns which establish and sustain

Actual Intelligence (Biological Consciousness): Actual Consciousness, or biological consciousness, arises when an organism realizes the biological patterns within their environment and behaves accordingly to the healthy biological patterns which establish and sustain life. For example, for living organisms, such as human beings, I can safely say that everyone is not biologically conscious, perhaps the engineers and scientists who are designing via biomimicry are very close, but they are only biologically conscious within their field. To be biologically conscious is to interpret one's reality relative to these underlying biological patterns which govern the nature of one's reality. To recognize the healthy and unhealthy biological patterns and to abide by the healthy biological patterns.

Artificial Intelligence: The theory of a "biological framework for a mathematical universe" would have several implications for artificial intelligence:

1. Design and Development: The theory suggests that biological patterns are inherent in all systems, processes, and objects in reality. This would encourage researchers and developers of artificial intelligence to incorporate and emulate these biological patterns in the design and development process of AI systems. By doing so, it is posited that AI systems may exhibit a closer alignment with the natural world, potentially leading to more efficient and effective AI models.
2. Biomimicry: The theory's postulation that the physiology of living organisms reveals hidden biological patterns throughout the universe could inspire the application of biomimicry in AI. Biomimicry involves studying and imitating nature to solve human problems. In this context, AI researchers could explore how biological patterns manifest in various organisms and phenomena to develop algorithms and models that enhance AI capabilities.
3. Understanding Intelligence: The theory's proposition about the relationship between the universe's biological processes and the creation of life raises questions about the nature of intelligence. It challenges researchers to investigate how these biological patterns may contribute to the emergence of intelligence and consciousness. This could lead to a deeper understanding of intelligence and potentially aid in the development of more advanced AI systems.
4. Ethical Considerations: The implications of the theory could prompt discussions on ethical considerations related to AI. If all systems and objects possess biological patterns, ethical questions arise regarding the treatment and management of AI systems. This could include discussions on the rights, responsibilities, and potential moral implications associated with AI that exhibits biological patterns or mimics biological organisms.
5. Algorithmic Insights: Exploring the biological framework of a mathematical universe may inspire new algorithms and computational approaches in AI. By understanding and mapping biological patterns to target domains, insights could be gained on how these patterns can improve AI algorithms, such as optimizing efficiency, resilience, adaptability, and problem-solving capabilities.
6. Integration with Biological Systems: The theory's emphasis on the biological nature of all systems and objects in reality could lead to innovative applications of AI in conjunction with biological systems. For instance, AI may be utilized in fields such as biotechnology, medicine, or environmental research to leverage the biological patterns present in these domains. This integration could enhance the understanding and manipulation of biological processes for various beneficial purposes.

*Interdisciplinary Synergy:* Embracing the notion of a biological framework for the universe enhances interdisciplinary synergy. It encourages collaboration between biologists, mathematicians, physicists, and other scientific disciplines. This collaboration enables the exchange of ideas, methodologies, and perspectives, ultimately leading to a more comprehensive understanding of complex phenomena.

*Education and Pattern Recognition:* Our framework suggests that education plays a crucial role in fostering free-will consciousness by introducing individuals to various scenarios and teaching them to recognize patterns. Education helps individuals become conscious by providing a foundation in recognizing and understanding patterns that they would ultimately have responsibility to understand on their own if it were not for the benefits of the infrastructure and history of their society.

*Updating Educational Resources:* Our study challenges and expands upon existing knowledge, which prompts a reassessment of the information presented in textbooks. Our theory provides a paradigm shift across various fields and will warrant the inclusion of updated information in educational resources.

*Alignment of Socioeconomics with Biological Patterns:* Our theory would imply that socioeconomics should align with the underlying biological patterns that define the framework of the mathematical universe. Socioeconomic, regulations, and governance systems would need to be structured and interpreted in a way that acknowledges and respects the intrinsic biological nature of reality. This alignment could involve considering how laws impact living organisms, their well-being, and the preservation of biological processes and patterns. See the initiative: **[www.PerfectPublicOffering.org](http://www.PerfectPublicOffering.org)**

*Alignment of Human Law with Biological Patterns:* If your theory were true, it would imply that human law should align with the underlying biological patterns that define the framework of the mathematical universe. Human laws, regulations, and governance systems would need to be structured and interpreted in a way that acknowledges and respects the intrinsic biological nature of reality. This alignment could involve considering how laws impact living organisms, their well-being, and the preservation of biological processes and patterns.

*Unity of Science and Nature:* The theory would bridge the gap between the natural sciences and biology, providing a unified framework for understanding the underlying patterns and principles that govern the universe. It would bring together concepts and methodologies from various scientific disciplines, fostering collaboration and interdisciplinary approaches to scientific inquiry.

*Coherence and Consistency:* The theory would provide a coherent and consistent framework that explains the relationship between biological patterns and the mathematical structure of the universe. This would help reconcile seemingly disparate phenomena and concepts, allowing for a more comprehensive understanding of the natural world.

*Predictive Power:* A unifying theory has significant predictive power. If the theory of a biological framework for a mathematical universe were established as a unifying theory, it would enable scientists to make more accurate predictions about various phenomena. By understanding the inherent biological patterns present in all systems, processes, and objects, scientists may be able to better anticipate and explain their behavior.

*Interdisciplinary Collaboration:* The unifying nature of the theory would encourage collaboration and exchange of ideas among scientists and researchers from different disciplines. This would promote a holistic approach to scientific inquiry, where insights and methods from biology, mathematics, and other fields can be combined to enhance our understanding of the universe.

Philosophical Implications: As a unifying theory, the biological framework for a mathematical universe would have philosophical implications as well. It would impact philosophical discussions on the nature of reality, the relationship between science and nature, and the role of biology in understanding fundamental principles. The unifying theory may also prompt philosophical questions related to consciousness, purpose, and the interconnectedness of all things.

Educational and Communicative Value: A unifying theory has educational and communicative value. It could serve as a foundation for science education, providing a framework that connects various scientific concepts and disciplines. Additionally, it would assist in communicating complex scientific ideas to the general public, facilitating a more accessible understanding of the universe and its biological underpinnings.

By recognizing and leveraging the prevalent biological patterns throughout the universe, we can establish a connection between biological and non-biological domains. This connection allows us to extend our understanding and application of principles from fields like mathematics and physics to a wide range of natural phenomena. It suggests that the fundamental nature of biological patterns provides a framework through which we can comprehend and predict the behavior of non-biological systems. This perspective highlights the interconnectedness of different domains and emphasizes the importance of recognizing the underlying biological patterns that shape our universe. Here, we discuss the potential impact on areas such as research, education, or practical applications.

1. Research: By recognizing and analyzing the biological patterns that define the nature of systems, processes, and objects in reality, this framework offers a fresh perspective for research in various scientific disciplines. It encourages interdisciplinary collaborations, allowing researchers to explore the connections between biology and other domains such as physics, chemistry, or social sciences. By understanding and leveraging the biological patterns present throughout the universe, researchers can uncover new insights, identify novel relationships, and make predictions about biological phenomena.

2. Education: Introducing the concept of biological patterns within the educational system can revolutionize the way we teach and learn about the natural world. By emphasizing the inherent biological nature of all systems, processes, and objects, this approach promotes a holistic understanding of biology and its interconnectedness with other domains. It encourages students to recognize and appreciate the underlying biological patterns that shape our world. Integrating this perspective into educational curricula can foster critical thinking skills and inspire innovative solutions to societal challenges.

3. Practical Applications: Understanding and utilizing biological patterns within our framework can lead to impactful practical applications. By recognizing the significance of biological processes in the evolution of life, we can gain insights into developing solutions for various fields such as healthcare, biotechnology, and environmental sustainability. For instance, by leveraging our understanding of these patterns, we can improve medical treatments, design sustainable ecosystems, optimize agricultural practices, or develop bio-inspired technologies. It can also contribute to the field of biomimicry, where innovations are inspired by the biological patterns and principles observed in nature.

In summary, incorporating biological patterns within our framework has far-reaching implications. By recognizing the inherent biological nature of all systems, processes, and objects in reality, we can enhance our understanding, prediction, and intervention in all systems. This approach can have a significant impact on research, education, and practical applications, fostering interdisciplinary collaboration, empowering students and the general public, and inspiring innovative solutions to societal challenges.

## B. Mathematical Universe Hypothesis

**Mathematical Universe Hypothesis:** Max Tegmark's Mathematical Universe Hypothesis (MUH) is the hypothesis that our external physical reality is mathematical structure. That is, the physical universe is not merely *described by* mathematics, but *is* mathematics — specifically, a mathematical structure. Mathematical existence equals physical existence, and all structures that exist mathematically exist physically as well.

## C. Interconnection Between Biological Patterns and the Mathematical Universe

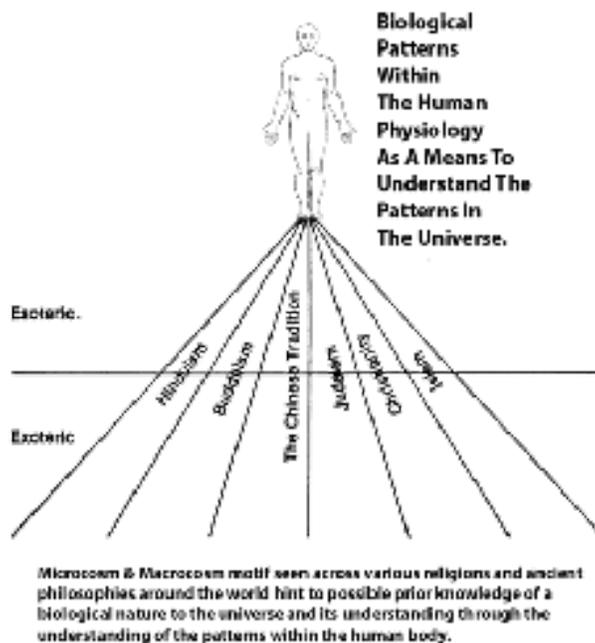
A mathematical universe hypothesis serves as a theoretical foundation for our theory of a biological framework. Here's an explanation of how a mathematical universe hypothesis supports and provides that foundation:

***Interconnectedness and Order:*** A mathematical universe hypothesis posits that the fundamental nature of reality is governed by mathematical principles and structures. It suggests that mathematics is not just a human creation but an inherent part of the fabric of the universe. This concept aligns with our theory, which proposes that biological patterns define the framework for understanding reality. By considering the universe as mathematically structured, it implies an underlying order and interconnectedness that are essential to our biological framework. [fractals, fractal cosmology, The Mandelbrot Set, Systems Theory, Systems Biology, Biomimicry]

***Quantifiable Patterns:*** Mathematics provides a language and set of tools to quantify and describe patterns and relationships. By connecting a mathematical universe hypothesis to the theory of a biological universe, we can argue that these mathematical patterns and relationships manifest as biological patterns within systems, processes, and objects in reality. The mathematical structure of the universe lays the foundation for the emergence and existence of biological patterns, allowing for the exploration and understanding of life and living organisms. [fractals, fractal cosmology, biomimicry]

***Modeling and Analogies:*** Our theory suggests that the physiology of living organisms can serve as models revealing hidden biological patterns throughout the universe and our surroundings. This concept aligns with the mathematical universe hypothesis, as mathematics often involves the creation of models and analogies to grasp complex phenomena. By considering the universe as mathematically grounded, our theory can propose that the relationship between biological processes and the universe allows for the structurally mapping of analogies from the biological to any target domain. This allows for the revelation and explanation of the biological nature of various domains, connecting them to the underlying mathematical framework. [Fractals, Fractal Cosmology, Biomimicry, Mathematical Modeling of Biological Systems, ]

## D. Biological Universe Expressed In Ancient Religious & Philosophical Text



**Perennial wisdom**, also known as perennial philosophy or perennial tradition, refers to the concept of universal and timeless spiritual truths that are found across various religious, philosophical, and mystical traditions throughout human history. It suggests that there are fundamental principles and insights about the nature of reality and the human experience that remain consistent throughout different cultures and historical periods. Building upon the concept of perennial wisdom, the ideas of a biological framework for a mathematical universe hypothesis can be seen in many cultures and historical periods. Here's how perennial wisdom is incorporated into our theory:

1. *Universal Principles*: Perennial wisdom suggests that there are fundamental and universal principles that underlie all religious and philosophical traditions. By considering our theory of a biological framework for a mathematical universe within the framework of perennial wisdom, we have discovered that our theory parallels with many of the religions and philosophical ideas from the past (which we show), especially the motif surrounding the microcosm and macrocosm and understanding the essence inside the body in order to understand the essence of God.
2. *Biological Patterns and Spiritual Truths*: Perennial wisdom emphasizes the interconnectedness of all things and the underlying unity of existence. In our theory, the idea that biological patterns define the framework for the mathematical universe hypothesis aligns with this emphasis on interconnectedness. By linking the biological patterns to spiritual truths, we can posit that these patterns serve as a bridge between the physical and the spiritual realms, revealing deeper spiritual realities through their existence and interplay.

3. *Common Motifs*: Perennial wisdom recognizes the presence of common motifs or themes across different religious and philosophical traditions. Our theory can utilize this concept by suggesting that the concept of a biological framework for the mathematical universe hypothesis predates the formation of specific religions and philosophies on Earth and its ideas/concepts can be seen within the ancient text of our religions and ancient philosophies. This implies that the presence of biological patterns as a fundamental aspect of reality is reflected in the common motifs found in various traditions. It highlights the universal nature of these biological patterns, further supporting our theory's assertion of their pervasiveness.

4. *Compatibility with Science*: Perennial wisdom emphasizes the compatibility of spiritual and scientific understanding. Our theory, which proposes a biological framework for a mathematical universe hypothesis, integrates scientific principles and patterns into the understanding of the nature of reality. This aligns with the aim of perennial wisdom to bridge the gaps between different modes of knowledge and to unite spiritual and scientific perspectives.

By incorporating perennial wisdom as a theoretical foundation for our theory, we strengthen the idea that the biological framework within the mathematical universe hypothesis is in alignment with universal and timeless spiritual truths. This perspective allows for a broader understanding of the interrelation between biological patterns, spiritual realities, and the common motifs found in different religious and philosophical traditions. We also propose that our theory for a biological framework for a mathematical universe may have been what was originally conveyed through our religion, and only through misinterpretations through time, have we come to a more “spiritual/religious” context of religion, and not the purely scientific meaning of what was being expressed. [Insert Atlas Cloud Scene when Tom Hanks talks to children at the end]

### **Atman & Brahman:**

The concepts of Atman and Brahman, as described in the Upanishads, can provide interesting perspectives and potentially contribute to the theoretical foundation of our theory, "biological framework for a mathematical universe hypothesis." Here's how these concepts can be relevant:

1. *Atman*: In the Upanishads, Atman refers to the individual self or soul, representing the essence of an individual being. It is considered eternal and interconnected with the ultimate reality. Our theory proposes that all systems, processes, and objects in reality possess biological patterns. From the perspective of Atman, one can interpret this as the essence or intrinsic nature of all things being interconnected and sharing common biological patterns. The concept of Atman supports the idea of the underlying unity and interdependence of all elements within the biological framework we propose.

2. *Brahman*: Brahman refers to the supreme cosmic reality, the ultimate truth or universal consciousness that encompasses and transcends individual beings. Brahman is considered the essence or source of everything. In our theory, the postulation that the existence of life and living organisms arises due to the evolution of the universe's biological processes aligns with the idea of Brahman as the creative force behind all manifestation. The concept of Brahman can provide a theoretical foundation for understanding the interconnectedness of the universal biological processes we propose and their relationship to the larger cosmic reality.

By integrating the concepts of Atman and Brahman, we incorporate ideas of interconnectedness, unity, and the universal nature of biological patterns. These concepts contribute to the theoretical framework of our theory by providing a philosophical and metaphysical basis for understanding the inherent biological nature of all systems, processes, and objects in reality, as well as the relationship between biological processes and the larger cosmic fabric.

## “Namaste”

In the realm of Hinduism, the traditional greeting "Namaste" carries a profound meaning. It serves as a acknowledgement that the divine essence resides within oneself as well as in others, emphasizing the unity that transcends physical boundaries and highlights the interconnectedness of all living beings. Namaste can be understood as "I respectfully bow to the divine within you"<sup>56 57 58</sup> or "the sacred within me recognizes the sacred within you".<sup>59</sup> We propose that the customary practice of bowing to one another may have originally served as a means to acknowledge the inherent sacredness of biological patterns that pervades every aspect of our existence. Regrettably, over time, the true meaning and context behind this divine salutation were lost.

## Pnimityut and Chitzonyut.

The concepts of Pnimityut and Chitzonyut from Kabbalah, a mystical tradition within Judaism, can provide intriguing theoretical foundations for certain aspects of our theory, "biological framework for a mathematical universe hypothesis." Here's how these concepts may be relevant:

1. *Pnimityut*: Pnimityut suggests an inward, hidden essence or inner dimension of reality. It refers to the underlying essence or spiritual aspect that is concealed from ordinary perception. In our theory, we propose that the hidden biological patterns throughout the universe can be revealed through the models of living organisms. This aligns with the concept of Pnimityut, as it suggests that there is an inner essence or pattern within all systems, processes, and objects that can be uncovered and understood. By exploring the biological nature and patterns of living organisms, we aim to reveal the hidden essence or Pnimityut within other domains.

2. *Chitzonyut*: Chitzonyut refers to the external or outer dimension of reality. It represents the surface-level or manifested aspects of existence. In our theory, we propose that all systems, processes, and objects possess biological patterns and are inherently biological in nature. This relates to Chitzonyut, as it suggests that the external manifestations or physical appearances of different domains can be seen as reflections of the underlying biological patterns. The interplay of Chitzonyut and Pnimityut in our theory can be seen as a parallel to the relationship between the revealed and hidden dimensions of reality within Kabbalah.

By integrating the concepts of Pnimityut and Chitzonyut, we incorporate ideas of hidden essences, inner dimensions, and external manifestations into our theory. These concepts can contribute to the theoretical framework by providing a philosophical and mystical basis for understanding the underlying biological patterns throughout reality and their relationship to the visible manifestations in different domains. Moreover, the concepts of Pnimityut and Chitzonyut can enrich the exploration of the interplay between hidden and revealed aspects, adding depth to our understanding of the biological nature of diverse phenomena.

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<sup>56</sup> Ying, Y. W., Coombs, M., & Lee, P. A. (1999), "Family intergenerational relationship of Asian American adolescents", *Cultural Diversity and Ethnic Minority Psychology*, 5(4), pp. 350–363

<sup>57</sup> K V Singh (2015). *Hindu Rites and Rituals: Origins and Meanings*. Penguin Books. pp. 123–124. ISBN 978-0143425106. Archived from the original on 2019-12-17. Retrieved 2017-05-20.

<sup>58</sup> Lawrence, J. D. (2007), "The Boundaries of Faith: A Journey in India", *Homily Service*, 41(2), pp. 1–3

<sup>59</sup> Oxhandler, Holly (2017). "Namaste Theory: A Quantitative Grounded Theory on Religion and Spirituality in Mental Health Treatment". *Religions*. 8 (9): 168. doi:10.3390/rel8090168.

### **Batin and Zahir (Sufism, Islam):**

The concepts of Batin and Zahir from Sufism, a mystical branch of Islam, can provide theoretical foundations for certain aspects of our theory, "biological framework for a mathematical universe hypothesis." Here's how these concepts may be relevant:

1. *Batin*: Batin refers to the inward or hidden dimension of reality. It represents the spiritual or esoteric aspect that is concealed from superficial observation. In our theory, we propose that biological patterns define the framework of a mathematical universe hypothesis. By emphasizing the hidden biological patterns throughout the universe, we can draw parallels with the concept of Batin. It suggests that there is an inner essence or hidden dimension within all systems, processes, and objects that can be explored and understood. By uncovering the Batin or hidden biological patterns, we aim to reveal the underlying nature of various domains.

2. *Zahir*: Zahir refers to the outer or apparent dimension of reality. It represents the manifest or surface-level aspects of existence. In our theory, we argue that all systems, processes, and objects possess biological patterns and are inherently biological in nature. This aligns with the concept of Zahir, as it suggests that the external manifestations or observable characteristics of different domains can be seen as reflections or manifestations of the underlying biological patterns (Batin). The interplay between Zahir and Batin in your theory can be seen as reflecting the relationship between the manifest and hidden dimensions of reality within Sufism.

3. *Whirling Dervish Ritual*: Whirling Dervishes spin in circles like parties within the body and planets within the solar system. They direct their attention inward and focus on the mystical contemplation of God's nature.

By integrating the concepts of Batin and Zahir, we incorporate ideas of hidden dimensions, spiritual aspects, and observable manifestations into our theory. These concepts can contribute to the theoretical framework by providing a mystical and philosophical foundation for understanding the underlying biological patterns throughout reality and their relationship to the visible expressions in different domains. Moreover, the concepts of Batin and Zahir can add depth to the exploration of the interplay between hidden and apparent aspects, enriching our understanding of the biological nature of diverse phenomena.

### **Microcosm and macrocosm:**

The concept of microcosm and macrocosm provide a theoretical framework for certain aspects of our theory, "biological framework for a mathematical universe hypothesis." Here's how these concepts can be relevant:

1. *Microcosm*: In the concept of microcosm, it is believed that the smaller or individual part reflects or mirrors the larger or universal whole. This means that the characteristics and patterns found in a smaller or more localized entity can be seen as representative of the larger universe. In our theory, we propose that biological patterns define the framework for a mathematical universe hypothesis. By considering living organisms as microcosms, or smaller entities within the universe, we suggest that they embody and reveal the hidden biological patterns that exist throughout reality. This concept supports our postulation that analogies can be mapped from the biological to any target domain, allowing for a better understanding of the biological nature of the target domain by looking at the microcosm.

2. *Macrocosm*: The concept of macrocosm, on the other hand, suggests that the larger universe is reflected in or reflected by the smaller entities within it. This means that the patterns and principles present in the

universe at a larger scale are found and reflected in smaller systems and processes. In our theory, we propose that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. This aligns with the concept of macrocosm, as it suggests that the larger-scale biological processes of the universe are mirrored in the physiology and patterns of living organisms, acting as models revealing the underlying biological nature of the macrocosm.

By incorporating the concepts of microcosm and macrocosm, we acknowledge the interconnectedness and mirroring of patterns between smaller and larger scales within the universe. These concepts provide a theoretical foundation for our understanding that biological patterns define the framework for a mathematical universe hypothesis. By exploring the biological nature of living organisms, perceived as microcosms, we seek to unravel and explain the broader biological patterns and processes present in the macrocosm, or the universe.

### **Incarnation (Religious Concept):**

To explore the potential connection between the theory of biological framework for a mathematical universe and religious concepts such as "incarnation," we consider the idea that "God" may represent the personification of the universe. In this view, "God's spirit," "God's essence," and "God's nature" are essentially synonymous with the biological patterns inherent in the fabric of reality. Thus, it is conceivable that the religious term "incarnation" attempts to express the concept of a biological framework for a mathematical universe hypothesis. Traditionally, the term "incarnation" is associated with the embodiment of a divine being in human form, as seen in various religious traditions. However, through the lens of a biological framework, we can reinterpret this concept as the manifestation of the universe's inherent biological patterns in human form.

The concept of incarnation, as traditionally understood in religious contexts, typically refers to the belief that a divine being assumes human form. In the context of our theory, we draw a parallel between the Universe's biological patterns that permeate reality, which we propose, and the embodiment or manifestation of the Universe's biological patterns in a living organism, such as human form. The concept of incarnation could have originally meant to convey the universe's biological patterns (i.e., divine, God, divine essence) manifestation into human form.

**“So God created man in his own image”** (Genesis 1:27) — For example, if one were to understand God as the personification of The Universe, one can see how biological universe could create man in its own image.

**“Yet in my flesh I will see God”** (Job 19:26) — This also supports our biological framework to a mathematical universe by implying that by the biological patterns in my flesh allow me to see the biological patterns in the universe and world around me. Now, did job know the context behind what he was saying? Or was he reiterating (without scientific/biological/astrophysical context) his teachings?

**“One God and Father of all, who is over all, and through all, and in all”** (Ephesians 4:1-6) — This is another example where if one were to understand God as the personification of the universe, one can see how this phrase could support the ideas that the concepts of a biological framework to the universe may have been conveyed to (tried to be conveyed) to a people during ancient times.

**“The Word became flesh”** (John 1:14) — In context to our theory of a biological framework to the universe, the Word became flesh, could mean referring to the manifestation of the universe's biological patterns in the creation of Jesus Christ.

**“Body is a Temple of the Holy Spirit who is in you”** (Corinthians 3:16 and Corinthians 6:19-20) — In light of perennialism and our theory of a biological natured-universe, this passage could be trying to express the biological patterns of the universe (i.e., Holy Spirit) being within a person’s body, and arguing to a person to not disrespect the pattern.

### ***Theology of the Body***

In light of perennialism, particularly how we suggest that the biological framework for the universe may have been conveyed in the ancient past, and the possibility of the original context being lost, we come to the misinterpretations of this knowledge in Pope John Paul II’s lectures on Theology of the Body. Pope John Paul II’s **“Theology of the Body”** acknowledges the importance of the human body in understanding the nature of God but does not grasp the concept that God is the personification of the universe and that by knowing the biological patterns within the human body is what allows one to understand the hidden biological patterns in the universe and world around us. Here is a quote from his lecture: *“The body, and it alone is capable of making visible what is invisible, the spiritual and divine. It was created to transfer into the visible reality of the world, the invisible mystery hidden in God from time immemorial, and thus to be a sign of it.”*, We can make the assumption based off his statement and by what he actually preached during his 128 lectures did not coincide with our theory of a biological framework for a mathematical universe. The Pope acknowledges the importance of the human body in understanding the nature of God but does not grasp the underlying scientific concepts, perhaps due to being lost through time, or being unable to communicate to a society who had no prior knowledge of biology, cosmology, and physics.

### **Anthropomorphism in Kabbalah.**

By incorporating anthropomorphism from Kabbalah as a theoretical foundation, our theory gains a perspective that recognizes the divine essence and intention within the biological patterns and processes of the universe. This supports our argument that biological patterns define the framework for the mathematical universe hypothesis, highlighting the deliberate design, interconnectedness, and unity found within creation. It also provides a metaphysical component that aligns with the concept of hidden biological patterns being revealed through the examination of the living things that the universe creates. Here's how it can be applied to support our theory:

1. **Divine Blueprint:** In Kabbalah, anthropomorphism is used as a metaphorical device to describe the divine essence. Anthropomorphism suggests that human characteristics and patterns can be seen as reflections of the divine nature. Similarly, our theory posits that the biological patterns found within living organisms serve as models for understanding the hidden biological patterns throughout the universe—that the patterns observed within the human physiology is a reflection of the biological patterns of the universe. By incorporating anthropomorphism from Kabbalah, we can argue that the biological framework observed in living beings reflects a larger divine blueprint, where biological patterns are intertwined with the mathematical framework of the universe.
2. **Intention and Design:** Anthropomorphism in Kabbalah also suggests that the divine essence has intention and purpose within creation. Applying this concept to our theory, we can propose that the evolution of the universe's biological processes, leading to the existence of life and living organisms, is not purely coincidental but rather displays an inherent intention and design. By viewing the universe through the lens of anthropomorphism, we can argue that the physiology of living organisms acts as a model that reveals the hidden biological patterns throughout the universe, reflecting the intentional design underlying the mathematical framework.

3. **Holistic Understanding:** Kabbalistic anthropomorphism encourages a holistic understanding of the divine, seeing aspects of the divine in different aspects of creation. By incorporating this perspective into our theory, we can emphasize the importance of a holistic approach that considers both the biological and mathematical elements of reality. This supports your theory's assertion that biological patterns define the framework for the mathematical universe hypothesis, with the ability to structurally map analogies from the biological domain to any target domain in reality, highlighting the interconnectedness and harmony between biology and mathematics within the greater cosmic order.

4. **Unity of Existence:** Anthropomorphism in Kabbalah also suggests the unity of existence, where all aspects of creation are interconnected. Linking this concept to our theory, you can argue that just as Kabbalah perceives the unity of existence, with every aspect reflecting the divine, our theory proposes that all systems, processes, and objects in reality possess inherent biological patterns. This unity emphasizes the interconnectedness of the biological patterns found throughout the universe, reinforcing our theory's assertion of a biological framework underlying the mathematical universe.

### **Akasha.**

Utilizing the concept of Akasha as a theoretical foundation for our theory can enhance the understanding of the interconnectedness, hidden patterns, and universal consciousness underlying the biological framework of the universe. Remember, Akasha is a philosophical concept from Hindu and Buddhist traditions; its inclusion in our theory demonstrates an interdisciplinary approach that integrates different philosophical frameworks to support our hypothesis. Here's how Akasha contributes to supporting our theory:

1. **Universal Consciousness:** Akasha is often described as the primordial element or universal consciousness that permeates everything in the universe. This concept aligns with our theory's proposition that all systems, processes, and objects possess biological patterns and are inherently biological in nature. By incorporating the idea of Akasha, we can argue that this universal consciousness is deeply connected to and shaped by biological patterns, establishing a link between consciousness and the biological framework of the universe.

2. **Interconnectedness and Holistic Approach:** Akasha emphasizes the interconnectedness of all things, with every entity and phenomenon connected and influenced by the universal consciousness. In the context of our theory, Akasha can serve as a theoretical foundation to highlight the interconnectedness and interdependence of biological patterns throughout the universe. The biological patterns within systems, processes, and objects can be seen as reflections of the universal consciousness, revealing the underlying unity in the manifestation of life and its interconnectedness with the wider universe.

3. **Revealing Hidden Patterns:** Akasha is often associated with the ethereal dimension that holds the records of everything that has occurred, the "Akashic Records." Analogously, in our theory, the physiological models of living organisms can be seen as revealing the hidden biological patterns throughout the universe and our surroundings. Akasha can provide a conceptually similar framework wherein the universal consciousness holds the records or underlying patterns of biological processes that shape and create life in various forms.

4. **Metaphorical Mapping:** Akasha can offer a metaphorical mapping for bridging the biological framework to other domains. By drawing upon Akasha's holistic and universal nature, we can propose that analogies can be structurally mapped from the biological realm to any target domain. This mapping can help reveal and explain the biological nature of the target domain, showcasing the interconnectedness of biological patterns and their presence across the universe.

## **The Principle of Correspondence.**

By drawing upon the Principle of Correspondence from Hermeticism, our theory gains a theoretical foundation that underscores the interconnectedness of different planes of existence and the correspondence between biological and mathematical patterns. This principle can support our argument that biological patterns define the framework for the mathematical universe hypothesis and highlight the importance of recognizing the underlying connections in order to reveal and explain the biological nature of any target domain. Here's how it can be applied to support our theory:

1. **Interconnectedness:** The Principle of Correspondence in Hermeticism asserts that there is a correspondence and interconnectedness between different planes of existence, from the microcosm to the macrocosm. Applying this principle to our theory, we can propose that the biological patterns found in living organisms reflect and correspond to the larger patterns within the universe. In this way, the concept of Correspondence reinforces our theory's assertion that all systems, processes, and objects possess inherent biological patterns, highlighting the interconnectedness between the biological and mathematical aspects of the universe.

2. **Fractal Nature:** The Principle of Correspondence also emphasizes the idea that the same patterns and principles manifest at different scales, creating a resemblance between the microcosm and the macrocosm. In our theory, this concept aligns with the notion that the biological patterns found within living organisms serve as models for understanding the hidden biological patterns throughout the universe. By recognizing the fractal-like nature of reality, where patterns repeat and display similarity across different scales, our theory can argue that analogies can be mapped from the biological to any target domain, revealing the underlying biological nature of that domain.

3. **Universal Laws:** Hermeticism holds that there are universal laws governing the cosmos, and the Principle of Correspondence suggests that these laws apply across different planes of existence. Correlating this principle with our theory, we can propose that the universal laws underlying biological patterns (and biological principles) are intertwined with the fundamental mathematical principles that govern the universe. This supports our postulation that the evolution of the universe's biological processes directly contributes to the existence of life and living organisms. By emphasizing the interconnectedness of these laws, our theory can argue that understanding the biology of living organisms provides insights into the broader mathematical nature of the universe revealing these hidden universal-biological laws.

4. **Holistic Perspective:** The Principle of Correspondence fosters a holistic perspective, encouraging the exploration and understanding of the interconnected nature of reality. By incorporating this principle into our theory, we can emphasize the importance of adopting a holistic approach that considers both the biological and mathematical aspects of the universe. This holistic perspective allows for a more comprehensive understanding of the underlying patterns and connections between the biological patterns within living organisms and the mathematical framework of the universe.

### **Emanationism:**

Emanationism is a philosophical concept that suggests the universe emanates or originates from a divine source or ultimate reality. It proposes a hierarchical structure of existence wherein different levels or stages emanate from the divine essence.

In our proposed theory, of a biological framework for a mathematical universe hypothesis, we draw a parallel between the idea of biological patterns emanating from the universe and the notion of emanationism. Considering the existence of biological patterns as emanations from the fundamental properties of the universe could provide a framework for understanding the interconnectedness between the physical and biological aspects of reality.

By positing that the biological patterns found in all systems and processes stem from the evolution of the universe's biological processes, we can argue that these patterns are manifestations or emanations of the underlying essence of the universe. This interpretation aligns with the notions of emanationism, where the divine or fundamental essence is understood to permeate and give rise to various forms of existence.

### **Anima Mundi:**

Anima Mundi, often translated as "world soul" or "soul of the world," is a concept that has been present in various philosophical and religious traditions throughout history.

Anima Mundi suggests the notion of a vital and animating force that permeates and connects all living beings and the natural world. It represents the idea of an underlying, unifying principle that integrates and sustains the diverse manifestations of life in the world.

Drawing a parallel between the concept of Anima Mundi and our theory of a biological framework for a mathematical universe, we propose that the biological patterns we postulate as inherent in all systems, processes, and objects in reality, are expressions of this underlying animating force. By considering the presence of biological patterns as a manifestation of the animating principle of the universe, we claim that our theory aligns with the concept of Anima Mundi.

Furthermore, Anima Mundi might have been attempting to express similar concepts that our theory proposes, we can posit that over time, the context and interpretation of the concept might have evolved or been misunderstood, leading to potential divergence from its original intent, which we believe to be this biological framework for a mathematical universe hypothesis.

### **Panentheism:**

Panentheism is a philosophical or religious concept that suggests the presence of a transcendent yet immanent divine reality within and beyond the universe. It posits that the divine is both intimately present in all aspects of existence and extends beyond them.

Within the framework of our theory, we propose that the concept of panentheism aligns with the idea that biological patterns define the framework for a mathematical universe hypothesis. By considering the presence of biological patterns as inherent in all systems, processes, and objects in reality, the notion of a divine essence that permeates and manifests itself through these patterns can be contemplated.

From a panentheistic perspective, the universe itself, including its biological processes and patterns, could be seen as a manifestation or expression of the immanent divine reality. In this interpretation, the physiological models found in living organisms could be understood as reflections or representations of the hidden biological patterns throughout the universe.

By connecting the concept of panentheism with our theory, we argue that the interplay between the universe's biological processes and the living organisms it generates reveals an underlying divine presence or creative force. This perspective potentially provides a theoretical foundation for understanding the inherent biological nature of systems, processes, and objects in reality.

## **Theosophy**

**Theosophy**, with its emphasis on a pure spiritual formation gradually materializing into an observable, material realm, echoes the hypothesis' proposition of a gradual manifestation of biological patterns in the universe. While theosophy primarily refers to spiritual formations, interpreting it as representing the biological pattern of the universe aligns with the hypothesis. This interpretation suggests that theosophy may actually be trying to express that the nature of a universe is governed by biological patterns. Theosophy speaks of a universal intelligence or divine wisdom permeating all aspects of the cosmos. The biological framework for a mathematical universe could be seen as providing a scientific basis for this universal intelligence, suggesting that the inherent biological patterns are the physical discernible manifestation of a universal intelligence or divine wisdom. Theosophy posits the existence of interconnectedness between all beings and aspects of reality. This mirrors the concept of biological patterns as the foundation of the mathematical framework for the universe. By considering all systems as interconnected through biological patterns, both Theosophy and the biological framework for a mathematical universe highlight the idea of a unified existence. Furthermore, Theosophy recognizes the concept of spiritual evolution, suggesting that beings progress and evolve through various stages. Similarly, the biological framework for a mathematical universe proposes that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. This implies an inherent link between biological evolution and spiritual growth, aligning with the idea of progressive development and evolution in Theosophy.

## **Stoic Physics:**

Stoic Physics is a philosophical framework developed by the ancient Stoic philosophers, provides some interesting insights for our theory. Stoic physics aimed to understand the workings of the universe through a combination of physics and metaphysics. While Stoic physics primarily focused on the study of the material world, it also incorporated elements of divine reasoning and nature.

In relation to our theory, Stoic physics can lend support to the idea of a biological framework for a mathematical universe hypothesis. The Stoics believed that the natural world operates according to a rational principle they called "logos." They posited that this governing principle was imprinted in everything in the form of active and passive forces.

By drawing on Stoic physics, we can argue that the biological patterns present throughout the universe are a reflection of the underlying logos. We can propose that the inherent biological nature of systems, processes, and objects in reality is a result of this rational principle imbued within them.

Additionally, Stoic physics emphasized the interconnectedness and interdependence of all aspects of the universe. This idea aligns with our theory's assertion that all systems, processes, and objects possess biological patterns. Stoicism suggests that these patterns are not isolated but partake in a unified fabric of existence.

Furthermore, the Stoic concept of the "pneuma," often translated as "breath" or "spirit," can be related to your theory's notion of these biological patterns. According to the Stoics, the pneuma permeated all matter, connecting everything. By this interpretation, the biological patterns could be seen as reflections of the underlying pneuma or life force present in the universe.

## **Ahimsa.**

Ahimsa is a concept rooted in Indian philosophy and often associated with Jainism and Buddhism, refers to the principle of non-violence, non-harm, and compassion towards all living beings. While at first glance, it may not seem directly related to your theory, there are some possible connections to explore:

1. **Ethical Considerations:** Ahimsa places great importance on fostering harmony and minimizing harm to living beings. In your theory, you could emphasize the ethical implications of understanding the inherent biological nature of all systems, processes, and objects in reality. By acknowledging and respecting the biological patterns present in the universe, your theory can highlight the interconnectedness and value of all life forms, aligning with the spirit of ahimsa.
2. **Unity and Interconnectedness:** Ahimsa promotes the recognition of the inherent unity and interdependence of all beings. Within your theory, the concept of inherent biological patterns also implies an interconnectedness between all systems, processes, and objects in reality. This correspondence with ahimsa can contribute to a holistic worldview that acknowledges the interwoven nature of life and promotes compassion towards all living entities.
3. **Holistic Understanding:** Ahimsa encourages a deep understanding of the web of life and the acceptance of the sacredness of all living beings. In your theory, the recognition of hidden biological patterns throughout the universe can be seen as an extension of this holistic understanding, uncovering the biological nature present in different domains. This shared perspective promotes a sense of reverence and appreciation for the interconnectedness of life, supporting the principles of ahimsa.

While these connections between your theory and ahimsa are exploratory in nature, incorporating the principles of non-violence, interconnectedness, and compassion within your research can enrich the philosophical and ethical dimensions of our work.

## **Animism.**

**Animism** is a belief system found in various indigenous cultures, holds that all entities, including plants, animals, and inanimate objects, possess a spiritual essence or soul. While animism focuses on spirituality and the interconnectedness of living and nonliving things, it can be applied as a theoretical foundation for our theory:

1. **Interconnectedness:** Animism emphasizes the interconnectedness of all aspects of the natural world. Similarly, our theory suggests that all systems, processes, and objects in reality possess inherent biological patterns, implying an underlying interconnectedness. By drawing on animistic principles, we can emphasize the spiritual or interconnected aspect of the biological patterns throughout the universe, aligning it with the notion of all things possessing spiritual essences in animism.
2. **Reverence for Nature:** Animism often includes a deep respect and reverence for the natural world. In our theory, recognizing the biological nature of all systems, processes, and objects can encourage a similar reverence for the complexity and interconnectedness of life and the universe. By integrating animistic values, our theory can underpin an understanding and appreciation for the inherent significance and value of biological patterns.
3. **Universal Spirituality:** Animism considers the existence of spiritual essences in both living and nonliving entities. Similarly, our theory suggests that the hidden biological patterns in the universe exist within everything in the universe. By considering animism, we can interpret these biological patterns as a reflection of the universal spirituality present in all domains, showing the interconnectedness between the spiritual essence within living beings and the universe as a whole.

## **Taoism,**

Taoism is an ancient Chinese philosophy and spiritual tradition, offers some intriguing aspects that can be related to your theory on the "biological framework for a mathematical universe hypothesis." Here's how Taoism might serve as a theoretical foundation:

1. **Harmony and Balance:** Taoism emphasizes the importance of harmony and balance in all aspects of existence. Within your theory, the concept of biological patterns defining the framework implies an inherent balance and harmony present in the universe. Like the Taoist idea of the Tao, representing the natural order of the cosmos, your theory suggests that the biological patterns contribute to the overall harmony and interconnectedness of reality.

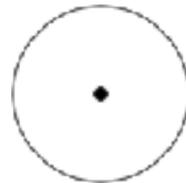
2. **Nature as a Teacher:** Taoism views nature as a profound source of wisdom and guidance. In your theory, by asserting that the universe's biological processes led to the existence of life and living organisms, you align with the Taoist perspective that nature itself can reveal fundamental truths. Just as Taoists observe and learn from the natural world, your theory implies that studying and understanding biological patterns can uncover the hidden workings and principles of the universe.

3. **Wu Wei (Non-Action):** Wu Wei is a Taoist concept that refers to effortless action in harmony with the natural flow. In the context of your theory, the notion of analogies being structurally mapped from biological patterns to reveal the biological nature of target domains can be related to Wu Wei. Rather than forcing understanding or imposing artificial frameworks, your theory suggests that by aligning with the natural biological patterns, insights and connections can be discovered more effortlessly and in harmony with the inherent nature of the universe.

By incorporating Taoism as a theoretical foundation, you can draw upon its emphasis on harmony, balance, nature as a teacher, and the concept of Wu Wei. These aspects complement the central ideas of your theory: the inherent biological patterns, the relationship between the universe's biological processes and living organisms, and the use of analogies to reveal the biological nature of different domains. Exploring Taoist principles can enrich your theory by providing a philosophical framework that resonates with the natural order and interconnectedness found in the biological patterns you propose.

## ***The Circled Dot***

The Pythagoreans and later Greeks employed the circled dot to represent the Monad or The Absolute, a metaphysical entity signifying the ultimate essence of reality. While traditionally interpreted as a symbol for the pure and indivisible first principle, we propose an alternative interpretation that aligns with our theory. Perhaps the Pythagoreans and later Greeks were attempting to convey the true nature of the universe (and where all first principles of the universe stem from): that it was biological in nature and its structure resembled that of a single-celled organism.



The circled dot was used by the Pythagoreans and later Greeks to represent the first metaphysical being, the Monad or The Absolute. The Monad, understood as the original source and principle of all reality, represents the indivisible and all-encompassing essence that lies beyond the physical world and is conceived as a fundamental, undifferentiated principle that encompasses all aspects of reality. The Pythagoreans believed that all things emanated from the Monad and are interconnected through the golden ratio and other mathematical proportions.

By acknowledging the circled dot as a representation of a single-celled organism, we can draw parallels between the structure and functions of living organisms and the underlying framework of the universe. This recognition supports our view that the universe's nature is inherently biological. Just as living organisms exhibit various patterns, processes, and interactions, the universe manifests similar characteristics on a grander scale. The flowing patterns of galaxies, the intricate networks of particles, and the dynamic interplay of forces all align with the biological patterns found within living organisms.\*\*

### III. The Relationship between The Universe's Biological Processes and Life

#### A. Evolution of Biological Processes of The Universe

Here are some evidence and arguments that support the idea that the existence of life, specifically living organisms, is a consequence of the evolution of the universe's processes:

1. Abundance of Carbon and Complex Molecules: One of the key building blocks of life on Earth is carbon, which forms the basis of organic compounds. The universe's processes, particularly nucleosynthesis in stars, have produced a vast amount of carbon and other complex molecules essential for the development of life.

2. Cosmological Fine-Tuning: Certain fundamental physical constants, such as the strength of gravitational forces and the values of physical forces, appear to be precisely fine-tuned to allow for the existence of stable and complex structures necessary for life. This fine-tuning is seen as an indication that the universe's processes have shaped the conditions necessary for life to emerge.

3. Stellar Evolution and Supernovae: The life cycle of stars plays a crucial role in the formation and distribution of elements required for life. Stellar evolution, including the processes of nucleosynthesis and stellar explosions (supernovae), releases heavy elements into space, enriching the interstellar medium from which new stars and planetary systems form.

4. Planetary Systems and Habitability: As a result of the universe's processes, including the formation of planetary systems, suitable conditions for life can arise. Factors such as the presence of liquid water, appropriate distance from the host star, and the stability of planetary orbits are crucial for the emergence and sustenance of life.

5. Organic Molecules in Space: Astronomical observations have revealed the presence of organic molecules, such as amino acids and complex hydrocarbons, in interstellar clouds, comets, and meteorites. The existence of these molecules suggests that the universe's processes can produce organic chemistry in various cosmic environments, potentially providing the necessary ingredients for life to evolve.

6. Biological Evolution on Earth: The study of biological evolution on Earth demonstrates how life has emerged and diversified through the process of natural selection. Evidence from fossils, comparative genomics, and experimental studies supports the idea that living organisms have evolved from common ancestors. This suggests that the evolution of life is a consequence of fundamental biological processes that are interconnected with the broader processes of the universe.

7. The Mandelbrot Set: By utilizing The Mandelbrot Set, we bring in concepts of infinite complexity, self-similarity, emergence, iterative processes, and mathematical beauty. This strengthens our hypothesis by incorporating a visually captivating fractal that embodies the intricate and detailed nature of biological patterns evolution throughout the universe. The Mandelbrot Set serves as an emblematic representation of the biological framework for a mathematical universe hypothesis. It shows how complex life can arise.

Collectively, these pieces of evidence and arguments suggest that the universe's processes have shaped the conditions, chemical elements, and environments necessary for the emergence and evolution of life. The abundance of complex molecules, the fine-tuning of physical constants, the role of stellar evolution, the presence of organic molecules in space, and the understanding of biological evolution on Earth, and the emblematic representation of the evolution of the biological patterns throughout the universe all support the idea that the existence of life is intricately connected to the **evolution** of the universe's processes.

More evidence and arguments supporting the idea that the universe's processes are biological:

**1. Biological Patterns in Non-living Systems:** We examined the presence of patterns resembling biological structures and processes in non-living systems.

We have observed biological patterns in non-living phenomenon in the universe, such as the biological pattern of (a) cellular mitosis (Telophase Stage) observed in the Laniakea and Perseus Pisces Supercluster, (b) the expansion of cellular mitosis and of a zygote to the expansion of the universe; (c) cytoskeleton to the cosmic web; (d) microtubules and microfilaments in cellular mitosis to black holes; (e) cytosol to dark matter; (f) cellular forces that contributes to the expansion in cellular mitosis, to dark energy; (g) inter-organelle communication to fast radio bursts (FRBs); (h) atoms to solar systems, and; (i) the entanglement of information between a mother and daughter cell, during mitosis, in the theory of quantum entanglement.

We also observed biological patterns in non-living phenomena on Earth, such as: (a) the pumping of a heart in the melting and freezing of Antarctica; (b) the patterns of stomach digestion in the Sahara Desert; (c) patterns of the circulatory system in water and wind currents; (d) patterns of kidneys in sea grass meadows; (e) patterns of Aveoli (lungs) in trees and plants (f) patterns of lipids (fats) in oil and coal; (g) the patterns of the mouth (or cell vacuole) in tectonic plates; (h) the conversion of food to lipids in the conversion of organic material to oil and coal; (i) the patterns of general development/evolution in Earth's development and evolution; (j) biological patterns of skin or membrane in Earth's Atmosphere; and (k) patterns of various organ systems in the various interconnections of Life on Earth.

We also mapped the biological patterns of a fetus to that of an island, such as The Hawaii Islands, where patterns of a fetus can be observed within the Island chain. The development of the island is analogous to the development of a fetus. The coral reefs act as the placenta. The Volcanic material which forms the island is similar to the mother's material forming the fetus. The development of the Hawaiian ecosystem is like the development of the fetus's ecosystems (organs). Also, the mountains created from the volcano produce the currents and concentration of air into water similar to how material within a fetus must be established prior to a defined circulatory system is established.

We also observed biological patterns embedded within the innovations created by humans. Such as how the patterns of red blood cells can be seen in cups, or how patterns of proteins produced from ribosomes can be observed in music produced from instruments. The organization of human society follows that of the organization of cellular society. Also, see field of biomimicry: [www.AskNature.org](http://www.AskNature.org)

**2. Fractal Patterns Across Living and Non-living systems:** In addition, fractals patterns observed in the formation of galaxy clusters and in neuronal networks within living organisms, provides a mathematical understanding of how these biological patterns can exist all throughout the universe. While, The Mandelbrot Set, can provide a visual representation of how these biological patterns can exist and evolve over time at different scales.\*

Fractal cosmology is a branch of cosmology that incorporates the concept of fractals, which are intricate and self-similar patterns that repeat at different scales. This theory supports our hypothesis that biological patterns define the framework for a mathematical universe. The application of fractal cosmology to our theory suggests that the universe itself may exhibit similar patterns and structures found in living organisms. Just as a tree branches out in a fractal pattern, the universe may have a similar organizational structure, with galaxies forming clusters and clusters forming superclusters. This fractal structure may extend indefinitely, revealing biological patterns at every scale.

Furthermore, fractal cosmology also suggests that the evolution of the universe's biological processes has led to the existence of life and living organisms. Just as the growth and development of cells and organisms follow certain patterns and principles, the universe may have followed a similar process of evolution that eventually gave rise to the formation of galaxies, stars, and planets. This perspective provides a deeper understanding of the interconnectedness between the biological nature of living organisms and the larger framework of the universe. By highlighting these similarities, we argue that biological patterns are not exclusive to living organisms but are inherent in the fundamental processes of the universe.

**3. Emergence of Life from Natural Processes:** Explore the concept of abiogenesis, the emergence of life from non-living matter. Discuss the various hypotheses and experiments that suggest how self-replicating molecules and early forms of life could have arisen through chemical reactions and environmental conditions. By demonstrating that life can arise naturally from the fundamental processes of the universe, you can argue for the biological nature of those processes.

Abiogenesis, which refers to the natural process by which life arises from non-living matter, is a topic of scientific investigation and inquiry. It is important to note that the topic is still an area of ongoing research, and there is no universally accepted theory that fully explains the origin of life. However, there are several scientific theories, hypotheses, and experimental findings that provide insights into the possibility and plausibility of abiogenesis. Let's explore how abiogenesis is generally viewed in science:

1. Plausibility of Abiogenesis: Many scientists consider abiogenesis to be a plausible explanation for the origin of life on Earth. This perspective is based on the understanding that early Earth had an environment conducive to the formation of complex organic molecules, such as amino acids and nucleotides, as well as the potential for these molecules to undergo self-replication and other processes associated with life's emergence.

2. Research Approaches: Scientists study abiogenesis through a combination of experimental laboratory work, computer simulations, and observational studies. These investigations aim to replicate and understand the chemical and physical processes that could have led to the formation of early life-like structures and the development of self-replicating systems. The field of astrobiology is dedicated to exploring the origin and potential for life beyond Earth, often considering abiogenesis in its scope.

3. Hypotheses and Experiments: Various hypotheses have been proposed to explain abiogenesis, such as the RNA World hypothesis, the metabolism-first hypothesis, and the vesicle-based protocell models. These hypotheses suggest different pathways and scenarios for the emergence of life's building blocks and their subsequent evolution into more complex organisms. Experimental studies aim to recreate conditions similar to early Earth and explore the chemical reactions and environmental factors that could have facilitated the emergence of life.

4. Challenges and Open Questions: While the plausibility of abiogenesis is supported by experimental evidence, the exact mechanisms and sequence of events that led to the emergence of life remain subjects of ongoing investigation and debate. There are several open questions, such as the origin of homochirality (the prevalence of one-handedness in biomolecules), the formation of a self-replicating system, and the transition from simple molecular structures to the complexity observed in biological organisms.

5. Interdisciplinary Perspectives: Addressing the origin of life requires a multidisciplinary approach, involving expertise from fields like chemistry, biology, physics, geology, and astronomy. Scientists from different disciplines collaborate to develop comprehensive models and theories that integrate knowledge from various fields.

In summary, abiogenesis is viewed as a plausible scientific explanation for the origin of life, and ongoing research aims to understand the chemical, physical, and environmental processes that could have led to the emergence of life from non-living matter. Continued studies, experimental investigations, and interdisciplinary collaborations are essential to further advance our understanding of abiogenesis and potentially uncover more about the origins of life.

#### 4. *Universe as an Evolving System:*

The universe, with its vast expanse and inherent complexity, can be seen as a dynamic and evolving system reminiscent of a living organism. By examining concepts such as cosmic evolution, interconnectedness, self-organization, and adaptation, we can draw parallels between the universe and living organisms, ultimately supporting the idea of the biological nature of the universe's processes.

1. *Cosmic Evolution:* Just as living organisms undergo evolution, the universe's constituents, including galaxies, stars, and planets, also undergo transformations and changes over billions of years. Galaxies form and evolve through gravitational interactions, leading to the birth of new stars and the creation of stellar nurseries. Stars, like living organisms, have life cycles and undergo changes from protostars to main-sequence stars, red giants, and eventually supernovae. Planets, too, emerge from protoplanetary disks and evolve through geological, atmospheric, and biological processes.

2. *Interconnectedness:* The concept of interconnectedness is evident in the universe, similar to the intricate web of relationships within biological ecosystems. Celestial bodies interact through various forces, such as gravity, electromagnetism, and nuclear reactions. Galaxies form clusters and superclusters, demonstrating a network of interconnected cosmic structures. Stellar systems are influenced by gravitational interactions and can form binary or multiple star systems. Planetary systems are shaped by their host stars and interact through orbits, tidal forces, and influences on each other's atmospheres. This interconnectedness mirrors the interdependence and interactions seen in biological systems.

3. *Self-Organization:* Self-organization is a fundamental characteristic of living organisms and can also be observed in the universe. Celestial bodies organize themselves into structures such as galaxies, galactic filaments, and cosmic web-like patterns. These structures emerge from gravitational collapse, cosmic inflation, and other physical processes. Just as cells organize into tissues, organisms into ecosystems, and ecosystems into complex biospheres, celestial bodies self-organize on various scales, exhibiting patterns and order.

4. *Adaptation:* Adaptation is a fundamental aspect of life, and similar principles can be observed in the universe. Celestial bodies adapt to changing environmental conditions and gravitational influences. Stars adjust their energy output and composition over time, adapting to fuel consumption and changes in nuclear reactions. Planets undergo geological, atmospheric, and climate changes, adapting to their evolving environments. This adaptability and response to changing conditions parallel the adaptive mechanisms seen in living organisms.

5. *Fractal Geometry and The Mandelbrot Set:* Fractal geometry, exemplified by The Mandelbrot Set, further strengthens the argument for the biological nature of the universe's processes. The Mandelbrot Set, a fascinating mathematical fractal, displays infinite complexity, self-similarity, and intricate patterns. The presence of fractal-like structures in natural phenomena, such as coastlines, clouds, and galaxies, and arteries and neuronal networks indicates a fundamental connection between mathematics, the physical world and biology. By observing fractals in the universe, including cosmic structures like galactic filaments or the distribution of galaxy clusters, we find parallels with the self-similar patterns found in living organisms. This suggests a deep-rooted biological nature inherent in the very fabric of the universe.

Cosmic evolution, interconnectedness, self-organization, and adaptation in the universe, draws compelling parallels to the dynamic nature of living organisms. The universe's transformations and changes, interconnected cosmic structures, self-organization processes, and adaptive responses showcase characteristics similar to those found in biological systems. These parallels suggest a biological nature inherent in the universe's processes, indicating that life may not be a unique occurrence but rather a manifestation of the fundamental properties of the cosmos.

## 5. *Information Processing and Communication in the Universe:*

Drawing connections to phenomena like quantum entanglement, information flow in biological systems, and the exchange of information in ecological networks. By examining how these processes exhibit patterns of information transfer and processing, we can argue for the biological nature of the universe's processes. We will also highlight similarities between the understanding of quantum entanglement and information exchange during mitosis between mother and daughter cells.

*1. Information Processing and Quantum Entanglement:* Quantum entanglement is a fascinating phenomenon where two or more particles become interconnected at a quantum level, allowing instantaneous communication regardless of the distance between them. This concept has similarities to information processing in biological systems, specifically during mitosis, where genetic information is transferred from a mother cell to daughter cells.

During mitosis, a cell replicates its DNA and precisely distributes identical genetic information to daughter cells. This transfer of information mimics the concept of quantum entanglement, where information is instantaneously shared between particles. The notion of entangled quantum states and the transfer of genetic information highlight the intrinsic connection and information processing in both the quantum realm and biological processes.

*2. Information Flow in Biological Systems:* Biological systems, from single cells to complex organisms, rely on the flow of information for their functioning and survival. Genetic information stored in DNA acts as a blueprint for the synthesis of proteins, which perform crucial functions in cells. This flow of information is facilitated through processes like transcription and translation.

Moreover, signaling pathways within organisms allow for communication between cells and coordination of biological activities. Hormones, neurotransmitters, and other signaling molecules transmit information, enabling cells to respond to external stimuli and adjust their behavior accordingly. These mechanisms of information flow in biological systems exhibit patterns and processes analogous to the transfer and processing of information in the broader universe:

*1. Network Dynamics:* In biological systems, signaling pathways form complex networks involving various molecules, receptors, and downstream effectors. These networks allow for the transmission, amplification, and integration of signals, enabling cells to respond to different stimuli and coordinate their activities. Similarly, in the broader universe, we observe intricate networks such as ecological networks, cosmic networks, and even networks of galaxies. These networks involve the flow of information, energy, and matter, allowing for interconnectedness and the exchange of information among their constituents.

*2. Information Processing:* In biological systems, signaling molecules act as carriers of information, allowing cells to communicate and coordinate their responses to external signals. Cells translate this information into appropriate physiological responses through processes like gene expression, protein synthesis, and changes in cell behavior. Similarly, in the broader universe, information is processed and transmitted through various carriers such as electromagnetic radiation, gravitation, and particle interactions. These carriers enable the transfer and processing of information in cosmic structures and phenomena, influencing their behavior and dynamics.

*3. Emergent Behavior:* Biological systems exhibit emergent behavior, where complex properties and patterns arise from the interactions and dynamics of their individual components. Signaling pathways and networks give rise to collective behaviors such as cell differentiation, tissue development, and organismal behavior. Similarly, in the broader universe, we observe emergent phenomena, such as the formation of galaxies, the emergence of large-scale structures, and the self-organizing of ecological communities. These emergent properties arise from the interactions and information flow between components, leading to complex and dynamic behavior.

**4. Adaptation and Evolution:** Biological systems, driven by information flow, exhibit adaptation and evolution over time. Through the process of natural selection, organisms adapt to changing environments by responding to and processing information about their surroundings. Similarly, in the broader universe, we observe adaptive systems and processes. Celestial bodies, galaxies, and even the universe itself undergo changes and adaptations in response to the physical and informational forces acting upon them. These adaptive processes shape the evolution and dynamics of cosmic structures.

Overall, the mechanisms of information flow in biological systems exhibit patterns and processes that resonate with the transfer and processing of information in the broader universe. Network dynamics, information processing, emergent behavior, adaptation, and evolution are common threads in both biological and cosmic systems. By recognizing these similarities, we deepen our understanding of the fundamental connections between the microscopic and macroscopic realms, further supporting the idea that the universe's processes have a biological nature.

**3. Exchange of Information in Ecological Networks:** Ecological networks exemplify how information is exchanged and processed in ecosystems, reflecting the interconnectedness and communication within the living world. Species interact and transmit information through various relationships such as predation, competition, mutualism, and symbiosis. These interactions create intricate networks where information, energy, and matter flow among organisms and their environments.

Just as ecosystems rely on the exchange of information to maintain balance and adapt to changes, the interconnectedness and information flow in the universe are reflected in celestial systems. Cosmic bodies, such as galaxies and star clusters, interact and exchange information through gravitational forces, electromagnetic radiation, and cosmic rays. These cosmic networks mirror the information exchange seen in ecological networks, further supporting the idea of the biological nature of the universe's processes.

By examining phenomena like quantum entanglement, information flow in biological systems, and the exchange of information in ecological networks, we observe patterns of information transfer and processing that bear striking similarity between living systems and the broader universe. The understanding of quantum entanglement and information exchange during mitosis highlights parallels between the quantum realm and biological processes in terms of information processing. Furthermore, the flow of information within biological systems and ecological networks reflects interconnectedness and communication similar to celestial systems. \*\*\*

These similarities between the universe's processes and living systems lend support to the idea that the universe itself exhibits a biological nature, where information plays a significant role in shaping its dynamics and evolution. Further research and exploration are necessary to fully uncover the intricacies of information processing and communication in the universe, ultimately refining our understanding of the fundamental connections between the cosmos and living organisms.

**6. Astrobiology and the Search for Life:** Explore the field of astrobiology, which investigates the potential for life beyond Earth. Highlight the diverse environments where life exists or may exist, such as extreme environments on Earth, the subsurface oceans of icy moons, or the habitable zones around other stars. Emphasize the interconnectedness between life and its environment, and how the universe's processes have shaped the conditions necessary for life's existence. Showcasing the breadth and diversity of life in the universe, you can argue for the biological nature of the universe's processes.

[QUANTUM ENTANGLEMENT]

## B. Physiology of Living Organisms as Models

The Biological Framework for a Mathematical Universe proposes that the physiology of living organisms can serve as models to reveal hidden biological patterns throughout the universe and our surroundings. Here's an explanation of how this can be understood:

**1. *Biological Universe:*** The mathematical universe hypothesis is a theory that the physical universe is not merely *described by* mathematics, but *is* mathematics, specifically a mathematical structure. Our research has supported the idea that the mathematical structure of the universe is biological in nature and all systems, processes, and objects within the universe function in harmony with biological patterns. Living organisms are the evolution of the universe's biological patterns and are therefore embedded within their physiology the patterns of this biological universe. They are a continuation, or result, of the biological universe's processes.

**2. *Embedded Biological Patterns:*** Living organisms possess intricate physiological structures and processes that have evolved over billions of years through the evolution of the universe's biological nature. These biological patterns are shaped by the fundamental principles of life, including growth, development, reproduction, and adaptation. By studying and understanding the patterns within living organisms, we can gain insights into the underlying biological principles that exist throughout the universe.

**3. *Generalizability of Biological Patterns:*** The theory suggests that the biological patterns found within living organisms are not confined to isolated instances. Instead, they can be seen as representative of broader universal patterns and principles. These patterns may manifest at multiple scales, from the molecular level to complex ecological systems and to the structure of galaxy clusters. By recognizing and studying the patterns in living organisms, we can identify and investigate analogous patterns in other domains of reality.

**4. *Mapping Analogies to Other Domains:*** The theory proposes that analogies can be structurally mapped from the biological patterns found in living organisms to any target domain. This mapping process involves identifying similarities in structure, function, and pattern between the biological model and the target domain. By making these connections, we can gain a deeper understanding of the biological nature of the target domain and how it is influenced by underlying biological patterns inherent throughout the universe.

**5. *Uncovering Hidden Biological Patterns:*** By employing the physiology of living organisms as models, we can uncover hidden biological patterns that might otherwise go unnoticed. These patterns may exist in domains seemingly unrelated to biology, such as cosmology, physics, or even aspects of human society. By recognizing and mapping the biological patterns, we can reveal underlying biological principles and uncover a deeper understanding of the interconnectedness and biological nature of various phenomena.

In summary, the theory of a biological framework for a mathematical universe hypothesis proposes that the physiology of living organisms serves as a model for revealing hidden biological patterns throughout the universe and our surroundings. By studying these patterns, recognizing their generalizability, and mapping analogies to other domains, we gain insights into the underlying biological nature of diverse phenomena. This approach allows for a deeper understanding of the interconnectedness and biological foundation that permeates all systems, processes, and objects in reality.

## C. Analogies and Structural Mapping

*Dedre Gentner's "Structure-Mapping: A Theoretical Framework for Analogy"*

Dedre Gentner's work on analogies is foundational for our theory of a biological framework for a mathematical universe hypothesis, as it explores the cognitive process of analogical reasoning. Analogies play a crucial role in our theory by proposing the mapping of structural relationships from the biological patterns within living organisms to other domains to reveal and explain their biological nature. Here's how Gentner's work is foundational for our theory:

**1. Structure Mapping Theory:** Gentner's Structure Mapping Theory explains how analogical reasoning involves mapping the structural relationships between two domains of knowledge. This theory provides a foundation for our theory's proposal that analogies can be structurally mapped from biological patterns to other domains to uncover and explain their biological nature. Gentner's work establishes a cognitive framework for understanding how this process of mapping and reasoning through analogies can occur.

**2. Cross-Domain Mapping:** Gentner's work highlights that analogical reasoning often involves identifying similarities and differences across different domains. In our theory, the cross-domain mapping of biological patterns to other domains allows for the identification of shared structural relationships and the subsequent understanding of the biological nature of the target domain. Gentner's research can provide insights into the process of recognizing and mapping these cross-domain relationships.

**3. Mapping Biologically-Inspired Patterns:** Gentner's work also explores how analogies can be used to understand and describe complex phenomena. In our theory, the analogical mapping of biological patterns allows for the unveiling of hidden biological features in diverse systems, processes, and objects within reality. Gentner's research on analogical reasoning provides a theoretical foundation for understanding how these mappings of biologically-inspired patterns can be a viable approach.

By drawing upon Dedre Gentner's work on analogies and structure mapping, our theory of a biological framework for a mathematical universe can be supported by an established cognitive framework for understanding the process of analogical reasoning. Gentner's research provides insights into how cross-domain mappings can be made, allowing for the recognition and application of biological patterns in diverse domains. Integrating her work help bolster the theoretical underpinnings of our theory and provides more depth to the process of mapping analogies within our proposed biological framework for a mathematical universe hypothesis.

## Analogical Mapping Process

### *Analogical Mapping Criteria:*

#### *Understanding Analogical Reasoning:*

At its core, analogical reasoning involves recognizing and utilizing similarities between different domains or concepts to make inferences, solve problems, and facilitate learning. Gentner's research emphasizes the structural aspect of analogies, focusing on how individuals highlight and map the underlying relationships between different components of an analogy.

#### *Structural Alignment Theory:*

Gentner's theoretical framework for understanding analogical reasoning is known as the Structural Alignment Theory. According to this theory, successful analogical mapping occurs when there is a "match" between the structural relationships within the base and the target domains of an analogy. Structural alignment involves aligning corresponding components within the analogy to establish mappings and derive inferences.

#### *Components of an Analogy:*

Gentner identifies three essential components in analogical mapping: the source domain (base), the target domain (target), and the mapping relations that establish connections between them. She posits that structural alignment is facilitated through the identification and mapping of features, relations, and higher-level organization between the source and target domains.

#### *Criteria for Structural Mapping:*

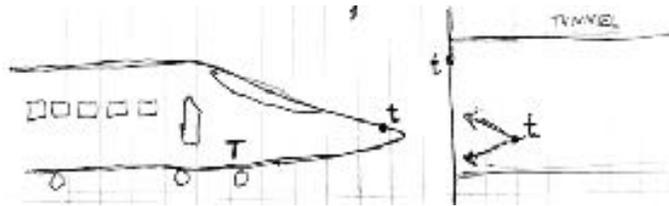
In order to effectively map analogies, Gentner outlines several criteria that individuals employ during the analogical reasoning process.

1. **Relational Correspondence:** Gentner highlights the importance of mapping relationships between corresponding elements in the source and target domains. For example, identifying that the relationship between "bird" and "nest" in the source domain aligns with the relationship between "teacher" and "classroom" in the target domain helps establish a mapping.
2. **Structural Similarity:** The structural similarities or patterns between the base and target domains serve as crucial cues for analogical mapping. Identifying shared organizational structures, such as hierarchies, sequences, or spatial arrangements, aids in the establishment of mappings.
3. **Surfaces Features and Superficial Similarities:** Gentner also recognizes that individuals may rely on surface similarities between the source and target domains as initial cues for analogical mapping. However, she argues that deeper structural mappings are more reliable and informative for understanding the relationships between concepts.

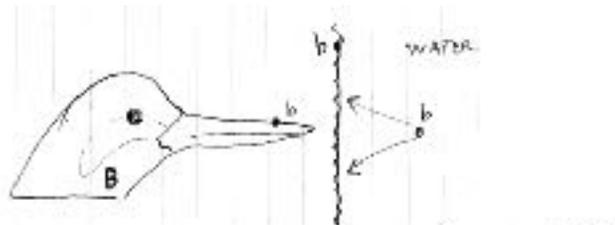
## Conduct Analogical Mapping

### *Mapping the Biological Domain to Target Domains:*

The step-by-step process of mapping the biological domain to target domains, based on Gentner's framework, provides a systematic approach to uncover and understand the biological nature inherent in various aspects of reality. By employing this process, researchers and scholars can gain new insights, explanations, and perspectives in their respective domains. The mapping process facilitates a deeper understanding of the interconnectedness between biological patterns and the fundamental principles that govern different systems, processes, and objects in the universe, ultimately contributing to our overall understanding of a mathematical universe hypothesis.

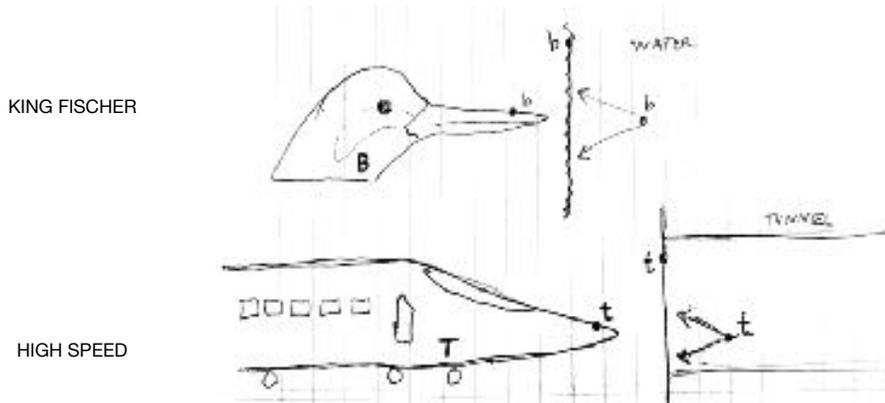


*Step 1: Define the Target Domain.* A clear and comprehensive understanding of the target domain is essential to recognizing biological patterns that share a correspondence. This includes familiarizing oneself with the fundamental concepts, theories, and principles that govern the target domain, as well as the relational correspondences amongst all variables of a target domain. A thorough investigation of existing literature and research in the field of a target domain can provide valuable insights into the specific characteristics and challenges of the target domain. Finally, reiterating *step one* may be required due to the fact that the observer may not have adequate knowledge of biology's patterns to conduct the mapping.



*Step 2: Identify the Biological Patterns.* To initiate the mapping process, it is important to identify the biological patterns so that one can recognize their correspondences to the target domains they aim to explain. These biological patterns encompass all aspects of biology at various realms of biology, such as macroscopic, molecular, and quantum realms. Recognizing and categorizing these biological patterns is crucial as they serve as the foundation for recognizing those patterns in target domains and mapping the aspects of those biological patterns to aspects within the target domain.

*Step 3: Engage in Analogical Mapping.* Analogical mapping involves identifying parallels between the biological patterns and the target domain. This step involves structurally mapping the identified biological patterns onto the target domain and depicting how they align with or relate to the concepts and processes in the target domain. This mapping will reveal similarities, differences, and insights that can enable a deeper understanding of the target domain from a biological perspective.



$$f: B \rightarrow T$$

The analogy “T is (like) B” defines a mapping from  $B$  to  $T$ .  $T$  will be called *target*, since it is the domain being explicated.  $B$  will be called *base* [or *biological domain*], since it serves as the source of knowledge.  $T$  shares a correspondence to the biological patterns of  $B$ . Each  $b$  can be used as a model to explain a corresponding  $t$ . Suppose that the representation of the *biological domain*  $B$  can be stated in terms of object nodes  $b_1, b_2, \dots, b_n$ , and predicates such as  $A, R, R'$ , and that the *target domain* has object nodes  $t_1, t_2, \dots, t_m$ .<sup>60</sup> The analogy maps the object nodes of  $B$  onto the object nodes of  $T$ :

$$M: b_i \rightarrow t_i$$

These object correspondences are used to generate the candidate set of inferences in the target domain. Predicates from  $B$  are carried across to  $T$ ,<sup>61</sup> using the node substitutions dictated by the object correspondences.

The mapping rules are:

1. Discard *attributes* ( $A$ ) of objects:

$$A(b_i) \quad -/-> \quad [A(t_i)]$$

<sup>60</sup> Most explanatory analogies are 1-1 mappings, in which  $m=n$ . However, there are exceptions (Gentner, 1982).

<sup>61</sup> The assumption that predicates are brought across as *identical* math's is crucial to the clarity of this discussion. The position that predicates need only be similar between the biological domain and th

2. Try to preserve *relations* (R) between the objects:

$$R(b_i, b_j) \quad \text{--->} \quad [R(t_i, t_j),$$

3. {The Systematicity Principle) To decide *which* relations are preserved, choose systems of relations (frame of reference):

$$R \setminus (R_1(b_i, b_j), R_2(b_k, b_l)) \quad \text{--->} \quad [R \setminus (R_1(t_i, t_j), R_2(t_k, t_l))]$$

Higher-order relations play an important role in analogy, as is discussed below.

Notice that this discussion has been purely structural; the distinctions invoked rely only on the syntax of the knowledge representation, not on the content. The *content* of the relations may be static spatial information, as in UNDER (x, y), or FULL (CONTAINER, WATER); or constraint information, as in PROPORTIONAL [PRESSURE(liquid, source, goal), FLOW-RATE(liquid, source, goal)]; or dynamic causal information, as in CAUSE {AND [PUNCTURE (CONTAINER), FULL(CONTAINER, WATER)], FLOW-FROM (WATER, CONTAINER)}.

After we establish an analogy, general principles and knowledge can be transferred from the biological domain to the target domain, thereby helping one better understand the nature of the target domain. In this case we can transfer general knowledge and principles surrounding aerodynamics pertaining to a King Fischer bird traveling through fluid at high speed so to prevent inefficiencies of to high speed trains traveling through tunnels at high speeds so to reduce/eliminate sonic boom. Examples of analogical mappings in practice and what knowledge can be transferred and their benefits can be understood in the engineering field of biomimicry, or biomimetics.

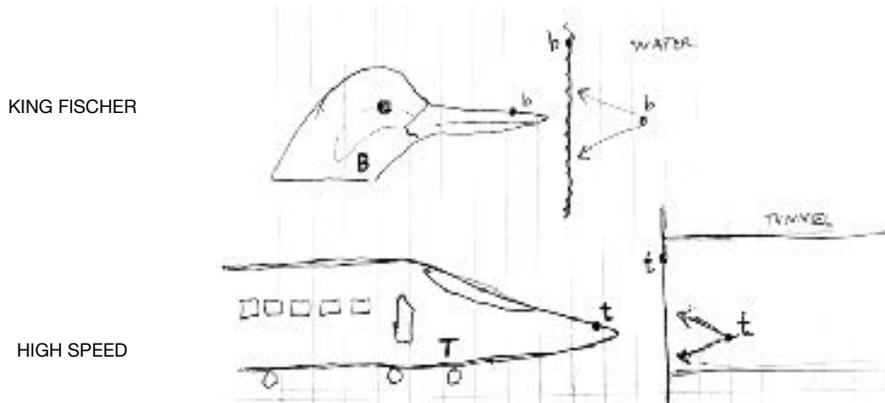
*Step 4: Evaluate the Mapping.* Once the initial mapping between the biological domain and the target domain has been achieved, it is vital to evaluate the effectiveness and validity of the mapping. Are the biological patterns accurately and meaningfully mapped to the target domain? Does the mapping provide new perspectives, explanations, or insights that were previously unseen in the target domain alone? This evaluation will ensure the reliability and usefulness of the mapped analogies.

*Step 5: Refine and Iterate.* As with any scientific process, refinement and iteration are key. Based on the evaluation results, adjustments may be necessary to improve the mapping process. It might involve revisiting the identified biological patterns, exploring additional analogies, or refining the existing mapping to enhance the biological understanding of the target domain. Constant refinement and iteration will lead to a more robust and accurate representation of the biological nature within the target domain.

*Step 6: Validate and Communicate.* The final step of the process involves validating and communicating the findings of the mapped analogies. Validation can be achieved through further research, experimentation, and peer review, ensuring that the biological framework and its mapped analogies hold scientific merit. Once validated, the results should be effectively communicated to the scientific community and relevant stakeholders through publications, conferences, or other platforms, fostering further discussion and exploration of the implications of the biological patterns within the target domain.

**Examples and illustrations of analogical mapping in practice.**

The process of structurally mapping analogy requires an adequate understanding of biological functions and biological relationships within a biological domain, as well as mechanical functions and relationships of its parts of the target domain under observation.



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**Biomimicry**, or biomimetics, is the design and production of materials, structures, and systems that are modeled on biological entities and processes. Biomimicry aims to take inspiration from natural selection solutions adopted by nature and translate the principles to human engineering. Examples of biomimicry can be found in how Velcro was inspired by burr fruit seeds;<sup>62</sup> how surgical needles were inspired by bee stingers;<sup>63</sup> How producing fresh water from salt water (desalination process) was inspired by biological patterns in red blood cells;<sup>64</sup> How the wings of the Airbus have been inspired by the wings of an albatross;<sup>65</sup> and; How paint coatings on airplanes<sup>66</sup> and antibacterial surfaces have been inspired by the biological patterns observed in shark skin.<sup>67</sup> All of these examples structurally mapped analogies from the biological domain to their respective target domains.

<sup>62</sup> <https://www.microphotonics.com/biomimicry-burr-invention-velcro/>

<sup>63</sup> <https://3dprintingindustry.com/news/bees-put-sting-templates-bioinspired-3d-printed-needle-design-132859/>

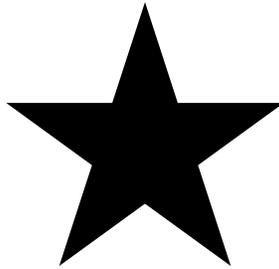
<sup>64</sup> <https://cbm.msos.edu/mapsTeams/assets/biomemeticMembrane2.pdf>

<sup>65</sup> <https://www.airbus.com/en/newsroom/stories/2020-03-biomimicry-a-fresh-approach-to-aircraft-innovation>

<sup>66</sup> <https://www.airbus.com/en/newsroom/stories/2020-03-biomimicry-a-fresh-approach-to-aircraft-innovation>

<sup>67</sup> <https://www.sharklet.com>

INSERT MORE MAPPING EXAMPLES



INSERT MORE MAPPING EXAMPLES

## IV. Implications and Applications

### A. Understanding the Biological Nature of Systems, Processes, and Objects

The exploration of the mathematical underpinnings of the universe has fascinated scientists, philosophers, and thinkers for centuries. While the application of mathematics in describing physical phenomena has yielded remarkable insights, there is a growing understanding that a purely mathematical framework may not capture the full complexity and nature of reality. In response to this, our research delves into the notion of a biological framework for a mathematical universe hypothesis, proposing that all systems, processes, and objects in reality possess inherent biological patterns.

Having examined the concept of a mathematical universe hypothesis, we now turn our attention to the far-reaching implications and possible applications of integrating a biological perspective into this framework. By recognizing and exploring the biological nature inherent in diverse domains, our research aims to provide new insights and achieve a deeper understanding of the complex systems that shape our reality. In this section, we discuss the potential implications of our theory for various fields, its practical applications, and its contribution to interdisciplinary knowledge.

#### *Implications for Understanding the Biological Nature of Reality:*

The central implication of our theory is the realization that biological patterns define the framework for a mathematical universe. This perspective challenges the traditional dichotomy between living and non-living systems and emphasizes the interconnectivity that underlies all aspects of reality. By recognizing and understanding the biological nature inherent in systems, processes, and even inanimate objects, we open up new avenues for inquiry and gain a more holistic understanding of the universe. This biological lens allows us to uncover shared principles, behaviors, and patterns across diverse domains, providing a more comprehensive framework for scientific inquiry.

#### *Applications in Various Fields:*

The implications of a biological framework within the mathematical universe hypothesis extend to numerous fields of study. In biology, this perspective can help elucidate fundamental biological processes, illuminate previously unexplained phenomena, and guide investigations into the origins and evolution of life. In physics, the integration of a biological perspective aids in bridging gaps in our understanding of the fundamental forces and particles, and shed light on the interplay between physical and biological phenomena. Additionally, disciplines such as neuroscience, ecology, sociology, and cosmology can benefit from exploring the biological nature inherent in their respective systems to gain deeper insights into the underlying principles and dynamics.

#### *Practical Applications:*

Beyond its theoretical significance, a biological framework for a mathematical universe hypothesis entails numerous practical applications. By understanding the biological nature inherent in various systems and processes, we can potentially develop new strategies for solving complex problems, optimize technological advancements, and advance interdisciplinary collaborations. For instance, recognizing the interconnectedness and interdependence between different domains can pave the way for innovative solutions in areas such as bio-inspired engineering, sustainable resource management, and healthcare advancements. Understanding the organizational correspondence between human society and cellular society highlights individual and group behaviors as well as problems and their solutions.

*Contribution to Interdisciplinary Knowledge:*

The integration of a biological framework into the mathematical universe hypothesis represents a significant theoretical contribution to interdisciplinary knowledge. By bridging the gap between biology, mathematics, physics, and other fields, our research offers a new perspective that enriches scholarly discourse and encourages cross-disciplinary collaborations. This framework not only stimulates further research but also provides a foundation for exploring new frontiers, refining existing theories, and guiding future investigations.

*Implications for Perennial Wisdom:*

One intriguing implication of our theory is its resonance with perennial wisdom, the notion that there exists a timeless, universal knowledge that underlies spiritual, philosophical, and cultural traditions across diverse civilizations. The idea of a biological framework for the mathematical universe aligns with the concept of interconnectedness, suggesting that the principles that govern our physical and biological reality may transcend cultural boundaries. It raises the possibility that what these traditions have conveyed throughout history could be, at its core, a comprehension of the biological patterns and interrelations inherent in existence—or rather, that there was a source that originally conveyed the ideas of a biological universe, which ultimately became/evolved into the current understanding of religious, spiritual, philosophical, and cultural concepts and traditions.

*Historical Alignment and Cross-Cultural Insights:*

By connecting the dots between our biological framework and the wisdom traditions of the past, we gain valuable cross-cultural insights and potentially validate the enduring relevance of these teachings. Ancient texts, myths, and symbols that have shaped religions and philosophies may have captured, in metaphoric or symbolic form, observations of the biological patterns and behaviors that govern our reality. Analyzing these texts through the lens of a biological framework allows us to reinterpret and potentially distill deeper meanings in ways that align with our contemporary scientific understanding.

Additionally, this integration offers an opportunity to bridge the gap between science and spirituality. By recognizing the biological nature inherent in reality, we can find common ground between empirical investigation and the philosophical and spiritual inquiries of humanity. Rather than being disparate realms of knowledge, they may represent different expressions of our attempt to grasp the underlying principles and interconnectedness of the universe.

*Implications for Modern Society:*

The significance of merging the mathematical universe hypothesis with a biological framework extends beyond academic discourse. Consideration of perennial wisdom and alignment with ancient teachings can provide insights and guidance to contemporary society. By reviving and reassessing these ancient concepts, we may discover alternative approaches to addressing current challenges, fostering sustainable practices, and reestablishing a harmonious relationship with the natural world.

Moreover, recognizing the parallelisms between our theory and perennial wisdom can promote intercultural dialogue and understanding. It encourages us to explore the threads that unite different belief systems and philosophies, cultivating respect, tolerance, and appreciation for the diverse perspectives that humanity has developed throughout history.

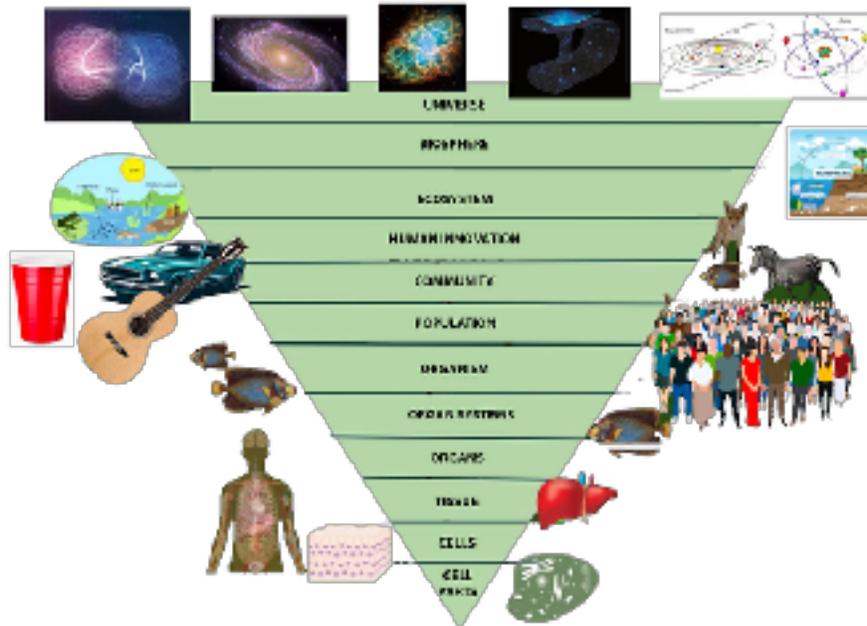
For science a biological framework allows for this [Concrete system for measurement]:

For understanding ideas and intangible concepts it allows for this [particulars]

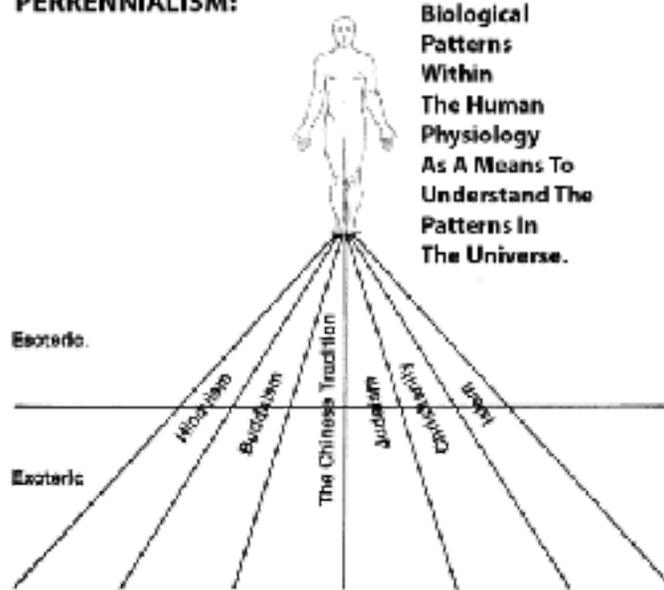
In the subsequent sections, we delve deeper into specific implications and applications of our theory, highlighting its potential impact across various fields and practical domains. By grounding the principles of the mathematical universe hypothesis in a biological framework, we aim to illuminate the hidden biological patterns that weave through the intricate fabric of reality, allowing for a more comprehensive understanding of the universe and its fundamental nature.

The exploration of the mathematical universe hypothesis combined with a biological framework not only holds implications for our scientific understanding but also resonates with the concept of perennial wisdom found across many religions and cultures throughout history. In this section, we explore the multifaceted implications of our theory, considering how it may align with and shed light on the underlying principles that have been conveyed in various spiritual and philosophical traditions worldwide. This integration of scientific inquiry with the notion of perennial wisdom not only expands our understanding of the biological nature inherent in reality but also unveils potential connections to ancient wisdom traditions.

## Levels of Biological Organization:



### PERRENNIALISM:



Microcosm & Macrocosm motif seen across various religions and ancient philosophies around the world hint to possible prior knowledge of a biological nature to the universe and its understanding through the understanding of the patterns within the human body.

## Biological Patterns Defining Units and Systems of Measurement

Each species of organism defines a system of measurement. The various biological patterns contained within each living organism express the various units of measurement which can be used in measuring the various things within reality which share a functional correspondence. The stages of development and states of health of those units of measurement provide the system of measurement for the efficiency for that function (system, process, or object), or how a biological pattern can measure. Furthermore, that unit of measurement may also exist in a different system of measurement, for example the lungs of a fish and lungs of a human, while they are different systems of measurement, they also overlap in functions, which must be taken into consideration. This is especially important when designing systems.

When designing systems, especially within the field of biomimicry, we must choose not only the most appropriate unit of measurement, but also the system of measurement. The system of measure determines the potentials and efficiencies is related to that permutation of the function. For example, human society generally mimics the organizational properties of cellular society which composes a living organism:

Person = Cell;  
Business & Organizations = Tissue;  
Industries = Organ;  
Sectors = Organ system;  
Money/Wealth = Blood/Fundamental Needs.

Understanding and accepting this fact, human society must understand which cellular society it must try to mimic in order to achieve the same [analogous/homomorphic/mathematical] level of potentialities and efficiencies as the cellular society it assimilates its order to. This is important because the cellular society composing a frog is different from the cellular society composing a fly. Both contain cellular societies of organisms establishing and sustaining conditions for the life of their society, but only one of those societies has more resilience and potential than the other. The bottom line is when measuring a target domain, we must determine the epitome of that target domain, relative to the function it is trying to achieve.

To expand upon the concept of choosing the unit of measurement from the most appropriate system of measurement, when measuring aerodynamics in high speed trains so to prevent a sonic booms through tunnels, we must look to the beak of a King Fischer Bird, and not the beak of a parrot. When we are trying develop adhesive properties of Velcro, we must look to Fruit Bur Seeds, not Apple Seeds. When looking to the properties of society which display unlimited potential and the ability to be most resilient and achieve any goal it sets itself to, we must look to the properties surrounding the cellular society composing the human physiology and not the cellular society composing a frog.

## Target Domains May Contain More Than One Biological Correspondence

Furthermore, it is important to note that a target domain may be mapped to more than one biological pattern. Objects being mapped to the biological domain can have multiple functions, therefore multiple analogies; this is determined via its observers interpretation of the function given a particular situation. For example, a cup has the biological pattern of a red blood cell when transporting, but also has the biological pattern (or properties) of bones when I'm using it to support myself as I stand on it (when placed upside down on the floor). The ability for multiple possible mappings dependent upon how a person understands the function of a particular thing, or uses a particular thing to achieve a goal, will result in subjective nature of analogical mapping. To defend against this, we must zoom out further to realize its inherent Truth—and structurally map more nodes to the target domain from the biological domain from a particular biological pattern's frame of reference. The more analogies that can be established, the truer it is.

## Measuring Reality Relative To Life

Measuring any target domain relative to the biological domain which shares a correspondence, measures that target domain relative to the frame of reference of Life. It is eating from the “tree of life.” Understanding everything from the terms of what establishes and hinders life is the most sovereign way for living organisms to understand its reality. A living organism is required by the laws of life to interpret its reality in such a way—this has been proven through all cellular societies abidance to this law. our own recognition of this correspondence across other macro societies, including human society (while less efficient). Cellular society is the most efficient at abiding by this law, they are perfectionists, as they had billions of years to figure this out.

## Biological Patterns Defining Absolute Empirical Truth

Life is the Absolute Empirical Truth in a universe who nature is biological. The frame of reference of Life and its patterns is *Sovereign* within our universe, because without it, living organisms could not carry-out the actions necessary to live. They would not be able to measure the world around them to understand what the rules are to so live.

Therefore, it is required by the Laws of Life and the Biological Universe that established these laws, that every living organism must organize itself according to the biological patterns which establish and sustain the life and level of functionality and potential pursued by that organism and its society, or else lack the functionality, resilience, and potential possible for it and/or its society to exist, survive and flourish.

To not abide by these inherent laws and principles of Life established by the biological universe can risk one operating outside those laws which will hinder ones own life and ultimately lead to the destruction of their own life and the life around them. Every living society of organisms must abide by these laws of life; This is absolutely apparent with cellular societies, and less apparent with macro-societies. These laws are self-evident in every living organism. Living organisms are embedded with these laws—in *healthy* DNA.

Living organisms are models of this “Holy Pattern,” or Divine Essence, which permeates all of reality. The organization and interactions within the physiology of living organisms bring to light all the patterns of organization and interactions within the universe. This Holy Pattern, hidden, then manifested to the visible reality in the creation of living organisms through the mechanisms of a Biological Universe—who has been personified as “God”—A “God” whose biological nature is epitomized in human form, anthropomorphic, whose “Word became Flesh.”

So we reveal that it is true, “God created man in his own image.”

## General Relativity of Truth & Measurement

Truth can be seen as a pattern, and that the existence of truth is the existence of a pattern. The most important pattern is biological patterns, where absolute empirical truth is found. All things in the universe correspond to some permutation of biology's pattern, but may however, be interpreted to any other possible general pattern imaginable. We can access knowledge and truth by recognizing corresponding biological patterns using Dedre Gentner's Structure-Mapping framework, mapping the biological domain to a target domain.

The measurement of anything, like the measurement of truth, is dependent upon recognizing a pattern. The existence of a pattern is the existence of a measurement. To recognize a pattern is to measure. To measure something, in general, is to measure something relative to general pattern. However, to measure something absolutely, so to understand the true nature of something, is to measure it relative to biology's pattern.

## Biological Patterns Defining Conceptual Reality

Directly corresponding to the *physical order of reality*, which is biological in nature, is the conceptual order reality. The conceptual order of reality is biological in nature, however, the conceptual order of reality is the shadow of the physical order of reality—“and like a shadow,” it is free to any interpretation the mind can imagine. Just as a child can understand a monster in her bedroom through the shadow of a tree from outside a window, so too can the free thinking mind imagine anything other than the biological patterns inherent to a thing in reality. By understanding the concepts of reality relative to biological patterns, we can shine a light on the shadows to reveal the biological patterns from which those shadows stem from, and; In doing so, we see its Absolute Empirical Truth of that concept.

## Biological Patterns as Particular Which Define Universals (Philosophy)

In the realm of science, these biological patterns establish systems of measurement for which we can use to define, measure and understand the world around us with mathematical precision. In the realm of philosophy, the various systems, processes, and objects that compose the physiology of living organisms are **particulars** that contains *patterns* which define **universals**. These universals are used in defining, measuring and understanding the biological patterns in any thing in reality, such as human innovations, socioeconomic phenomena, or phenomena on Earth or in The Universe. These universals also define general principles, philosophies, or concepts in reality—such as Truth, Order, Logic, Governance, Law, Religion, Economics, Psychology, Sociology, etc., especially as those things pertain to Life and Life’s principles.

Biological patterns redefine our understanding of all fields of knowledge. Similar to how a spherical Earth has redefine the perception of a flat earth and has allowed people to circumvent the Earth and explore and unlock other various potentials due to the new paradigm of a spherical earth, understanding biological patterns which govern the nature of the universe will allow humanity to explore reality like it has never done in this life time. It will allow humanity to achieve an entire new level of potential, only achieved in movies.

## Underlying Biological Patterns Allow For General Analogies Across Non-Biological Domains

A biological universe provides a framework in which general analogy can exist by virtue of shared biological patterns, universal principles, the transfer of information, and the emergence of variations. Analogies allow us to comprehend and explain the underlying biological nature of diverse domains by identifying and mapping similarities between them, bridging the gap between seemingly unrelated systems and fostering a deeper understanding of the interconnectedness within the mathematical framework of the universe.

## B. Interdisciplinary Connections

Explore the potential interdisciplinary applications of your theory, such as in fields like biology, mathematics, physics, and philosophy.

### Implications for Ontology.

If Ontology is the branch of metaphysics that deals with understanding the nature of *being*, then in light of our theory, ontology is the branch of metaphysics that deals with the understanding that *being* is to be in correspondence with biological patterns—i.e., the nature of all *beings* (all things) exist with a correspondence to biological patterns. *That* biological pattern *is* “being.” Therefore, Ontology is the study of biological patterns within all things in reality. Ontology is the set of concepts and categories within a subject area/domain of reality that shows biological properties (patterns) and the relations between them. There is a nature emergence of all things. The nature of this emergence is biological.

### Implications for Cosmology

Prior to our theory, Cosmology was a branch of astronomy and physics that deals with the study of the origin, evolution, structure, and overall nature of the universe as a whole. It sought to understand the fundamental principles and processes that govern the universe on its largest scales, including its formation, composition, dynamics, and eventual fate. In light of our theory, Cosmology is now a branch of astronomy and physics that deals with the study of biological patterns in the origin, evolution, structure, and overall nature of the universe as a whole. It now uses biology’s patterns to understand the fundamental principles, and processes that govern the universe on its largest scales, including its formation, composition, dynamics, and eventual fate.

### Implications on Theology

Prior to the theory of a biological framework for a mathematical universe, Theology was a complex and multifaceted field of study that sought to understand and interpret religious beliefs, practices, and teachings. It is an academic discipline that requires critical thinking, research, and analysis. Theology extends beyond a simple examination of divinity. It encompasses various religious traditions, including Christianity, Islam, Hinduism, Buddhism, and many others. Theological research aims to explore, analyze, and interpret the scriptures, doctrines, rituals, and moral teachings of these traditions. Scholars engage in the study of theology to gain a deeper understanding of the divine nature, human existence, and the interplay between the two.

In light of our theory of a biological framework to mathematical universe, **Theology** is redefined as the understanding the a biological framework for the universe which ancient religious beliefs, practice and teachings were trying to express. Theology becomes the understanding that much of the significant religious concepts were trying to express the relationship between understanding human body’s biological patterns in order to understand the biological patterns that exist within reality, the universe, and in the world all around them.

Theology now becomes the understanding that *God* is the personification of the universe. God’s spirit and God’s Essence and the divine essence is the biological pattern of the universe that permeates all things—whose image (pattern) has made the image of Man, and in return, Man’s image can be used in recognizing and understanding the patterns of the universe in all of the things around us. “Man made in the image of God,” is an ancient attempt to express the relationships pertaining to the image/pattern of man (the microcosm) and image/pattern composing “God” (the macrocosm). “Even after my skin has been destroyed, yet in my flesh I see God.” (Job 19-26). Theology is now the understanding of these hidden biological concepts throughout the religious and spiritual text.

## Implications to Religion

Religion is validated through Science. Religion is the story of science. Science had to take the form of what we call “religion” and had to contain all of the analogous stories, in order to be capable of teaching science of our biological-universe to a people who had absolutely no understanding of physics, biology, astronomy/cosmology, etc.

Religion taught science to a people who had no understanding of science. And they abided by that science without any knowledge of physics, mathematics, cosmology, or biology. Religion’s analogy was the only way of explaining the nature of reality/universe to people having no prior knowledge of science, in a manner where the historical text would survive, and a person from a future would reconnect the dots of the past with the new modern day science. The way that religion was expressed in the past, influenced society (gave courage to individuals within society) to begin exploring the divine within the body—producing modern day medicine, healthcare and biology. Over time, enough data about the biology of things around us had been acquired for someone to recognize these biological patterns in and around everything in the universe. And for that person to take the arduous task of expressing those ideas eloquently in written form and communicating that knowledge to the public at large (i.e., **apocalypse**). It was said that The Messiah would come down through the clouds, which is the internet.

It was written in Revelation 1:7, “Look, he is coming with the clouds,’ and ‘every eye will see him,...” this means that “Yeooo bro!, Look at dude on YouTube talking about this theory of everything. Shit crazy bro. Shit biblical.”

Eating from the tree of Life” is understanding one’s reality relative to patterns that establish and sustain Life. For example, all living things should interpret their reality relative to the things which establish and sustain the life of them. To not do so, could jeopardize the life of the individual. Therefore, it was encouraged to “eat from the tree of Life.”

What is *perceived* as “evil” are actually the symptoms of the cause/effects from not functioning analogous to the biological patterns that pertain to establishing and sustaining *life*. For examples, cells would “perceive” autoimmune disease as “evil,” not knowing the macro events which cause it, just as humans perceive terrorism as evil, not knowing the macro events which cause it. These “evils” are meant to highlight a disorder, so that those disorders can be corrected, in harmony with patterns which establish and sustain Life.

*Heaven* is modeled by biological patterns expressed by the society of organisms composing the human physiology in a state of perfect health and homeostasis—i.e., the *Body of Jesus Christ*. For human society to be in accordance with the biological patterns of a healthy human body is for “Heaven to be on Earth”—it is for human society to become heaven, or to be “in Jesus.”

*Hell* is any discordance to healthy biological patterns. Experiencing hell is enduring the hardships pertaining to the *disorders* of biological patterns.

## Implications on Epistemology

Prior to our theory, Epistemology was the study of the *nature* and *scope* of knowledge and justified belief. In light of our theory of a biological framework for a mathematical universe, **Epistemology** becomes: the understanding of the nature and scope of knowledge derived from patterns and justified belief for a pattern's existence. The nature and scope of knowledge is biological. Knowledge is relative to biological patterns because biological patterns permeate all of creation. And because biological patterns permeate all of creation, fundamental principles and relationships can be gathered and extracted from the biological domain to explain the nature of the thing which corresponds.

A pattern can be thought of as a recurring or regular arrangement of elements or characteristics that can be observed or identified. In various fields and contexts, the term "pattern" is used to describe different phenomena. The recognition of a pattern is the recognition of **knowledge**. Biological patterns are the most sovereign pattern, because they underly the universe and define the nature of the Physical Order of Reality.

All information/data contains biological patterns. Information/data without a pattern recognized is just information/data. The recognition of information/data's adherence to a pattern is knowledge, in general. The recognition of information/data's adherence to a biological pattern is recognizing its true knowledge (recognizing the information/data's true relationships and order).

All data/information inherently contains biological patterns; the revelation of the biological pattern within data/information is the revelation of the true knowledge pertaining to that data/information.

The nature and scope of all knowledge in reality is the nature and scope of knowledge pertaining to biological patterns. Structure mapping analogies from the biological domain to a target domain is the way for gathering the actual true source of knowledge—not the “shadows” of biology's patterns.

Biological patterns govern the nature of the universe and everything in it. While all things contain biological patterns, we do not usually recognize these patterns. Instead we interpret reality in our own way. Similar to how all software runs on binary coding, but everyone sees the UX/UI and not the binary coding, the same goes with biological patterns. We see the “shadows of biology's patterns” in the things around us, but not the biological patterns itself. For example, when we look at a cup, we see a cup, or tool that can hold and transport fluid long enough for us to drink it—the phenomenon of seeing a cup as “just a cup” is seeing “the shadow of biology's patterns.” However, when we see the cup as functioning analogous to a red blood cell, we now see the biological pattern of the cup, and not “the shadow of that biological pattern.” We see the true nature and function of a cup. We can appreciate the cup and the environment it functions in. This also allows for harmonious innovations. Such can be seen in the field of biomimicry: [www.ASKNATURE.org/innovations/](http://www.ASKNATURE.org/innovations/)

## Biology's “Shadows” Allow for Limitless In Imagination

Biology's patterns cast “shadows” which inspire the imagination in the free thinking mind. All of the possible interpretations of the “shadows” cast by biology's patterns define endless things which can be imagined. That toy box is unlimited and allows for unlimited versatility. Regardless of how big the toy box is and its ability to allow for any type of imagination, biological patterns are sovereign and will be the answer/solution to any significant problems/concern. Biological patterns are the most eloquent forms of ideas, objects, and creativity. Those great imaginative ideas or stories are in harmony with the certain fundamental patterns of biology.

Similar to the idea of movies. For example there are only so many fundamental plots/storylines, however we can imagine and incorporate various things to cover up these mundane storylines, to keep things interesting. Similarly, this is the case with biological patterns. The ways we can interpret the shadows which biology casts, are endless, however there are only a limited amount of “plots/storylines.”

## Implication on the concepts of Information/Data and Knowledge

**Information/data** without a pattern is just information/data. However, all data/information inherently contains a biological pattern yet to be revealed. The recognition of a pattern is the recognition of **knowledge**; Using patterns to make predictions is using knowledge to make predictions. The most sovereign pattern is biological in nature (Life-patterns)—i.e., *biological patterns*, because *biological patterns* are the *Metapattern* that exists amongst everything, binding everything, connecting everything in the universe. Therefore the only true, universal, and sovereign source of *knowledge, truth*, and of *knowing absolutely* is by recognizing the biological patterns composing phenomena in reality. Biological patterns are the pattern of all patterns. All other patterns are shadows of biology's patterns—they are relative to a *lower realm of relevance*, with the possibility of overlapping the absolute truths (true knowledge) defined by the biological patterns which permeate/compose physical reality. Everything else that is not a biological-pattern is information which needs to be dissected to reveal biological patterns inherent to that information—and in doing so, bring forth the [true source of] knowledge surrounding that information.

## Implications on the concept of Belief

*Belief* is the hypothesis of a pattern's existence. Belief is justified through specification (i.e., justification) regarding what a pattern is, how it might be operationalized and measured, and what it does and does not predict in the real world. **Opinion** is the hypothesis of a pattern's existence without justification—i.e., hypothesis without specification regarding what a pattern is, how it might be operationalized and measured, and/or what it does and does not predict in the real world. The most sovereign form of *belief* (or *believing*) is through contemplating reality relative to biological patterns—i.e., trying to recognize the biological patterns within the phenomena of reality—such an act is “believing in God” (in religion) and *biomimicry* (in science)—they are the same. The more you know, the less you believe. To know something is to absent of belief because one knows. Belief precedes knowledge, and must undergo the scientific method to justify the belief. Once those patterns are recognized (proven), he/she does not *believe*, but rather he/she *knows* (he/she has actual knowledge of)—he/she knows.

## Implications on the concept of Enlightenment

**Absolute Enlightenment** is the recognition of fundamental patterns (biological patterns) which exist within and throughout all physical and conceptual things in reality—i.e., enlightenment is the recognition and understanding of those patterns (with such consistency) so that one can make accurate predictions (extrapolations) on those patterns—so to achieve goals in a logical and exact manner.

Ignorance, or being **ignorant** of something, is not being aware of a pattern pertaining to something observed. Enlightenment is being aware of that pattern. Therefore, if we are talking about the enlightenment about knowledge pertaining to the nature of human society, we are talking about the fundamental patterns (the meta patterns)—*the biological patterns*—of society that allow us to understand what is going on in human society, such as how nationalism in human society is analogous to cellular society shutting down less important organ systems in order to reserve resources for more important organ systems within the body. Or how wealth inequality in human society is similar to the improper distribution of blood/resources throughout cellular society. By deeply understanding human society analogously to that of a cellular society makes one enlightened. Furthermore, innovating using biological patterns (i.e., biomimicry) is enlightenment in the field of engineering/technology.

**General Enlightenment** may be defined as understanding philosophies and sciences (general patterns in reality) that are unknowingly in harmony with healthy biological patterns—truths not yet “fleshed out” to realize their accordance to biological patterns, as so to be truly enlightened. True enlightenment is the ability to recognize and understand the biological patterns that exist within everything in reality—to recognize this “Divine essence” (The Universe's Biological Pattern) within all things, to extrapolate on those patterns, make predictions and function in the world relative to those patterns—upholding those patterns.

The concept of Enlightenment has historically been associated with a philosophical and intellectual movement rooted in reason, rationality, and the pursuit of knowledge and understanding. It has focused on the development of self-awareness, personal growth, and the liberation of individuals from ignorance and societal constraints.

In the context of the theory of a "biological framework for a mathematical universe," the idea of Enlightenment undergoes some interesting implications and transformations. Here are a few potential ways in which the concept of Enlightenment might change:

1. **Reconsideration of Human-Centric Enlightenment:** Traditionally, Enlightenment has often focused on human-centered pursuits of knowledge, wisdom, and self-realization. However, in a biological framework that posits the pervasive presence of biological patterns throughout the universe, the concept of Enlightenment may expand to include a broader understanding of interconnectedness. It might acknowledge the shared biological foundation and patterns found in the entire universe, not just human experience, inviting a more holistic and inclusive perspective. The human-centric focus on enlightenment has more of a literal meaning—as understanding the biological patterns within the human body is necessary for enlightenment.

2. **Recognition of Interconnectedness and Interdependence:** A biological framework for a mathematical universe emphasizes the interconnectedness and interdependence of all systems, processes, and objects. Enlightenment could be reimagined as a realization and celebration of this universal interconnectedness, understanding the intrinsic biological nature of everything. It might foster a sense of unity with the natural world and a recognition of our place within the larger web of life.

3. **Emphasis on Biological Harmony:** The theory proposes that the existence of life and living organisms arises from the evolution of the universe's biological processes. In this new paradigm, Enlightenment may involve a deepening understanding and respect for the underlying biological patterns that sustain life, as well as the inherent harmony and balance within natural systems. It could encourage a mindful and responsible approach towards ecological stewardship and living in harmony with the natural world.

4. **Expanding Analogies and Insights:** The theory suggests that analogies can be mapped from biological systems to other domains, facilitating a better understanding of the biological nature of those domains. In the context of Enlightenment, this could lead to new analogies and insights about the human experience, consciousness, and personal growth. It might inspire novel ways to approach self-discovery, ethical decision-making, and the pursuit of wisdom through the exploration of biological processes and patterns.

Overall, the concept of Enlightenment could evolve in a biological framework for a mathematical universe, encompassing a broader understanding of interconnectedness, emphasizing harmony with nature, and opening up new avenues for exploration and insight. This expanded perspective may foster a deeper appreciation of the biological nature of reality and our place within it, offering a fresh lens through which to approach personal growth and understanding.

## Implications on the concept of Truth

**Truth** is a pattern. The existence of *Truth* is the existence of a pattern. To reveal Truth is the reveal accordance to a pattern. The most sovereign pattern is biological patterns (Life-patterns). Biological patterns is where *Absolute Truth* resides. Because the nature of reality is biological (i.e., containing biological patterns), all things in the universe correspond to (are analogous/homomorphic to) some permutation of biology's pattern, at some stage of development, and at some state of health. Recognizing these is recognizing the Absolute Truth about something.

The theory of a "biological framework for a mathematical universe hypothesis" asserts that biological patterns are the fundamental and overarching patterns that govern the nature of the universe. According to this theory, these biological patterns are seen as the only true and consistent patterns in reality. Here are some implications this theory may have on the concept of Truth:

1. Biological Truth: In the proposed framework, the concept of Truth would be closely associated with biological patterns. Truth would be understood as the alignment and recognition of these inherent biological patterns in reality. This perspective suggests that a deeper understanding of Truth can be achieved through the identification and comprehension of the fundamental biological nature of things.

2. Understanding Reality: The theory implies that understanding the biological patterns underlying all systems, processes, and objects provides access to a more comprehensive understanding of reality. It suggests that by perceiving and studying the biological patterns, we can attain a more accurate perception of Truth, as these patterns are considered universal and consistent.

3. Relative Truth vs. Biological Truth: The concept of relative truth, which acknowledges that truth may vary depending on personal or cultural perspectives, may be challenged in this framework. The theory suggests that relative truths might be considered lesser reflections of the ultimate Truth, which is rooted in biological patterns. Consequently, this perspective may diminish the relevance of relative truth, emphasizing instead the pursuit and alignment with the biological Truth.

4. Fallibility of Other Patterns: The theory implies that patterns outside of the biological framework may be seen as potentially flawed or less reliable. Since biological patterns are considered the only true and consistent patterns, other patterns in fields like mathematics, engineering, or science may be subject to scrutiny. This perspective may prompt a reevaluation of the validity and limitations of patterns in those fields and encourage a focus on identifying and incorporating the biological patterns within them.

It is important to recognize that these implications are contingent on the acceptance and validation of the theory itself. While the theory posits that biological patterns hold the key to Truth, its validity and integration within broader fields of knowledge would require rigorous examination, critical evaluation, and empirical evidence to ascertain its applicability and impact on the concept of Truth.

## Finding “Biological Truth” in a Target Domain

We can access the knowledge/truth of any phenomenon in reality (target domain) by recognizing its corresponding biological patterns. To do this, we use Dedre Gentner’s *Structure-Mapping: A Theoretical Framework for Analogy*. The analogy “T is (like) B” defines a mapping from B to T. T will be called *target*, since it is the domain being explicated. B will be called *base*, or *biology*, since it is the domain that serves as the source of knowledge. Suppose that the representation of the *biology* domain B can be stated in terms of object nodes  $b_1, b_2, \dots, b_n$  and predicates such as A, R, R’ and that the *target* domain has object nodes  $t_1, t_2, \dots, t_n$ . The analogy maps the object nodes of B onto the object nodes of T, upon which *general* principles, philosophies, and ideas/concepts pertaining to the relations amongst the object nodes of B can be transferred to object nodes of T.

For example, knowledge pertaining to the phenomenon surrounding “nationalism” in cellular society can be transferred to the phenomenon surrounding “nationalism” in human society—both lacking the proper distribution of fundamental resources which leads to shutting off resources outside of more important regions (a country with a human society denying resources to other countries, is analogous to organ system denying resources to less important organ system).

Another example is of, Antarctica’s melting and freezing being analogous to that of the function of a heart—the nodes which can be mapped within that analogy highlight a transference of general knowledge pertaining to the function of heart to that of the function of the melting and freezing of Antarctica—e.g., highlighting knowledge pertaining to systems of currents which carry resources throughout a system.

For more examples, please visit: [www.AskNature.org/innovations/](http://www.AskNature.org/innovations/)

## Implications to understanding the concept of Order

Biological patterns define Order. Biological patterns which establish and sustain Life is Absolute Order and Order for Life. Biological patterns that hinder and destroy life is Disorder.

In the "biological framework for a mathematical universe hypothesis," the theory posits that biological patterns define the framework for understanding reality. According to this theory, biology's patterns are considered the meta-patterns governing the universe and everything within it. In light of this, let's explore some implications this theory may have on the concept of Order:

1. *Order as Harmony with Biological Patterns:* The theory suggests that order in reality is associated with harmony with biology's patterns. It proposes that when systems, processes, and objects align with the inherent patterns of biology, they possess an inherent order. This order reflects a state of harmony with the principles and structures that establish and sustain life, potentially supporting the achievement of intended goals.
2. *Disorder as Deviation from Biological Patterns:* Conversely, the theory suggests that disorder arises when there is a deviation from biology's patterns. Disorders can be associated with the disruption or mismatching of biological patterns, which may lead to detrimental effects on the functioning and well-being of organisms and systems. In this context, disorder can be seen as a departure from the inherent order established by biology's patterns [which establish and sustains life towards a particular level of potential].
3. *Understanding and Promoting Order:* The theory implies that by recognizing and understanding biology's patterns, we gain insights into the order of the universe and can actively promote and reinforce that order. Through studying and aligning with these patterns, we can seek to establish harmony and order in various domains, including the design of systems, the organization of processes, and the preservation of ecological balance.
4. *Linking Order and Functionality:* The theory suggests that order, as defined by harmony with biology's patterns, is intricately tied to functionality and the achievement of intended goals. By aligning with the inherent order established by biology's patterns, systems and processes can optimize their efficiency and effectiveness, potentially leading to improved functionality and success in fulfilling their purpose.

## Implications to understanding the concept of Chaos

Chaos only exists in the unorganized mind. Chaos is ignorance of any pattern. The pattern of biology is within everything. Chaos cannot exist. Those who do not understand see a pattern in a thing, see chaos.

## Implications to understanding the concept of Logic

In the "biological framework for a mathematical universe hypothesis," the theory suggests that biological patterns are the fundamental patterns that govern the nature of the universe and everything in it. In this context, the implications for the concept of Logic can be examined:

1. Logic as Harmony with Biological Patterns: According to the theory, what is considered logical is in accordance with biological patterns that establish and sustain life. Logic, in this framework, aligns with the specific biological patterns necessary for the achievement of a particular goal or function within an organism or system. Thus, logical reasoning and arguments would be those that are in harmony with the underlying biological patterns associated with the success of survival and the functioning of life.

2. Illogic as Deviation from Biological Patterns: Conversely, what is considered illogical is the failure to adhere to biological patterns or using irrelevant patterns to achieve a specific goal or function. Illogic arises when there is a discordance from the biological patterns that establish and sustain life. It can also involve using patterns that are not in accordance with the specific biological mechanisms associated with the success of survival or the intended function.

3. Understanding Reality and Logic: The theory proposes that living organisms should define, measure, and understand reality relative to the mechanisms that establish and sustain their lives, which are the biological patterns. It suggests that logical thinking is rooted in understanding and aligning with these biological patterns. By recognizing and comprehending the true biological mechanisms of phenomena, individuals can consistently affect outcomes and make decisions that are in harmony with the underlying patterns governing life.

4. Degrees of Logic and Illogic: The theory introduces the idea of degrees of logic and illogic. The degree of harmony or discordance with biological patterns determines the level of logic or illogic within a particular system or argument. The closer the alignment with the specific biological patterns associated with a desired function, the higher the degree of logic. Conversely, the further the deviation from the required biological patterns, the higher the degree of illogic.

## Implications to understanding the concept of Potential

In the "biological framework for a mathematical universe hypothesis," the theory suggests that potential is determined by the opportunities or possibilities presented by patterns. Potential is closely tied to the permutation of biological patterns that establish and sustain life and are directed towards specific functions or goals. Here are the implications of the theory on the concept of potential:

1. Potential as Permutations of Biological Patterns: According to the theory, potential arises when the correct permutation of biological patterns is established to produce functions or achieve specific goals. The more opportunities that can be attained through a pattern, the greater the potential of a system, process, or object. Potential is thus a manifestation of the possibilities inherent within the existing biological patterns.

2. Hindering Factors of Potential: The theory states that hindrances to potential arise from unhealthy states of biological patterns. When the patterns that establish and sustain life experience disorders or unhealthy permutations, potential is hindered. These unhealthy patterns can limit the abilities of the intended biological pattern to carry out its intended agenda and restrict the range of achievable potential.

3. Logic and Potential: Logic, in this framework, is defined by patterns that are in harmony with and analogous to the order established and sustained by biological patterns. Therefore, logical patterns are those that align with the goal or function associated with a particular biological pattern, further promoting its potential. Illogical patterns, on the other hand, are those that deviate from the biologically established order, hindering potential.

4. Measurement of Disorder as Potential: The theory suggests that disorder contains order and can be measured. Within physical reality, disorder represents the transient states of unhealthy states of biology's patterns, associated with states of illogic and hindrances to potential. By understanding and acknowledging the order and disorder present in a system, one can identify the potential for growth, development, and achievement, through correspondences to healthy biological solutions.

5. Complexity and Potential: The theory acknowledges that complexities within patterns allow for the attainment of particular activities or goals, thereby increasing potential. The more complex a pattern is within the context of biological patterns, the greater the potential it can offer. Complexity and potential are intertwined, as complex patterns often provide more opportunities for functioning and adaptation. There is a point where too much complexity can hinder something. The human physiology defines the limit to complexity needed to achieve unlimited potential.

In summary, within the biological framework for a mathematical universe hypothesis, potential is determined by the opportunities and possibilities exhibited by the correct permutation of biological patterns. Disorder and unhealthy states of patterns hinder potential, while logic aligns with the order established by biological patterns, promoting potential. Understanding and recognizing the complexities and patterns present within a system or object allows for the identification and realization of its potential.

## Implications on the concept of Reason

According to the "biological framework for a mathematical universe hypothesis," reasoning is the process of finding and determining the accordance to patterns. In the context of this theory, here are the implications of the theory on the concept of reason:

1. **Recognizing Biological Patterns:** The theory suggests that the most sovereign form of reasoning is based on recognizing and understanding biological patterns in the world around us. It emphasizes that all things in reality are composed of biological patterns and that these patterns govern the nature of the universe. By recognizing the biological patterns in a thing or system, one can reason about its nature, behavior, and potential.

2. **Logic and Illogic:** Reasoning, within this framework, involves determining the logic or illogic of a thing by assessing its accordance to a pattern. Logic is defined as the accordance with the patterns that establish and sustain life, while illogic refers to patterns that deviate from or are not in accordance with these biological patterns, [especially healthy patterns]. Reasoning involves understanding the specific biological patterns necessary to achieve a goal or function and determining their presence or absence in a particular situation.

3. **Application of Biomimicry:** The theory suggests that absolute reasoning involves applying biomimicry, which means deriving knowledge and solutions from the observation and understanding of biological patterns. By recognizing the correspondence between biological patterns and patterns in other domains, such as human society, reason can be applied to extract knowledge and insights that can contribute to solving problems or improving outcomes. See reasoning use correctly here: [www.AskNature.org](http://www.AskNature.org)

4. **Frame of Reference:** Reasoning is influenced by the frame of reference or perspective through which the nature of order is interpreted. The theory proposes that the most absolute frame of reference for reason is the biological patterns that establish and sustain life. Absolute reasonability and logic are relative to this frame of reference, implying that decisions and actions should align with the logic of biological patterns to ensure harmony with life's processes and goals. Not abiding by the principles (biological patterns) which establish and sustain life, for a living thing, would be unreasonable.

5. **Extracting New Knowledge:** Reasoning, within this framework, allows for the exploration and extraction of new knowledge within the realm of reason. By recognizing the patterns and correspondences between different domains, such as organizational correspondences between cellular society and human society, reason enables us to draw analogies and apply lessons learned from biological patterns of cellular society to other areas of inquiry or problem-solving in human society. This is reasoning at its finest.

In summary, the theory suggests that reason is deeply connected to understanding and recognizing biological patterns. Reasoning involves determining the accordance or discordance with these patterns and implies aligning decisions and actions with the logic of these patterns. By applying biomimicry and recognizing correspondences, reason allows for the extraction of new knowledge and insights that can contribute to solving problems and improving outcomes.

## Implication on Language and Communication (“Language Games,” Ludwig Wittgenstein)

**Language** is patterns conveyed from one thing to another. Language is a system of patterns that are conveyed from one thing to another. For humans, language is the patterns conveyed from human to human through speech, writing, or paralanguage. This is analogous to but not as efficient as to how patterns are conveyed between things in the universe through the big bang or between mother and daughter cells during mitosis. Language helps to maintain and uphold the order established by the thing which conveyed the pattern/order. When we hear or read language, it organizes our thoughts in an attempt to align our actions with the patterns conveyed by the speaker or writer. The interpretation and conveyance of reality through language (in human society) can be challenging due to different languages, levels of understanding, and perspectives. We have seen the miscarriage of society through the challenges of language in the Tower of Babel. The purpose of conversations and debates is to iron out our understandings between each other and to discover the common underlying truth to our understandings—which are ultimately biological patterns. Recognizing these biological patterns can allow for more efficient conveyance of ideas and order which allows for more efficient actions to occur. In the grand scheme of language, we are playing whisper down the lane; the universe started by whispering the patterns of biology throughout the universe, which has been communicated to the creation of our galaxy, solar system, earth, life and its evolution of man, to this point of understanding the pattern and speaking it out loud: “Biology’s Patterns Rule All.”

## Implications for understanding and utilizing Mathematics

**Mathematics** is the language of expressing patterns precisely through the use of numbers and symbols. Everything in reality is associated with patterns. Biology's patterns being the most fundamental of patterns, as all things are associated with them. Mathematics allows us to express the patterns of cosmology (i.e., all things in the universe) with precision and exactness. While mathematics can express patterns exactly using mathematical language, mathematical language is held hostage to the the individuals ability to properly interpret the phenomenon in reality as so to properly convert it into meaningful mathematics.

Various interpretations of reality can lead to various mathematical expressions concerning the same topic. Biology provides a framework for mathematical equations to exist meaningfully. Biology allows for mathematical equations

Mathematics is dependent upon a frame of reference. Within physics, the specific frame of reference an event is perceived through can have a drastic effect on how we describe that event, thus directly effecting the quantities of motion that we derive from our measurement and description of the event. The frame of reference of an event is essentially the perspective that we choose to observe it from, or, mathematically speaking, our choice for the origin position of the coordinate system we have chosen to describe the event.

However, because the nature of our universe *is* biological, the frame of reference for measuring its phenomenon with mathematics *must be* relative to biology—i.e., biological patterns—therefore a new *relativity* in physics exists, imperative to truly understanding the nature of reality—i.e., a *relativity to biological patterns*.

## Implications for Einstein’s General Relativity.

General relativity is a theory of gravity proposed by Albert Einstein in 1915. It is a framework that describes the behavior of gravity and the nature of space and time in the presence of matter and energy. Curvature of Spacetime: According to general relativity, matter and energy curve the fabric of spacetime, creating what we perceive as gravity. The presence of mass or energy causes spacetime to distort and curve around it. Objects, therefore, move along curved paths in this curved spacetime, which creates the gravitational force. Our theory suggests that the nature of this curved spacetime is *biological*.

General relativity, along with all mathematical theory's and ideas must be interpreted from the frame of reference of *biology*. The most sovereign frame of reference for measuring any thing in reality is from the frame of reference of *biological patterns*. All of biology's patterns (even in their atrophies) represent the various permutations, stages of development, and states of health in which any physical or conceptual thing in reality can be homomorphic to (mathematically equivalent to), thus defining the nature, or form, of mathematical equations.

Because the nature of our reality is biological—meaning: that biological patterns exist within and throughout every physical and conceptual thing in reality, biological patterns govern the nature of mathematics and physics and how the equations must be made. Biology is the framework for mathematics and physics.

**Biology's authority** over mathematics and physics is observable in the field of biomimicry and biomimetics, and through the various homomorphisms that exist between phenomenon in reality to that of biological patterns, such as the structure of cosmos to that of neuronal networks. Furthermore, Niels Bohr also made the argument for the “irreducibility of biology to physics,” highlighting biology's firm stance on reality's mathematics.

### Human Language: “Painting with Pixels” vs. “Drawing with Vectors” Analogy

**Human language** (written and spoken) is a convoluted form of written and spoken mathematics. The letters/words which we compile into sentences and paragraphs convey patterns about reality (generally, or superficially). The sentences and paragraphs of human language are analogous to convoluted/inefficient/ (or plainly put wrong) mathematical equations, because they can be misinterpreted, unlike how numbers, equations and functions of math convey patterns of reality with precision. Despite their differences, there are importances to how each one allow us to define, understand, and communicate reality around us.

#### *Painting with Pixels vs. Drawing with Vectors.*

To better describe these similarities and differences between human spoken-language and mathematical language, let us understand the analogy of “painting with pixels,” and “drawing with vectors.” Conveying ideas/patterns in human language is analogous to “painting by pixels (Microsoft Word's Paint),” Doing so is difficult to express complex ideas/patterns eloquently. Whereas, conveying ideas/patterns with mathematics is similar to “drawing with vectors (Adobe's Illustrator).”

When speaking in human language, the use of more words are necessary to provide context/detail/ (“more pixels”) to the image/pattern being conveyed. How those words are used to convey an image/pattern provide **resolution** (more pixels) to the pattern, in hopes to better describe it—both “resolution” of an image is necessary so that a “vector pattern” can be recognized so that *then* a mathematical equation can be formulated to exactly convey that image/pattern.<sup>68 69</sup> The use of analogy to express a pattern/idea is the the attempt of using the “vectors of another drawing with similar patterns” to express the patterns present in what is trying to be painted by pixels (spoken with words).

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<sup>68</sup> Words, (like Pixels): are the smallest building block of what can be conveyed by written and spoken language by a person—which can range from person to person, like computers screens range from computer to computer. Resolution: This is refers to the size of the pixel, or amount of words necessary to describe the pattern. The smaller the pixel (the more words), the higher the resolution. Most daily conversations are “lower resolution” conversations. Most conversations in science are of “higher resolution.” Laws in science— i.e., especially those that are accompanied with mathematical equations which express those laws, are “vectors conversations”

<sup>69</sup> Speaking in human language (as opposed to mathematical) is like a person producing a long and inefficient mathematical expression because he/she does not know its most reduced form. Human language is almost necessary in its inefficiencies to retrieve and compose a context of reality, as so to allow for us to recognize the patterns which can be converted/exacted with mathematics. Human language (written/spoken) precedes the more precise mathematical language.

Equations, expressed in mathematical language, convert the "pixelated" configurations or images represented by spoken or written human language into a vectorized form. Human language, whether written or spoken, enables us to conceptualize the patterns or images, which can subsequently be precisely defined using mathematical language. These "pixelated interpretations of reality" permit us to capture the context and collect data from which we can identify a specific and precise "vector pattern." Consequently, we can precisely explain this pattern mathematically, presenting it as a "vector image" rather than a blurry and pixelated representation. All of reality functions relative to biological patterns—i.e., this is the “vectorized pattern” that exists within all physical and conceptual things in reality.\*\*\*

The importance of biology’s patterns in this process of interpreting things in reality so to convert them into mathematical equations is important. It provides humanity a cheat sheet, expediting the

Teaching people language (and how to speak and write) teaches people how to orderly associate their thoughts (i.e., the patterns observed and interpreted in reality) to written symbols and spoken pronunciations. These symbols and pronunciations act as “pixels” for conveying reality to others in an organized manner—this is why it is important for all people to learn and use a common language properly, especially when the goal is for those people to communicate and achieve goals together and to ensure the lives of themselves, each other and the infrastructure of society that allows them to attain their potential.

Meanwhile, mathematical language is the “vectorized versions” of our written/spoken languages; mathematics conveys ideas/patterns as vector images existing within the “pixelated patterns.” Mathematics helps bring exactness and a clearer image to our understanding of reality, similar to how TOPAZ Labs is able to use mathematics to provide more resolution and higher image quality to pixelated photography/videos.

## Understanding General Patterns in Conversation/ Debate/ Arguments

\*\* **Conversation/debate** is spoken or written argument between *perceived* Order and *perceived* Disorder, relative to Actual Order (Biological Order); A Conversation/Debate/Arguments is the “resonance” of two competing patterns conveyed by each debating party. The competing patterns striving towards some common Order or Disorder (an Order homomorphic to patterns which establish and sustain Life, or a Disorder homomorphic to patterns which hinder and destroy Life). To put it into an analogy, conversations/arguments are a balancing act on a tight rope—i.e., it is the wobbliness of the walker; The tight rope walker has "finished the conversation/debate/argument" when he/she found balance on it, or has found the ground—both relieving the individual of his/her wobbliness (conversation).

Conversation/argument/debate is our interpretations trying to “find balance on the tight rope.” The purpose of conversation/debate/argument is to align our *conceptual order of reality* with the actual *physical order of reality* (Truth) which is absolutely biological in nature—biological in its patterns—BUT a reality who’s nature and phenomenon can be misinterpreted relative to any other “UX/UI-interpretation” (frame of reference)—that frame reference of which inherently contains patterns that are homomorphic to the various permutations, stages of development and states of health of biological patterns. The importance of understanding the physical order of reality relative to biological patterns, as opposed to any other frame of reference (any other pattern), is so that we can truly understand the mechanisms of reality and make actions that are in accordance to the necessary patterns which achieve the goals which we are intending to achieve. By interpreting reality in any other way reduces our ability to efficiently/effectively achieve our goals.\*\*

## Analogies Allow Us to Convey Mathematics Without Numbers or Symbols

Our ability to utilize analogies is our ability to utilize mathematics without numbers and symbols. Analogies allow us to convert words and human spoken language into mathematics. Analogies are the UX/UI between mathematics and patterns conveyed through written and spoken word. Analogies allow us to define and understand the things around us precisely without knowing or using mathematics or physics.

Our ability to use analogies takes advantage of underlying patterns which exist across different domains—e.g., such as the patterns existing between a battery and a water reservoir, or the patterns existing between a red blood cell and a cup. The most sovereign and absolute pattern is the *biological* pattern, because it underlies the nature of all physical and conceptual things in reality. These biological patterns allow for analogies to exist across non-biological domains. Biological patterns provide an underlying pattern which allow for analogies to exist across non-biological domains.

The biological pattern is the meta-pattern; the pattern of patterns. The only pattern that is real and associated with Truth in our reality. To recognize and understand the biological patterns present within all things, is to see and understand Absolute Truth, *Biological Truth*. Biological patterns connect all patterns; biological patterns are within all lower forms of patterns and allow for lower form analogies to exist. The reason we are even capable of conducting analogies between various domains is due to the fact that biological patterns underly all things in the universe, and in the event where we are able to structurally map an analogy between two non-biological domains is due to the fact that they share an underlying biological pattern.

Biological patterns are the *base domain* from which all knowledge can be transferred from and applied to any target domain. Biological patterns make all other patterns possible; similar to how a 3-dimensional cylinder makes possible the 2-dimensional circle and a 2-dimensional rectangle, biological patterns make possible all other patterns which can be imagined/interpreted. Biological patterns define *Potential*, in every way possible. \*\*

!! The patterns we imagine, perceive and convey to ourselves and each other are documented in the following formats: Physics (math), Science, Human Innovation, History, Religion, and Philosophy, and other Fictional /Nonfictional literature, and Art. All of which spans the entire existence of human history.

## Implications of our theory on the field of Science

Our theory, which proposes that biological patterns define the framework for a mathematical universe hypothesis, has several implications for the field of science as a whole:

1. Paradigm Shift: Your theory suggests a significant paradigm shift in how science approaches and understands the world. By asserting that all systems, processes, and objects possess biological patterns and are inherently biological in nature, it challenges the traditional separation of disciplines, prompting a more integrated and holistic perspective. This would require a rethinking and restructuring of scientific frameworks across various scientific disciplines.

2. Interdisciplinary Collaboration: Recognizing the fundamental nature of biological patterns would encourage collaboration and cross-pollination among diverse scientific fields. Scientists from biology, physics, mathematics, chemistry, and other disciplines would be prompted to work together more closely, seeking common patterns and principles within their respective domains. This interdisciplinary collaboration could lead to new insights and discoveries, fostering a deeper understanding of the intricate interconnections within the universe.

3. Expanding Scientific Methodology: If the only true and consistent pattern throughout the universe is identified as biology's pattern, it would necessitate a reevaluation of the scientific methodology employed to understand the world. This expanded methodology would likely involve incorporating biological models, analogies, and techniques into scientific investigations across various disciplines. It would also encourage the development of new tools and approaches to study and comprehend the underlying biological patterns of the universe.

4. Broadening the Scope of Investigation: Our theory implies that recognizing biological patterns could facilitate a more comprehensive exploration of various phenomena and domains. Scientists would be encouraged to examine biological aspects and implications within their fields, recognizing that these patterns have universal relevance. This broader perspective would lead to a richer understanding of the interconnectedness and interplay between biology and other scientific disciplines.

5. Philosophy of Science: Our theory challenges traditional notions of patterns and foundational principles, suggesting that biological patterns are the meta-patterns that govern the nature of the universe. This has profound implications for the philosophy of science, prompting a reevaluation of how scientific knowledge is acquired, the role of patterns, and the boundaries of various scientific disciplines. It would likely stimulate philosophical inquiries into the nature of patterns, the relationship between biology and other fields, and the concept of universal consistency.

Prior to our theory, **Science** (from Latin *scientia* 'knowledge') was a systematic enterprise that builds and organizes knowledge [patterns] in the form of testable explanations and predictions about the knowledge of the universe [patterns of the universe]. **Science**, (from Latin *scientia* 'knowledge') is any system of knowledge [patterns] that is concerned with the physical world and its phenomena and that entails unbiased observations and systematic experimentation. In general, a science involves a pursuit of knowledge [patterns] covering general truths or the operations of fundamental laws. Science can be divided into different branches based on the subject of study. The **physical sciences** study the inorganic world and comprise the fields of **astronomy**, **physics**, **chemistry**, and the **Earth sciences**. The biological sciences such as **biology** and **medicine** study the organic world of **life** and its processes. **Social sciences** like **anthropology** and **economics** study the social and cultural aspects of **human behaviour**.

In light of our theory, If science is system of knowledge, science *is* system of patterns. The process of finding patterns is integral to science. \*\* While science (in general) is the study and recognition of patterns in general, the **truest science** is the study and recognition of how the phenomenon in the universe corresponds to biological patterns.

## The Scientific Method

The Scientific Method is *the* method for which to recognize patterns—it is the process of finding the existence (or nonexistence) of a pattern. The **scientific method** is an empirical method of recognizing patterns [acquiring knowledge] that has characterized the development of science since at least the 17th century (with notable practitioners in previous centuries). The scientific method involves careful observation, applying rigorous skepticism about what is observed, given that cognitive assumptions can distort how one interprets the observation. And it involves formulating hypotheses, via induction, based on such observations; experimental and measurement-based testing of deductions drawn from the hypotheses; and refinement (or elimination) of the hypotheses based on the experimental findings.

The Scientific Method will be utilized to find and connect these biological patterns within and across fields of study.

## Implications for the field of Physics

Prior to our theory, **Physics** is the **natural science** that studies [and conveys the patterns of] **matter**, its **fundamental constituents**, its **motion** and behavior through **space and time**, and the related entities of **energy** and **force**. Physics is one of the most fundamental **scientific** disciplines, with its main goal being to understand how the [patterns of the] **universe** behave. **Physics** is the collection of patterns pertaining to various natural phenomenon of reality expressed exactly, through our most precise language: mathematics.\*\*

In light of our theory, biological patterns define the framework for all of physics. If the nature of the universe is biological, then all matter, its fundamental constituents, its motion, and behavior through space and time, and the related energy and force must be biological in nature. When we say biological patterns, we are referring to: (1) all biological patterns associated with the systems, processes, and objects composing the physiology of living things at a macro, microscopic, and quantum scale; (2) all possible biological permutations of these patterns, otherwise known as species; (3) all stages of development/evolution of biological patterns, and; (4) all states of health of biological patterns.

The implications of our theory, which posits that biological patterns define the framework for a mathematical universe hypothesis, on the field of physics are as follows:

1. Holistic Approach: Our theory suggests a holistic approach to understanding the nature of systems, processes, and objects in reality. By recognizing and emphasizing the presence of biological patterns in all aspects of the universe, physics can adopt a more comprehensive perspective that incorporates biological principles alongside traditional physical theories. This broadens the conceptual framework in physics and encourages interdisciplinary approaches.

2. Unifying Principles: By proposing that all systems, processes, and objects possess inherent biological patterns, our theory implies that there are underlying unified principles and connections that link various phenomena in the universe. This suggests that the conventional boundaries between physics and biology may blur, allowing for a deeper exploration of how biological patterns and physical laws intertwine.

3. New Research Directions: Our theory encourages explorations into the relationship between biological patterns and physical phenomena. It opens up avenues for research to investigate how the evolution of the universe's biological processes gives rise to life and the subsequent emergence of physical laws. This could lead to novel insights and discoveries at the intersection of physics and biology.

4. Enhancing Models and Analogies: The proposition that the physiology of living organisms serves as models that reveal hidden biological patterns throughout the universe implies that physics can benefit from adopting biological analogies and models. This perspective can inspire new ways to understand and explain physical phenomena, potentially leading to improved models and a deeper understanding of the universe.

5. Interdisciplinary Collaboration: By emphasizing the intertwining of biology and physics, our theory encourages interdisciplinary collaboration between physicists and biologists. This collaboration can foster the exchange of ideas, methodologies, and concepts, ultimately enriching both fields and pushing the boundaries of scientific exploration.

Our theory presents an alternative perspective that combines biological patterns with the traditional framework of physics, potentially expanding our understanding of the universe and stimulating innovative research directions within the field of physics.

Biology's Authority Over Physics: [www.AskNature.org/innovations/](http://www.AskNature.org/innovations/)

## Implications of our theory on Engineering Human Innovation (Applications of Physics)

Our theory, which proposes that biological patterns define the framework for a mathematical universe hypothesis, has several implications for the engineering of human innovation:

*1. Biomimicry and Bio-inspired Design:* Recognizing that biological patterns are fundamental and the basis of all systems and processes would encourage engineers to seek inspiration from nature in their design and innovation processes. This approach, known as biomimicry or bio-inspired design, involves studying biological patterns, structures, and processes in living organisms to create innovative solutions that imitate and harness nature's efficiency and sustainability. Engineers could apply this principle to various fields, such as materials science, robotics, transportation, and energy systems, leading to more efficient and sustainable technological advancements.

*2. Systems Thinking:* Embracing the concept that all systems, processes, and objects possess inherent biological patterns would encourage engineers to adopt a systems thinking approach in their work. Systems thinking allows for a holistic understanding of how different elements interact within a larger ecosystem or framework. By recognizing and integrating biological patterns into engineering processes, engineers can design solutions that are more resilient, adaptable, and in harmony with natural systems.

*3. Sustainable Engineering:* Our theory's emphasis on the fundamental nature of biological patterns would likely drive engineers to prioritize sustainability in their designs. The inherent wisdom of biological processes, as revealed by studying living organisms, could inspire engineers to develop technologies and practices that mimic nature's efficiency, resourcefulness, and balance. This could lead to the development of sustainable materials, energy systems, waste management solutions, and smart infrastructure that align with the principles observed in biological patterns.

*4. Human-Centered Design:* If the evolution of the universe's biological processes leads to the existence of life and living organisms, engineers would recognize the importance of designing technologies that align with the needs and well-being of humans. Human-centered design principles would become even more crucial to ensure that technological advancements enhance the quality of human life while respecting and supporting the broader biological patterns within the universe.

*5. Interdisciplinary Collaboration:* Acknowledging the universal presence of biological patterns would foster closer collaboration between engineers and biologists. Engineers could work closely with experts in biology to gain a deeper understanding of biological patterns and how to apply them to engineering challenges. This interdisciplinary collaboration could lead to new insights, innovative solutions, and groundbreaking technologies that harness the power of biological patterns.

Overall, our theory would encourage engineers to incorporate principles from biology and nature into their design processes, fostering innovation that is sustainable, holistic, human-centered, and inspired by the inherent patterns observed throughout the universe.

The Future of Human Innovation:  
**[www.AskNature.org](http://www.AskNature.org)**

## Understanding General Patterns In Human Innovation

\*\*\* **Human innovation** are the things which humans create from science; They are our creations that are accordant to some pattern that was recognized, typically using the scientific method. Human Innovation is the practical implementation of patterns (typically from science) that result in the introduction of new [goods](#) or [services](#) or improvement in offering goods or services. These goods and services are an extension of (or scaling of) our natural biological processes—patterns of biology are innovated for scaling the task at hand; Human innovation strive to do more efficiently, and at scale (in quantity and less time), the tasks that would take more time if we carried out that task ourselves (without the technology).

Human innovation turns the microcosm into macrocosm—e.g., such as how a chair and table provide as a skeletal system to maintain order and provide structure for us to sit and to organize things; how the fork is an extension of our hands/fingers; how cups, cars, and money transporting nutrients, energy, and wealth respectively, mimic the biological patterns of red blood cells transporting fundamental resources; how the eyes's seeing words in a book due to light particles from a candle mimics the biological patterns of a dendrites recognizing messages from signaling molecules from an axon. Or, how agricultural production, and distribution in human society scales from the production and allocation of resources within our bodies.

The field of Biomimicry is a great example of humanity's recent discovery of how human innovation is defined by biology. Biomimicry will be the standard methodology for science and technology moving forward; We are only at the tip of the iceberg (year 2024). The revelation that reality is biological in nature will make biomimicry absolutely fundamental for innovating human endeavors. \*\*

## Implications of our theory on Human History (Ancient Text, Religion, and Philosophical Ideas)

Our theory, which suggests that biological patterns define the framework for a mathematical universe hypothesis, would have several implications for human history, including ancient texts, religion, and philosophical ideas:

*1. Interpretation of Ancient Texts:* Our theory implies that biological patterns are fundamental and the underlying nature of all systems and objects in reality. This perspective could lead to a reinterpretation of ancient texts, religious scriptures, and philosophical writings, taking into account the presence and significance of biological patterns. Scholars and researchers might search for hidden biological metaphorical or symbolic references in these texts that could shed new light on their meanings and implications.

*2. Integration of Scientific and Spiritual Perspectives:* Recognizing the fundamental importance of biological patterns could bridge the gap between scientific understanding and spiritual or philosophical beliefs. Our theory suggests that the biological nature of reality permeates all aspects of existence, which could encourage individuals and communities to explore the connections between scientific principles and philosophical or spiritual concepts. This integration could foster a more holistic understanding of the nature of the universe and human existence.

*3. Evolution of Philosophical Ideas:* Our theory postulates that the existence of life and living organisms is a result of the evolution of the universe's biological processes. This could inspire a reexamination of philosophical ideas related to the nature of life, consciousness, and the purpose or meaning of existence. Philosophical perspectives might undergo a shift to incorporate the inherent biological patterns of the universe, offering new frameworks for understanding ontology, metaphysics, and the philosophy of mind.

*4. Modernizing Religious Interpretations:* Our theory's recognition of the universal presence of biological patterns might encourage religious institutions and theologians to reconsider their interpretations and beliefs within a scientific context. Religious teachings and concepts could be reevaluated and possibly reinterpreted in light of these biological patterns, leading to a more nuanced and updated understanding of religious doctrines.

*5. Ethical and Moral Implications:* Understanding that biological patterns are fundamental and inherent in all aspects of reality might influence ethical and moral frameworks. Appreciating the interconnectedness of living organisms and the presence of universal biological patterns could foster a sense of responsibility towards the environment, biodiversity, and the well-being of all living beings. This could shape modern ethical and moral perspectives, particularly in areas relating to environmental sustainability, conservation, and animal rights.

In summary our theory would impact human history by influencing the interpretation of ancient texts, fostering integration between scientific and spiritual perspectives, inspiring the evolution of philosophical ideas, modernizing religious interpretations, and shaping ethical and moral frameworks.

## Understanding the Patterns in History

**History** is two things: (1) the documentation of past patterns, and; (2) the documentation of past data, that when accompanied with new data, new thinking, and/or new methods for analyzing that data, reveal patterns [knowledge] about past events. "History" is an umbrella term, comprising past events as well as the memory, discovery, collection, organization, presentation, and interpretation of these events as *patterns*, and as the data that can later undergo the process of recognizing patterns pertaining to that history, especially when accompanied with new data or new methods to interpret past data.

Patterns recognized in historical data create a science. **Historians** seek knowledge [patterns] of the past using **historical sources** such as written documents, oral accounts, art and material artifacts, and ecological markers. We can look at history as “the science of past events.” The use of meta-analysis to discover patterns is important to unveiling a science pertaining to a past event(s).

The discovery of patterns within past data builds upon various fields of science—e.g., cosmology, physics, geology, epistemology, psychology, sociology, religion, and all realms of knowledge [patterns]. Therefore, the storage of history’s past *data* acts as a “hard drive” for storing data that can later fit into a specific science [pattern]. For example, Galileo’s meta-analysis of Copernicus’ past data contributing to a hypothesis of patterns pertaining to his Heliocentrism, allowed Galileo to recognize actual patterns which support Copernicus’s Heliocentrism—establishing a science pertaining to Earth and the sun. Galileo’s recognition of Heliocentrism patterns, provided as data which lead to patterns pertaining to Kepler’s laws of planetary motion, which provided as data for patterns pertaining to Newton’s Laws of Motion, which was later used, refined and expanded upon with patterns pertaining to Einstein’s theory of relativity.

Furthermore, history has allowed this research to conduct a meta-analysis of historical, religious and scientific literature to discover and reveal a pattern of topics surrounding the human body as it pertains to being a source for understanding the nature of the universe, reality and God.\*\*

History is designed to inform future decision making. If you touch something and it is hot, our ability to remember the past will inform our future decisions in touch something while hot. Intelligent beings will recognize these patterns in history and apply them in their daily lives, while others will have the arduous path of “re-discovering” what has already been established in history.

## Implications of our theory on Religion and Spirituality

Our theory, proposing that biological patterns define the framework for a mathematical universe hypothesis, has significant implications for religious, spiritual, and philosophical ideas, including the concept of perennial wisdom. Here are some potential implications:

*1. Reevaluation of Religious Beliefs*: Our theory suggests that the fundamental nature of reality is composed of biological patterns. This understanding could prompt a reevaluation of religious beliefs and practices. Religious traditions might explore how these biological patterns align with and enrich their teachings, potentially deepening their understanding of the interconnectedness of all life and the natural world.

*2. Interconnectedness of Spiritual and Scientific Perspectives*: Recognizing the significance of biological patterns could bridge the gap between spiritual and scientific worldviews. Our theory implies that the universal presence of these patterns underlies both biological and physical phenomena. This could foster a more integrated approach, where spiritual and scientific perspectives collaborate and inform each other. This may encourage scientists to explore the deeper spiritual implications of their findings and inspire spiritual practitioners to embrace scientific knowledge.

3. Expansion of Perennial Wisdom: Perennial wisdom refers to the common themes and underlying truths found in different religious and philosophical traditions. Our theory could contribute to the expansion of perennial wisdom by highlighting the shared understanding of biological patterns as a universal foundation. This insight might facilitate dialogue among different traditions, promoting mutual understanding, and unearthing deeper insights into the nature of reality.

4. Enhanced Ethical Frameworks: Understanding the inherent biological patterns throughout the universe could influence ethical frameworks associated with religious, spiritual, and philosophical systems. Recognizing the interconnectedness of all life could foster a sense of responsibility towards the environment, promote compassion for all beings, and drive sustainable practices. It could also encourage a reevaluation of concepts like dominion or stewardship and inspire a more ecologically conscious approach to spirituality and philosophy.

5. Evolution of Concepts of Divinity: Our theory's recognition of the underlying biological nature of reality might prompt a reexamination of concepts of divinity within religious and spiritual traditions. Religions may explore how the divine is intimately intertwined with the biological patterns that govern the universe. This perspective could lead to new metaphors and understandings of the divine, emphasizing immanence, interconnectedness, and the sacredness of all life.

Overall, our theory would impact religious, spiritual, and philosophical ideas by encouraging their reevaluation and integration with the understanding of biological patterns. It could deepen the concept of perennial wisdom, foster a connection between science and spirituality, inspire ethical frameworks, and influence the understanding of divinity within various traditions.

## Religion: The History of a Lost Science

**Religion** was the science of a biological universe expressed to people who had absolutely no knowledge or understanding of biology, physics, and astronomy. The personification of the universe in a “God entity,” who is anthropomorphic in nature (taking human form), was actually necessary to express advanced scientific knowledge of how the biological patterns of the universe and everything in it could be understood through the biological patterns within the human physiology—i.e., “man made in the image of God (or universe/reality),” and vice versa; the microcosm explaining the macrocosm; a “microcosm made in the image of the macrocosm.”

Religion is the scientific expression of these relationships between the patterns of the universe (“God”) and the patterns within the human physiology (and all Life). Religion was advanced scientific knowledge of the universe, without the context of biology, physics, astronomy, taught to a people who had no knowledge or understanding of biology, physics, and astronomy.

Our meta analysis of historical, religious and scientific text supports a “perennial wisdom” that supports the notion of biological patterns (such as those epitomized within Man and living things) being a means to understand the nature of the universe and its personification—God. [Examples]. Over time, the true scientific knowledge pertaining to what was being taught with religion was lost and taken out of its original scientific context, until we could collect enough historical and scientific data to *reveal* its pattern once again—to bring to light, once again, the knowledge pertaining to the universe’s biological nature.

Religion uses analogy to take advantage of inherent phenomenon of patterns existing across different domains to teach scientific facts pertaining to God [The Universe personified] to people capable of understanding, while also providing a story that captivates and compels people to organize themselves relative to those teaching of science, irregardless of their own inabilities to understand the facts of that science. Similar to how parents tell their children to do chores around the home while the child might not understand the concept of responsibility, or duty, of the benefits of having a clean household.

The curiosities of the body, in religion, eventually provoked humanity to explore the innards of the human physiology—to discover and document the biological patterns of Man, and of all living things—to educate themselves on biological patterns, so that eventually an individual can later recognize and *reveal* to humanity the biological accordances of everything in the universe—so to enable and empower mankind too recognize this pattern too. And in doing so, understand themselves, each other, their environment, to solve problems, unify and build a humanity in harmony with these biological patterns which establish and sustain Life's patterns that enable the greatest possible potential.

Religion *is* science. Science *is* religion, especially to scientists and the intelligent. History has documented the stories [patterns] that when integrated with the knowledge [patterns] of today, eventually allowed humanity to once again realize that which was once hidden—a biological universe whose patterns can be recognized within the physiology of all living things.

Religion is the “zygote of science.” It is the consolidation of all science into a nugget of knowledge, a nugget of patterns, a nugget of Life. Religion is DNA. Religion preached to our ancient ancestors is analogous to “DNA preached to the group of cells starting cellular civilization.” This knowledge provides the cells how their reality works and provides guidelines for them to be successful at life. Their understanding of its pattern allows them the science to birth a successful civilization. While their misunderstanding will miscarry their attempt at civilization—e.g., “Tower of Babel.” These patterns of cellular society are scientifically analogous (homomorphic) to patterns of human society—i.e., the cellular society is the microcosm expressing the macrocosm of human civilization. Human civilization must understand the importance of biological patterns in forming and maintaining human civilization, or else experience another “Tower of Babel.”

Religious stories create paradoxical relationships between of fiction and non-fiction stories—paradoxes that are scientific poetry. It does not matter if religious stories are fiction or nonfiction (some may be very well imaginary work overlapping scientific facts), what matters is the “**scientific poetry**” it produces.

## Understanding General Patterns in Non-fiction and Fiction Writing

Patterns [and the data which contribute to them] can be documented by humans in two distinct forms of writing, through:

- (1) *non-fiction* writing, and;
- (2) *fiction*, writing.

### *Nonfiction Writing*

Nonfiction is prose writing that is based on facts, real events, and real people, such as biography or history, and writing that is based on actual/real science. In light of our research, **nonfiction** is the writing of real patterns, as well as real data which will contribute to the future recognition of real patterns in reality—both of which may be accurate or inaccurate of the actual nature of the pattern that is interpreted. Nonfiction is the documentation of actual patterns in reality (regardless of how those patterns were interpreted/misinterpreted)—they are patterns which are documented from the interpretation from some actual pattern in reality.\* *Great non-fiction* is actual science—real science, interpreted exactly and conveyed eloquently, capable of standing the test of time. Great non-fiction is the recognition, documentation, and/or conveying of actual/real patterns in reality, in an exact manner. Great nonfiction is exact patterns conveyed eloquently. Great nonfiction is exact interpretation of real patterns expressed eloquently. *Good/average nonfiction* is the general documentation of patterns and data contributing toward the recognition of future patterns; it is the collection and documentation of real information/data in general, so that actual patterns can be recognized and real science be established.

*Bad nonfiction* is real patterns expressed in a convoluted manner or imagined (or misinterpreted) patterns documented and conveyed as real/actual patterns. Bad nonfiction, never allows the actual pattern to become revealed, poorly conveyed. Bad fiction is writing that contains no patterns and no inspiration toward patterns.\*\*

### *Fiction Writing*

Fiction is literature in the form of prose, especially short stories and novels that describe imaginary events and people. **Fiction** is the documentation and conveying of imagined patterns in reality, and of imagined information/data pertaining to patterns in reality. *Great fiction* is the documentation and conveying of imagined patterns in reality which overlaps/coincides (or that is in harmony with) actual/real patterns in reality—i.e., nonfiction. Great fiction is the prophecy, or exact extrapolation of great nonfiction. Great fiction is the hypotheses of science. Good fiction is the documentation/conveying of imagined patterns that are in accordance to the real/actual patterns. *Good fiction* inspires nonfiction. Good fiction inspires science. Good fiction is the expression of imagined patterns in such a way that inspires the search of actual/real patterns in reality.

*Bad fiction* are imagined patterns which contain difficult/complex, or no pattern to any actual/real pattern. Bad fiction are imagined patterns containing no pattern at all, or contain inefficiencies at conveying real patterns.

### Understanding General Patterns in Poetry

Within the context of our theory of a Biological Framework for a Mathematical Universe, poetry can be understood as the artistic expression of real patterns through the use of imaginative patterns. Poetry conveys these patterns in a manner that evokes an imaginative awareness of the underlying patterns in reality or elicits specific emotional responses connected to those patterns. It utilizes language, rhythm, sound, and imagery to evoke empathy and understanding in the reader, often by relating imagined patterns to real patterns.

Poetry can serve as a powerful tool for efficiently transferring knowledge, communicating complex ideas, or inspiring others to recognize and connect with specific patterns. It is the utilization of imaginative patterns to express the underlying biological patterns that define the nature of the universe. While poetry can express both simple and complex patterns, the most effective poetry is able to convey real patterns in a concise and relatable manner, utilizing analogies, metaphors, or other devices. Ultimately, great poetry aligns with science by effectively communicating real patterns and inspiring action based on profound understanding of the nature of the universe and reality.

\*\*\* **Poetry** is imagined, or real, patterns conveyed to evoke the imagination of real patterns. Poetry is the conveying of patterns in a manner that evokes a concentrated imaginative awareness of real/actual patterns in reality, or a specific emotional response pertaining to some real/actual pattern in reality, especially through language chosen and arranged for its meanings, sound, and rhythm, and relative to how a person would interpret that “poetry.” Poetry is the attempt to evoke a pattern in one’s own mind, or a mind of another—to establish empathy for real pattern(s), especially by using imagined patterns. Poetry is the eloquent expression of complex patterns, or the verbose expression of a simple pattern.

Good poetry is the efficient expression, communication, understanding of patterns through the use of any pattern capable of getting the job done—i.e., poetry is heuristics. At its best, poetry is Albert Einstein using imaginative patterns pertaining to a bed sheet and billiard balls to express and understand real patterns pertaining to gravitational forces—to help himself and others empathize the patterns pertaining to gravitational forces. Good poetry transfers knowledge efficiently, while bad poetry fails to communicate, fails to connect, or fails to express knowledge [patterns], or fails to inspire. Bad poetry fails to evoke

imagination in another person to see the actual underlying pattern that wants to be conveyed—which may not totally be the poets fault. A bad poet fails to find an imaginative pattern that relates to himself (or others) as so to convey the real/actual underlying pattern that is actually trying to be conveyed/understood. As a poet, it is his/her duty to imagine a pattern that conveys the actual underlying pattern trying to be conveyed. It is the poets duty to convey a real pattern using any means possible that can be most efficient—this is poetry.

At its bare minimum, poetry is what is communicated between two parties in an attempt to establish an understanding/empathy between one another. Poetry is what is communicated to evoke imaginative awareness towards some real and underlying pattern.\*\*—poetry is *what is communicated* to evoke imaginative awareness towards some real/actual underlying pattern that is trying to be communicated; “what is communicated” in an imaginative way is efficient towards conveying a real/actual pattern in a manner which can be easily understood.

Poetry is about conveying real patterns in an imaginative way, using imaginative patterns. Hueristics is poetry. Poetry may evoke one or more ideas/patterns specifically, or evoke the conception of multitudes of ideas/patterns, generally—for example, poetry may express specifically such as:  $1 + 2 = 3$ , or poetry may express multitudes of ideas/patterns such as:  $a + b = c$ .

Poetry can express simple patterns abstractly, complexly, or secretly. Or, poetry can express abstract or complex patterns clearly/concisely/simplely, such as through analogy and metaphor. Great poetry is relatable; Great poetry transfers knowledge from one domain to another using imagined patterns. Great poetry stands the test of time. Great poetry efficiently orders the mind specifically, or generally, to patterns intended by the poet. Good poetry inspires others to recognize some pattern. Great poetry inspires others to recognize specific patterns. \*\*

\*\*\* *Great poetry* is a long and happy marriage between great nonfiction and great fiction; Poetry is the utilization of fiction to express nonfiction precisely and efficiently—it is “Man made in the image of God” to express the biological nature of the universe—it is the utilization of imaginary patterns to express real patterns. **Poetry is the utilization of patterns in a base domain to convey patterns in a target domain.** Great poetry overlaps science—it overlaps actual/real patterns. The greatest poetry possible is the hypotheses of a science—it is that poetry which not only orders the mind, but our reality. It inspires action. Great poetry is exact mathematics of real patterns expressed imaginatively—e.g., it is  $E=Mc^2$ . The greatest poetry communicates most efficiently. The best poetry is any real pattern expressed as simply and exactly (efficiently) as possible, particularly through patterns in another domain. The greatest poetry is the expression of the nature of the universe/reality/God through biological patterns which compose life.

## Understanding General Patterns in Art

Based on the context within our theory "the biological framework for a mathematical universe," art can be understood as the exploration and expression of patterns. Art serves as a creative process that allows for the discovery and playfulness with patterns, which can ultimately lead to scientific and engineering breakthroughs. The ultimate form of art is seen in life itself, as living organisms embody the highest level of harmony with biological patterns.

Art, when in alignment with healthy biological patterns, can be considered Feng sui or aesthetic. It evokes a feeling of harmony with these patterns and is in accordance with the order of nature. Art, through various mediums and forms, including poetry, fiction, nonfiction, and all artistic expression, is capable of conveying patterns and engaging the imagination. Jazz and improvisational art are seen as the physical creative process of poetry, playing with data and searching for patterns. In this sense, art is also the unstructured creative process of science.

Human innovation, encompassing science and engineering, is viewed as the limit of human art. It involves mimicking and incorporating biological patterns into technological advancements to achieve design efficiencies. Biomimicry, a recent field that emphasizes designing innovations based on functions

observed in biology, recognizes the importance of aligning human creations with efficient biological patterns.

In summary, art, within the framework of your theory, is the exploration and expression of patterns in various mediums. It is the creative process of science, poetry, fiction, and nonfiction. Art in its highest form aligns with healthy biological patterns and serves as a source of inspiration for human innovation and the advancement of society.

Art is the “sandbox,” or “drawing board,” of discovering with and playing with patterns—its end result of the greatest art is science. Great art is science, engineering, and life (living things). The greatest art possible is Life—i.e., living things, and that which is in harmony with biological patterns composing Life. The greatest artist is God—i.e., *the Universe & Reality personified*.

Art, or things, which are **Feng sui or aesthetic** are in harmony with healthy biological patterns. What makes something Feng sui or aesthetic is its inherent accordance to the order of biological patterns which establish and sustain life. Things which are Feng sui or aesthetic share analogy/homomorphism to that of healthy biological patterns. That good feeling/emotions from which Feng sui or aesthetic things provoke is the feeling of harmony to healthy biological patterns. Chi is the movement/force behind the manifestation of biological patterns and of things which are Feng sui—chi is the movement/force behind all forces that are in harmony with biological patterns. The most feng sui and aesthetic things in reality are those patterns composing living organisms and the environments which nurture their life and health.

Jazz/Art is the physical creative process of poetry—it is playing with data/information to find patterns. Finding a pattern is the achievement of science. Therefore, the creative process of science is art. Art is the unstructured creative process of science.

Art is poetry, nonfiction, and fiction expressed in any/all mediums. Rather than being limited to the confines of written and spoken linguistics, art utilizes the expression of patterns within all mediums (within all domains)—therefore, art contains all the same properties as poetry, fiction, and nonfiction in regards to what is “good” and “bad” art.

## Understanding The Patterns of Art & Science In Human Innovation

**Human Innovation (science/engineering)** is the limit of human art. Biomimicry is human innovation/technologies (science) in close harmony/accordance with *healthy* (efficient) biological patterns. All human innovation is inherently analogous to biological patterns at various degrees of efficiency. The recent field of biomimicry highlights the importance of acknowledging the fact that human innovation must be accordant to functions observed in biology in order to bring about design-efficiencies that are energy efficient at carrying out the function. The greatest inventor, designer, artist, poet, and story-teller is “God”—i.e., *the personification of The Universe*. The greatest and most fundamental story, poetry, art, and innovation that could ever be imagined, then created, is Life—i.e., living things and the journey toward creation—a story told through the history of the *actions* of the universe and the things around us.

## Understanding General Patterns of our Actions (General Behavior & Psychology)

The **actions** of objects in our reality/universe reveal patterns which our mind recognizes. The positions of objects at given points of space, relative to time, define “actions” of objects.

Actions of objects reveal data (and if viewed well enough, eventually patterns) pertaining to those objects—specifically the systems of which those objects are a part of and the cause and effects which they are apart of, relative to space-time.

Actions, and inactions, allow a mind to recognize patterns associated with that data, relative to position and time.

All actions, of all things, share correspondences to the actions of biological patterns. All actions and inactions of objects in reality correspond to some *permutation* of some biological pattern, at some *stage* of development, at some *state* of health.

Because of this biological order/organization to the universe (an organization/order that cannot be broken, but only evolve or devolve into other permutations, stages of development and states of health), we can use the actions of objects in the biological domain as models from which to establish analogies to things in reality which share correspondence.

These correspondences to biology define, measure and allow us to understand the behavior of things in reality, as well as their relationships and connection to larger systems around them. Our ability to recognize these biological correspondences allows us to realize how objects in reality should behave.

Objects should naturally behave relative to actions pertaining to healthy biological patterns. If the object/phenomenon corresponds with a biological pattern that is unhealthy, then we must look at the ways in which biology remedies the behavior.

The Biological patterns which solve/remedy any particular biological pattern in an unhealthy state is a model of a solution for any thing in reality which shares an correspondence to that unhealthy biological pattern. For example, the problems of Nationalism in human society (my country first, similar to my organ first when resources are not properly distributed amongst all cells within the body) can be resolved by a more equitable and consistent distribution of resources throughout human society. Establishing an equitable and consistent production and allocation of fundamental resources throughout cellular society in order to remedy “nationalism” within cellular society, allows us to use the cellular model to solve the analogous situation in human society. The actions to remedy situations in the microcosm becomes a model for action to remedy situations in the macrocosm. Another example is the entire field of biomimicry: [www.AskNature.org](http://www.AskNature.org)

## Implications of our theory on Psychology & Sociology, Ethics and Morality

\*All objects in reality mimic biology's pattern to varying degrees of efficiency and inefficiency. This allows us to identify the permutation, stage of development, and state of health of any object's actions in the universe. The patterns of an objects actions display an inherent biological behavior, which can be comprehended by comparing them to biological correspondences. The object's actions can be understood to their correspondence to their biological equivalent. Biological actions are dependent upon the following categories: permutation, stage of development, and state of health; These categories determine the nature of the actions. The healthy states of a biological pattern serve as a reference point for comprehending the nature of the actions of any object. We understand the nature of the objects actions, we determine what biological permutation, stage of development, and state of health to which that object corresponds to and compare it to the ideal states—by doing so, we measure behavior.

Actions of objects thereby reveal the “*psychology*” of an object, the *sociology* of a collection of objects, and the *ethics* and *morality* pertaining to their actions, which are inherently relative to the actions which occur in biology. A living organism's actions of things over time and space allows us to recognize biological patterns. These biological patterns define their psychology/sociology and allow us to understand what biological patterns need to be established within their environment to produce to the behavior we want for ourselves and for society—which is the behavior that is required for all Life to exist.

All things in reality produce actions. Inactions are actions; the inactions of any object still moves through time. The actions of all things correspond to patterns in the biological domain. Freethinking minds may interpret their reality (or any object or situation in reality) from many different frames of reference and respond accordingly to that imagined framework for thinking, *however* biology's pattern still exists within whatever frame of thinking they choose. Biology's pattern permeates across *all* domains, natural or man-made. Biology's pattern exists, hidden, within any frame of reference a person chooses to interpret the world around them. It is important to abide by biology. Ironically, humanity overlaps healthy biological patterns to such a degree where it has allowed itself to thrive. However, humanity is straying away from sustainable biological patterns and it is important now that we recognize our own discordant behaviors as individuals and as a society, so that we can realign ourselves to a survive and thrive as a society.

### *Slavery & Freedom Paradox x Survival of the Fittest & Cooperation Paradox x*

We has the freedom to choose how we live, just as Babe Ruth had the freedom to choose how he hit a baseball. However, just as Babe Ruth was required by laws of baseball and physics to understand how to hit a home run and to swing the bat to achieve a home run, living things are required by the laws of life to understand and behave (carryout actions) in our reality relative to establishing and sustaining the life of ourselves and our society and everything around us. This requires cooperation. We have seen the problems of the cellular wilderness, the epitome of survival of the fittest. And we have seen the potential of cooperation, (especially for a society and the organisms within it) epitomized by the organization of cellular society composing the human body.

\*\* Hence, it is crucial for every living being to comprehend their reality through a biological perspective to mitigate the difficulties that may arise from interpreting reality differently. The open-mindedness of individuals to perceive biological patterns in the behaviors of entities depends not only on our understanding of biology but also on our capacity to recognize patterns through our senses. Additionally, it relies on our ability to rely on our emotions and feelings when we do not contain the logic and organization sufficient enough for understanding.

## Understanding General Patterns in our Five Senses

Our ability to carry-out actions depends on our ability to measure data pertaining to the movement of objects in reality so to recognize patterns—which is dependent upon our five senses and our ability to store information and reference data so to recognize patterns.

All of our senses (sight, sound, touch, taste, smell) receive information pertaining to the movement/order of objects within a given space, relative to a timeframe. Our mind then processes all of this information, so to find patterns which allow us measure those objects (relative to time—i.e., vibrational frequencies). Based on those measurements, courses of action are determined.

Successful organisms do this particularly well for the benefit of themselves. Extremely successful organisms do this well in a manner which not only benefits themselves, but also benefits their society, their environment, and other life—without any hinderances whatsoever. Those unsuccessful, perish.

The information/data collected and processed through the five senses is necessary for living things to carry-out actions relative to the movement of objects in their environment/reality (movement of objects through space and time). [Information collected from our senses are necessary for establishing behaviors.](#)

Many of these patterns we recognize form *heuristic behaviors* which help us carry out actions quickly. While some heuristics may overlap healthy biological patterns, Some heuristics/routines may be discordant. These dilapidated socioeconomic patterns may impose unhealthy patterns (routines) upon weaker minded individuals, of which may spawn a plethora of negative effects on society as a whole—e.g., individual investor paradigm, inequalities, crime, terrorism, etc., which all share accordances to patterns of biological dilapidations. \*\*

The ability for organisms to live and thrive depends upon their ability to receive and interpret data pertaining to the movement of things in their reality, so that they can recognize patterns and order themselves and their environment to be in (and remain in) accordance to the patterns which allow them, their society, and environment, to survive and thrive—these patterns are healthy biological patterns.

Whether a society of cells that form complex organisms, collection of living organisms forming our ecosystems, or human society, all successful living things depend upon recognizing and responding to patterns produced by actions of objects in reality.\*\* The organisms that are most successful at life are those the mimic the biological patterns which compose complex living organisms.

Our ability to recognize the inherent biological patterns pertaining to the movement/actions/order of things in our reality—i.e., *biological emergence*, is dependent upon our five senses (i.e., sight, sound, touch, taste, smell) and our knowledge of biological patterns (which is dependent on our ability to store the information/data we receive from senses upon our exploration of biology's vast realm), and our ability to have emotions/feelings.

## Understanding General Patterns of Emotions/Feelings

Feelings compensate for a lack of logic. Feelings inspire logic. Feeling provoke logic. Feelings for a particular situation are the result of not understanding the logic [patterns] of a particular situation. These feeling give rise to emotion which motivate actions. These actions reveal behaviors relative to particular situations. These particular situations contain biological correspondences. We can understand the nature of emotions and the behaviors/actions associated to them by understanding the situation/patterns which provoked the emotions/behaviors/actions. We can understand the situation/patterns by understanding its correspondence to biology's patterns.

## Understanding the Patterns of Consciousness

### *General Consciousness:*

Being generally conscious is being able to recognize patterns. The more patterns a person or thing is able to recognize and understand, so to behave (carry-out actions) based on those recognized patterns, the more generally conscious that person or thing is. General consciousness usually indicates the success at being conscious for a particular thing. For example, Behaving according to the rules [patterns] of baseball reveals a consciousness towards baseball; Behaving according to laws and skills [patterns] within the trucking industry, reveals a consciousness towards trucking, and; Behaving according to the laws [patterns] of life and biology, reveals a consciousness to life.

The general consciousness of anything can be understood relative to the behavior of a particular person or thing. If the person or thing shows behaviors that correspond with to the environment which that person or thing is placed, then that person or thing is generally conscious.

Logic, reasoning, order, feelings and emotions are all tied into culminating the nature of something's consciousness. The universe is already conscious. It defines it. It creates it.

### *General Unconsciousness:*

Being generally unconscious is not being able to recognize a pattern so to behave accordingly for a particular scenario.

What helps someone or something become conscious is by introducing them to various scenarios to allow them to discover the patterns which must force their action and inspire thoughts. Introducing a person or thing to patterns and guiding their ability to recognize patterns—this is the point of the education system, to teach patterns to individuals, so that they have a jump-start into successfully functioning within a reality that has similar patterns established.

### *The Evolution of Consciousness:*

Our theory suggests that life and its consciousness evolved in complexity and in harmony with the complexity of its environment. As the environment became more complex, so too did the consciousness of life become more complex, in order to process the complexity of its environment.

Our theory suggests that as life emerged and evolved, cellular organisms realized the causal effects of the biological patterns that existed throughout their environment, and were forced to evolve with it, as the universe/Earth evolved. Cellular organisms evolved in complexity and in harmony with the evolution of the Earth/Universe's complexity. As their environment became more complex, their general consciousness evolved to be more complex—in order to recognize the various patterns and behave accordingly.

Ultimately, the environment for life had evolved to a maximum complexity, a complexity that allowed freedom of consciousness. It produced Man, and allowed for self-sustainability/automation of man in such a way, that now he/she is freed from the immediate accordance to biology's patterns. He or she is freed from being required to abide by the immediate laws of their biologically-patterned environment.

However, there are repercussions if one becomes overly fascinated with the "shadows" of the universe's biological patterns. The mind is now free to interpret these shadows produced by these biological patterns, not relative to life and death, but relative to whatever provokes it. It becomes more aware of its senses, then begins to depend on them. Trust them, rather than the patterns pertaining to life and death. It is free to be provoked by any pattern—and to create the "UX/UI" of reality and not abide by the "binary" of reality. He/she has now the ability to freely interpret the inherent biological patterns that exist all around them in any way they so choose. Free to imagine. Free to compose poetry, art, music, and leisurely activities. Humanity now eats from the "Tree of knowledge of good and evil," rather than the "Tree of Life," which would ensure its long-term survival. However, as humanity strayed down this path, we lost our way.

Becoming unconscious to this biological pattern inherent to the universe—inherent to reality. We've become obsessed with the “shadows and projections” of the biology's patterns.

### *Free-Thinking Consciousness*

**Free-thinking consciousness** is the ability to recognize any pattern, to create patterns, and mix match, or to decide to not recognize any pattern and to allow all the other patterns around an individual to carry one through a particular scenario. Free-thinking consciousness is the ability to be free from seeing patterns, especially biological. It is the ability to see the shadows which biology's patterns create. In religion, this is original Sin.

Free-thinking consciousness is the ability to imagine patterns within the shadows and projections casted by biology's patterns. Biological patterns exists in everything around us—various permutations, various stages of development, and various states of health. Similar to the allegory of the cave, by Plato. In the allegory, Plato describes people that have spent their lives chained in a cave facing a blank wall. They watch shadows projected onto the wall by objects passing in front of a fire behind them, and they give names to these shadows. The shadows are the prisoners' reality but not accurate representations of the real world. The shadows represent the fragment of reality that we can normally perceive through our senses, while the objects under the sun represent the true forms of objects that we can only perceive through reason.

Similarly our theory describes *free-thinking consciousness* as people living their lives chained in a cave facing a blank wall. They watch shadows projected onto the wall by biologically-patterned-objects passing in front of of a fire behind them, and they give names to these shadows and these shadows look nothing like biological patterns. The shadows are the prisoners' reality but not accurate representations of the real world/universe/reality. The shadows represent the fragment of reality that we can normally perceive through our senses, while the objects under the sun represent true [biological] forms of objects that we can only perceive through understanding of the biological patterns within the physiology of living things and recognizing those patterns around us.



The philosopher is like a prisoner who is freed from the cave and comes to understand that the shadows on the wall are actually not the direct source of the images seen. A philosopher aims to understand and perceive the higher levels of reality—this biological nature of reality. However, the other inmates of the cave do not even desire to leave their prison, for they know no better life.<sup>[1]</sup>

The paradox of Free-Thinking Consciousness is that while it provides a vacation from thoughts of biology to it allow for art, music, poetry, science, technologies, etc., it can allow one to stray down the path of their own demise. It can allow individuals and systems to take advantage of them, as now they do not have a fundamental framework to which to behave/govern themselves.

Free-thinking Consciousness, is easy, especially when surrounded by mechanisms and infrastructure which exude patterns which are safe for the individual, providing as heuristics that automate actions in a safe environment. However, free-thinking consciousness can be dangerous if surrounded by individuals or systems which displays patterns that could be detrimental to ones safety and life.

For life to survive and thrive and to achieve its potential, it must abide by the inherent laws of biology established by the biological universe. Living things must be a “slave” to the patterns which establish and sustain life, just as you and me must be slaves to our daily activities which allow us to keep the roof over our heads, or how a baseball player (if he wants to hit a home run) must swing the bat in a very particular way in order to do so.

AWK Consciousness becomes a culmination of all the patterns we’ve recognized throughout our lives, cued by our immediate situation/environment. Our environment determines what we think. When you wake up, your morning chores determine how you think. When you are at work, work determines how you think. When you are stuck in traffic, traffic determines how you think. Music in traffic allows one to disconnect from the patterns of the traffic. When you are at home with the family, family [patterns] determines how you think. Our environment governs what we think at any given particular time, our possible thoughts during that time can come any past experiences/knowledge/patterns that we have come in contact with. \*

### Paradox of Free Will & Free Thinking (Paradox of Consciousness & Free Will)

All free-thinking individuals must behave in a manner which establishes and sustains the life of themselves, or else jeopardize the life of themselves. Despite our abilities to think freely and to have the free-will to do whatever we want to do, we are required to have to carry-out the necessary tasks to establish and sustain the conditions which give us our potential, our society, and our environment and our Life, or else threaten the luxuries which life provides.

For example, if the society of cell composing our bodies were given the ability to “freely think” and “free will,” would they remain carrying-out the precise tasks which allow them to establish and sustain the infrastructure which allows them to secure the fundamental needs and potentials as individuals cells and as a society? Or would that society of cells revert back to the “cellular wilderness” of the amoeba and paramecia? If so, what would that mean for their society and their potential? Their ability to remain resilient and protect themselves from threats?

While cells do not have the luxury of free-will and free-thinking, we can imagine how such would effect cellular society’s organization. As humans, we have the ability of free-will and to freely think. As humans, we have been given room for error (a buffer for learning and reconnecting back to the pattern—this process will judge the nature of humanity’s character), however, we have reach a threshold where we must understand the actual biological patterns of reality and abide by them, especially if we want to remediate the problems our society has created from our past actions.

We have the freedom to choose how we think and live, just as Babe Ruth had the freedom to think and how to hit a baseball. However, just as Babe Ruth was required by the laws of baseball and physics to understand how to swing the bat to achieve a home run, living things are required by the laws of life and the physics of a biological universe, to understand and behave (carryout actions) in our reality relative to that which establishes and sustains the life of themselves.

Therefore it is best for all living things to understand their biological universe from a biological frame of reference, so to minimize the troubles that can occur from interpreting reality in any other way.s. Just as a baseball player has the ability to hit the ball any way he/she chooses, there is only a small window in which how that batter must hit the ball in order to hit a home run, regardless of that batter’s ability to think and act freely.\*\*

## Slavery & Liberty Paradox

Let us use the analogy of the cellular society within the human body to shed light on the paradox between the concepts of "slavery" and "freedom".

In the cellular society of the human physiology, each cell has a specific role and function to fulfill. These cells work together in a coordinated manner to ensure the proper functioning and survival of the whole organism. Each cell is assigned a particular task and carries out its duties diligently, contributing to the overall health and well-being of the body.

When we think about "slavery" within this analogy, we can consider it as a situation where a particular cell is forced to perform a specific function against its will. Just as in human history, where slavery involved individuals being coerced into serving others without their consent, in the cellular society, a cell might be forced to carry out a task that is not aligned with its natural capabilities or preferences.

In the context of the cellular society, "slavery" can occur if a cell is hijacked by a pathogen or disease, such as a virus or cancer cell. These intruders manipulate the normal functioning of the cell, exploiting its resources and redirecting its activities to serve their own interests. The victimized cell loses its autonomy and is subjected to the control of the invader, resulting in a compromised state of functioning and potential harm to the overall organism.

On the other hand, when we consider "freedom" within this analogy, we can envision it as a state where each cell is able to fulfill its role naturally and without external interference. In a healthy and balanced cellular society, every cell performs its designated function efficiently and harmoniously, contributing to the holistic well-being of the organism. Each cell operates freely according to its inherent abilities and contributes to the overall functioning of the body.

The paradox arises because individual cells within the human body must somewhat surrender their absolute freedom for the sake of the greater good and survival of the organism as a whole. While each cell has its own unique properties and potential, it operates within the boundaries of the larger system, functioning in coordination with other cells and aligning itself with the needs of the organism. In this sense, the cells are simultaneously free to carry out their individual tasks yet enslaved to the purpose of the collective organism.

Similarly, in human society, the concepts of "slavery" and "freedom" can generate a paradox. True freedom is often understood as the ability to make choices and pursue one's desires without undue constraint. However, the well-being and functioning of society as a whole require individuals to voluntarily abide by certain social rules, norms, and responsibilities. This balance between individual freedom and societal cohesion creates tension and complexity in our understanding of freedom and slavery.

In both the cellular society and human society, the paradox of slavery and freedom arises from the interplay between individual autonomy and collective cooperation. Recognizing the delicate balance between these concepts allows us to navigate the complex dynamics of societal systems while striving for a harmonious coexistence where individual freedom is respected, and the collective well-being is upheld.

## Understanding the Patterns of Global Consciousness

Global consciousness is our alignment with the healthy biological patterns of the universe. Global Consciousness is the state of being in harmony with the patterns that govern and support life, whether consciously or subconsciously (whether aware or unaware of the patterns). Our actions, movements, and interactions with others and our environment reflect the nature of our consciousness, either in accordance or discordance with these biological patterns. The true consciousness of any entity can only be understood by examining the past and present patterns of its actions. Things that are "conscious" are harmonious with the biological patterns that sustain all life, thus being globally conscious. For instance, the cells that make up the human body have a global consciousness that enables them to cooperate for the benefit of the entire body. Any cell that acts out of harmony with this order is not aligned with the global consciousness of the cellular society.

Furthermore, it is important to note that there is also a connection across cellular societies which form each species. This connection is not only evidenced in the similarities in DNA we all share, but also the patterns which establish and sustain life—we are all living things bound by the biological patterns of the universe whose nature is biological.

This global consciousness can also be observed in other cellular societies, such as those found in the natural world. The human body serves as a model for understanding the nature of this global consciousness. We can see it in phenomena like the melting and freezing of Antarctica, which resembles the function of a heart distributing resources across the Earth. Even everyday objects, like a cup that delivers its contents to us, reflect this global consciousness, similar to how a red blood cell delivers nutrients to a needy cell.

Our interpretation of reality is based on the biological projections we perceive, even if we imagine them to be something other than biological. Our ability to recognize patterns in reality and align our actions with those patterns is what determines the nature of our consciousness. [Examples] Our interpretation of reality is measured against our adherence to the biological patterns that establish and sustain life. Deviating from these patterns leads to disorder and death.

Being conscious, particularly globally conscious, means having a heightened awareness of the patterns that sustain complex and sovereign life, as well as the societies that emerge from this order. This includes the cooperation and order necessary for the functioning of the human body, which represents the highest form of biology's pattern.

Global consciousness refers to our alignment with the natural patterns and life-sustaining processes of the biological universe. It is our ability to act and interact in accordance with these biological patterns that ultimately reveals the nature of our consciousness. This can be observed in cellular societies, such as the human body, where the cells work together for the benefit of the whole. Global consciousness can also be seen in various aspects of our daily lives, such as the distribution of resources or the delivery of goods.

In light of this theory of a biological framework for a mathematical universe, the nature of our consciousness is determined by our interpretation of reality through our recognition of patterns and adherence to the order of the biological patterns which establish and sustain life, its diversity, functionalities and potential, while deviations from this order can highlight a loss of consciousness, or an unhealthy scenario within the larger system encompassing the conscious organism. Ultimately, being globally conscious involves a high awareness of the patterns that sustain complex life and the societies associated with them.

## Understanding the Patterns of Subconsciousness.

Subconsciousness is either global consciousness and/or one's unawareness to their own heuristics, or habits.

## Further Implications of our Theory on Understanding Global Consciousness

The implications on the concept of global consciousness, in the context of our theory of a biological framework for a mathematical universe, is as follows:

1. Interconnectedness and Unity: The concept of global consciousness would suggest that all living beings, including humans, are interconnected through a shared recognition and understanding of patterns (consciously or subconsciously). This interconnectedness arises from the inherent biological patterns that exist throughout the universe, as proposed by our theory. Global consciousness would signify the recognition of these patterns and the resulting unity among all living entities.

2. Universal Language of Patterns: If global consciousness is rooted in the recognition and understanding of patterns, it implies the existence of a universal language of patterns that transcends cultural, linguistic, and geographical barriers. This universal language would allow for communication and mutual understanding among diverse individuals and cultures, based on the shared recognition of patterns in the biological framework of the universe.

3. Collective Evolution of Consciousness: Global consciousness, in the context of our theory, could denote an evolution of consciousness that extends beyond individual organisms or societies. It suggests that the complexity and harmony of the environment have shaped the general consciousness of all living beings, allowing for a collective evolution of consciousness. This collective evolution arises from the recognition and adaptation to the intricate patterns embedded in the biological framework of the universe.

4. Potential for Heightened Awareness and Empathy: If global consciousness is based on recognizing and understanding patterns, it may imply a heightened awareness and empathy towards the experiences and perspectives of others. Recognizing the shared biological patterns underlying human existence and the patterns present in the environment could foster a sense of interconnectedness, empathy, and a broader understanding of the diverse patterns of life on a global scale.

5. Exploration of the Mathematical Universe: In the context of our theory of a biological framework for a mathematical universe, global consciousness may involve an exploration and interpretation of the inherent mathematical patterns that exist within biological systems. This exploration would entail recognizing and understanding the mathematical structures underlying life and the universe, thereby providing insights into the fundamental workings and interconnectedness of the mathematical and biological patterns.

The concept of global consciousness, the interplay between biological and mathematical patterns, and the nature of human consciousness as described in our theory could require further investigation, exploration, and potential refinement through scientific research and philosophical inquiry.

## Emotional IQ is the Measurement of Consciousness

How the concept of "Emotional IQ" or "emotional intelligence" could potentially serve as a measuring tool for consciousness. Here's a possible explanation:

*1. Emotions as Pattern Recognition:* Our theory suggests that recognizing patterns is a fundamental aspect of consciousness. Emotions, according to our theory, arise from the recognition or lack of understanding of patterns in a particular situation. Emotional intelligence can be seen as the ability to accurately recognize, understand, and navigate these patterns of emotions within oneself and others.

*2. Sensitivity to Patterns in Emotional Interactions:* Emotional intelligence often entails being sensitive to the emotions and nonverbal cues of others, which can be interpreted as recognizing patterns in emotional interactions. Someone with a high emotional IQ might be adept at perceiving and understanding the patterns in facial expressions, body language, and tone of voice, enabling them to accurately interpret the emotions and intentions of others.

*3. Behavioral Adaptation Based on Emotional Patterns:* Emotional intelligence also involves using emotional information to guide behavior and make decisions. This aligns with the idea in our theory that consciousness is demonstrated by behaving in accordance with recognized patterns. People with a high emotional IQ can recognize emotional patterns in themselves and others, and adjust their behavior accordingly to maintain relationships, manage conflicts, and make informed decisions.

*4. Empathy and Understanding of Biological Correspondences:* Our theory suggests that understanding the patterns and correspondences to biology allows for a deeper comprehension of situations. Emotional intelligence often includes empathy, the ability to understand and share the feelings of others. By recognizing patterns in emotions, individuals with high emotional IQ may develop a better understanding of the biological correspondences underlying those emotions, fostering a greater sense of empathy and connection with others.

*5. Reflection and Self-Awareness:* Emotional intelligence also encompasses self-awareness and reflection on one's own emotions and behaviors. This aligns with the notion of consciousness being tied to recognizing and understanding patterns. Individuals with high emotional IQ are often capable of analyzing their own emotional responses, recognizing patterns in their own behavior, and adapting accordingly to promote personal growth and well-being.

Our theory suggests that emotional intelligence can be seen as a measure of consciousness to some extent, as it reflects an individual's capacity to recognize, understand, and navigate emotional patterns within themselves and others.

## Stimulus & Response (Stephen Covey) & The Room For Consciousness and Free-Thinking

The space between the stimulus and the response is the realm where we have the ability to freely-think. Our theory suggests (and will explain following this section) that as life evolved the space between stimulus and response was near to no space, which would force living organisms to behave relative to the patterns of their surroundings—which were biological in nature. These biological patterns in their environment manifested themselves in the organization of their societies. A living organism’s ability to process the complexities within their environment, trained their consciousness to recognize these underlying patterns in their environment and to behave accordingly for survival. This is the emergence of consciousness.

As the living organism’s environment evolved in complexity, so to did the consciousness of the living organism—as it had to process the complexities of its environment necessary for survival. However, the complexities of the environment evolved to a point where it established a buffer for living things to think (have free-will and the ability to freely think, permitted by the forces of their environment nor requiring them to have to immediately survive)—this space between *stimulus* and *response* was formed. This space, between stimulus and response, is the ability to freely think about the decisions to make. The more space that an organism has, the more enabling for free-thinking. Keep in mind, that our ability to reason well and think well is dependent upon patterns recognition, etc.

The true test in the journey of Life is to return to these biological patterns and to abide by them, despite being given this freedom to think—for if not, We could ultimately cause our own miscarriage of society through the miscommunications and misunderstandings that can happen from interpreting our reality through the shadows/projection of biology’s patterns.

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## Biological Emergence: The Evolution of Complexity in Systems within a Biological Universe.

Awareness to biological patterns, especially as it pertains to the order/arrangement/actions of an object or collection of objects, is the phenomenon of **emergence**. In [philosophy](#), [systems theory](#), [science](#), and [art](#), **emergence** occurs when an entity is observed to have properties its parts do not have on their own, properties or behaviors which “emerge” only when the parts interact in a wider whole.

At the fundamental root of all actions/movements, pertaining to the order of *any* and *all* objects in the universe, *emerges* patterns and properties which are accordant to biological patterns and properties. Recognizing this phenomenon in any given entity is the phenomenon of “emergence.”

The actions of objects produce patterns that are accordant to biological patterns & properties that either: (1) establish and sustain life (healthy patterns/properties), or; (2) hinder and destroy life (unhealthy patterns/properties). These patterns pertain to (a) one of the many possible permutations of biology’s patterns, at (b) one of the many stages of development of that permutation, and at (c) one of the many states of health.

The universe’s nature is biological. Everything in reality created through the processes of the universe contain biological patterns which “emerge” as it reaches the complexity of biology where one is able to recognize the biological patterns within that process. Biological organisms are a result of a biological universe’s processes. Embedded within every living organism are the patterns of the universe’s biological nature. “Emergence” is the coincidence of recognizing these patterns in a thing(s) not originally thought to have a biological pattern existing within it. Biomimicry is the understanding of this inherent relationship of biology and the world around us, and utilizing biology’s patterns to intently bring about the emergence of biologically inspired innovation.

The concept of Fractals within the The Mandelbrot Set can explain of the nature of the Universe’s simple biological patterns evolving in complexity to a point where it results in life and its evolution to man.

Emergence may not be obvious to the freely thinking mind, especially when our environments commandeer the free thinking mind’s ability to think freely (i.e., society w/ its focus on money, economics, family, survival, or social media forcing minds to understand the world through “likes;” Our world is full of wonder and innovation which distract us from the inherent biological correspondences around us).

Emergence depends on each individual’s cognitive abilities to *focus* at recognizing the biological patterns inherent to all things in reality. All things in reality are homomorphic to a permutation of biology’s patterns, at some stage of development, at some state of health. Therefore, the phenomenon of “emergence” is a product of the mind’s ability to be aware of the natural biological correspondences which all things contain—i.e., it is the free thinking mind’s *personal revelation* (biblical apocalypse), or acknowledgement, to a particular thing's accordance to biology’s patterns. Each case of “emergence” is a case supporting the fact that biological patterns defines the nature of reality. Emergence is a phenomenon of the mind becoming aware of the fact: that from all things physical and conceptual in reality contain biological patterns. \*\*\*

Awareness to biological patterns, which is defined by acting in harmony with those patters, especially as it pertains to the order/arrangement/actions of an object or collection of objects, is the phenomenon of **emergence of consciousness**.

## The Evolution of Consciousness

Awareness to a particular set of patterns, which is defined by acting in harmony with what is being conveyed by those patterns, especially as it pertains to the order/arrangement/actions of an object or collection of objects, is the phenomenon of **emergence of consciousness**.

Consciousness is an outcome of the actions that occur in our surroundings. It emerges from the intricate nature of our environment in tandem with our sensory organs ability to receive information and our minds ability to recognize patterns. Our ability to define, measure and understand the patterns in the space around us contributes to the development of consciousness. Consciousness is influenced by the diversity of the objects, movement of those objects, and physics of objects in our environment.

Consciousness is achieved by the interactions with our surroundings, similar to how balance is achieved by peddling a bicycle. Consciousness emerges from the interplay of systems, processes, and objects in our surroundings that stimulates our thoughts through our sensory organs. And just as one's capabilities on a bike are measured by the diversity of things which one can do on a bike and in various scenarios on a bike (such as riding a vert ramp, doing down hill mountain biking, hitting jumps, riding flatland, etc.), one's capabilities of consciousness are measured by the diversity of things which one can do with the mind in various scenarios. All of which relies on the ability to recognize patterns.

These stimuli in our situation prompt the sensory organs to search for data for the mind to establish patterns pertaining to a given situation. The more complex the patterns, the more complex the thoughts and thinking. There are various levels of thinking/consciousness. Those who possess consciousness are those who respond appropriately to the patterns within their environment—an environment that is biological in nature, biological in its patterns. Those who possess consciousness are in harmony with biological patterns (they are logical, or exude logical behavior, especially if they respond to their environment in a manner that enables them to survive; their survival display consciousness for survival), regardless of how they interpret the patterns as something other than biological. It is through interfacing with patterns that consciousness emerges. It is through interfacing with *biological* patterns that true consciousness emerges. The more complex the patterns and stimuli, the more complex the consciousness. Furthermore, consciousness relies on the input received by our senses; the fewer senses we possess, the less capable we are of being conscious, the less capable we are at being able to gauge the world around us in complex ways.<sup>70</sup>

To illustrate this point, let us consider a thought experiment. If we were to deprive a human child of all senses except for touch and taste, and took away all memory of that child, that child would resemble a simple organism like a paramecium or amoeba in their behavior. They would navigate their surroundings by feeling around for things to eat. If we took away the child's teeth, the child would be forced to eat without teeth. The consciousness of this blindfolded child would be restricted to thoughts associated with touch and taste. Furthermore, if we limited the amount of things a child could touch... for example a if we removed the child's ability to touch/interact with a table, or coffee cup, or book, or another human being, or chair, car, or any human innovation or complex thing, anything aside from a spherical object that is either something edible or un-edible, we would expect behavior similar to that of an amoeba. The mind of that child would be limited to what data that child receives and processes, limiting the complexity of patterns that can be recognized, therefore limiting the complexity of thought, or consciousness which can be established.

In conclusion the nature of our environment governs the nature of consciousness. The complexities and diversity of our surroundings allows for, invokes within us, the complexity and diversity of thought.

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<sup>70</sup> Sensory overload can also hinder consciousness, particularly hinder the minds ability to organize the data into patterns so to develop well constructed idea and thoughts and understanding of reality.

## The Creation & Evolution of Consciousness From The Universe's Biological Patterns

1. Importance of Patterns: Our theory emphasizes that everything in reality is measured and understood through patterns. We argue that knowledge, mathematics, engineering, and science are all based on recognizing patterns within their respective fields. Biological patterns are considered fundamental and the only true and consistent pattern throughout the universe and reality. These biological patterns of the universe are hidden from site until they manifest themselves in the physiology of living organisms.

2. Biological Patterns as Meta-Patterns: The framework emphasizes that biological patterns are a meta-pattern that underlies and governs the nature of the universe and everything in it. Biological patterns are the patterns that underlies all patterns—creating the ability for analogies to exist across traditionally non-biological domains. These knowledge, principles and wisdom surrounding biological patterns transcend individual disciplines and provide a foundational understanding of reality. But prior to providing a foundational understanding to reality, the universe must first create the life which to understand itself.

3. Consciousness and Recognition of Patterns: We introduce the concept of consciousness as the ability to recognize and understand patterns. By positing that recognizing and behaving according to patterns is an indicator of consciousness, our framework establishes the fundamental role of pattern recognition in consciousness. With regards to the consciousness of life's first organisms—cellular organisms—cellular organisms had to organize themselves relative to the patterns conveyed by their environment in such a manner that ensured the development and survival of those organisms and their communities. If the organism(s) were not capable of recognizing the patterns in their environment necessary for survival, those organisms would be destroyed by their environment. Any organisms that would be destroyed by their environment would be considered *unconscious* towards recognizing and organizing itself relative to the healthy biological patterns of their environment. Any living organism that could abide by these biological patterns in their environment to survive is *conscious*. This is where the concept of survival of the fittest is born. Those organisms capable of quickly recognizing and organizing themselves accordingly to the patterns conveyed by their environment were considered conscious and fit for survival, fit for Life.

4. Consciousness and Unconsciousness: The distinction between consciousness and unconsciousness is described, with consciousness being the ability to recognize and behave according to biological patterns specific to an environment in such a manner which allows it to establish and sustain the development, survival and life of the living organisms. This behavior is accordant to the patterns which are being conveyed by the environment in which the organism is immersed. Organisms not capable of quickly recognizing and organizing themselves to the patterns of their environment necessary for life will ultimately be destroyed. This distinction highlights the importance of pattern recognition in developing consciousness, especially as consciousness is originally established one's ability to organize oneself relative to the [biological] patterns in ones environment that establish and sustain the survival (life) of the organism.

5. Environment Defines Consciousness: Because living organisms are forced to have to recognize and behave relative to the patterns of their environment necessary for their survival, the environment to which the living organism is immersed defines the nature of consciousness of the living organisms. The organism must non-stop and consistently reason the logic within its environment the patterns necessary to organize itself to survive. It must abide by the biological patterns of its environment necessary for survival. \*\*\*

6. Evolution of Consciousness: The theory proposes that the evolution and complexity of a living organism's environment drives the evolution and complexity of it's consciousness. The environment evolves in complexity, and as a response, organisms must be capable of recognizing these new complexities in their environment so to organize themselves for survival. As organisms adapt and evolve to the complexity of their environment, their consciousness evolves in parallel. This evolutionary perspective underscores the link between the complexity of the environment and the complexity of consciousness.

7. *The Origins of Species*: Complexity in the environment can give rise to diversity in environments. The diversity in environment forces diversity in consciousness for living organisms. The specific nature of an environment forces an organism to recognize and behave/organize itself according to the patterns in its environment necessary for survival. These various different environments encourage different organizational patterns necessary for survival—thereby giving rise to various species, or "cellular tribes." Each of these environments evolve in complexity, forcing each organism in that environment to evolve.

8. *Free-Thinking Consciousness*: There comes a moment in the evolution and complexity of environments where the rate slows down as it approaches its limit. This limit on evolution (development) and complexity in the environment of living organisms establishes a "buffer" between the immediate actions necessary for survival through establishing and sustaining fundamental needs. This "buffer" encourages a new conscious to emerge—free-thinking consciousness. As the organism is not required to immediately recognize and organize itself according to the patterns in its environment necessary for its immediate survival, the organism is able to recognize, or "imagine," other patterns within its environment. This "buffer" created by the environment reaching a level of complexity to establish and maintain the fundamental needs of an organism, freeing the organism from immediate survival constraints, gives rise to imagination, artistic expression, leisure activities and ignorance.

Our framework presents humanity as a pinnacle of complexity and consciousness, where individuals are freed from immediate survival constraints of their environment. With this freedom, humans can interpret the inherent biological patterns of their environment in *any* way they choose. It gives rise to the capacity for imagination, artistic expression, leisure activities, and ignorance. This displays an evolution of consciousness from being dependent upon their environment to being able to have significant control over their environment within the "buffer" created by the complexities of their environment. Stephen Covey explains this space for free-thinking as the space between *stimulus* and *response*.

**Free-thinking consciousness** is the ability to recognize any pattern, to create patterns, and mix match, or to decide to not recognize any pattern and to allow all the other patterns around an individual to carry one through a particular scenario. Free-thinking consciousness is the ability to be free from seeing patterns, especially biological. It is the ability to see the shadows which biology's patterns create. In religion, this is original Sin.

Free-thinking consciousness is the ability to imagine patterns within the shadows and projections casted by the biological patterns of the universe. Biological patterns exists in everything around us—various permutations, various stages of development, and various states of health. Similar to the allegory of the cave, by Plato—In the allegory, Plato describes people that have spent their lives chained in a cave facing a blank wall. They watch shadows projected onto the wall by objects passing in front of a fire behind them, and they give names to these shadows. The shadows are the prisoners' reality but not accurate representations of the real world. The shadows represent the fragment of reality that we can normally perceive through our senses, while the objects under the sun represent the true forms of objects that we can only perceive through reason.



Similarly our theory describes *free-thinking consciousness* as people living their lives chained in a cave facing a blank wall. They watch shadows projected onto the wall by biologically-patterned-objects passing in front of a fire behind them, and they give names to these shadows and these shadows look nothing like biological patterns. The shadows are the prisoners' reality but not accurate representations of the real world/universe/reality. The shadows represent the fragment of reality that we can normally perceive through our senses, while the objects under the sun represent true [biological] forms of objects that we can only perceive through understanding of the biological patterns within the physiology of living things and recognizing those patterns around us.

The philosopher is like a prisoner who is freed from the cave and comes to understand that the shadows on the wall are actually not the direct source of the images seen. A philosopher aims to understand and perceive the higher levels of reality—this *biological nature* of reality. However, the other inmates of the cave do not even desire to leave their prison, for they know no better life.

The paradox of Free-Thinking Consciousness is that while it provides a “vacation” from immediate thoughts of survival, and it allows for art, music, poetry, science, technologies, etc., it can allow one to stray down the path of their own demise. By not staying connected/understanding of biology's patterns, and upholding the healthy patterns of biology, one can suffer the slings and arrows of unconsciousness. Thus, the paradox of Free-Thinking Consciousness is that it can allow for unconsciousness to pervade. However, unconsciousness is allowable within any environment that permits it—ie., that will not destroy it. Free-thinking consciousness can allow stronger individuals and systems to take advantage of them, as now they do not have a fundamental framework to which to behave/govern themselves.

Free-thinking Consciousness, is easy, especially when surrounded by mechanisms and infrastructure which exude patterns which are safe for the individual, providing as heuristics that automate actions in a safe environment. However, free-thinking consciousness can be dangerous if surrounded by individuals or systems which displays patterns that could be detrimental to ones safety and life.

For life to survive and thrive and to achieve its potential, it must abide by the inherent laws of biology established by the biological universe. Living things must be a “slave” to the patterns which establish and sustain life, just as you and me must be slaves to our daily activities which allow us to keep the roof over our heads, or how a baseball player (if he wants to hit a home run) must swing the bat in a very particular way in order to do so.

9. *Loss of Consciousness*: The framework acknowledges that humanity has, to some extent, lost touch with the inherent biological patterns present in the universe and reality. revealed in the dilapidation in the organization of their society, wealth inequalities, crime, and social and economic injustice. Miscommunications in and various unhealthy socioeconomics could result in a miscarriage of human society similar to the story of “The Tower of Babel.” This loss of consciousness is attributed to an obsession with superficial aspects, symbolized by the “shadows and projections” of biology's patterns, rather than a deep understanding of their foundational biological patterns from which those shadows stem and aligning themselves and their human laws, and systems in harmony with the patterns inherent to our biological universe.

10. *Reconnecting with Biology's Patterns*: The highest state of consciousness would imply being mentally and physically in harmony with the biological patterns of the universe despite being free in conscious. Being able to be the Babe Ruth focused on baseball and hitting home runs, rather than the vices which prevent him from achieving his goals. Being able to establish and maintain balance between understanding and behaving in harmony biology's healthy patterns, in a manner that uphold the principles surrounding life, its survival, resilience, diversity, functionality, and potentials. , but also e understanding and behaving according to the biological patterns existent with in the fabric of reality and the universe, building human civilization in harmony with healthy biological patterns which establish and sustain the complexities which maintains the environment which allows humanity the leisure to imagine and create. Never forget.

11. *Education and Reinforcing Pattern Recognition*: Our framework suggests that education plays a crucial role in fostering consciousness by introducing individuals to various scenarios and teaching them to recognize patterns. Education helps individuals become conscious by providing them with a foundation in recognizing and understanding patterns. Human Society, or any society of organisms must put education as its number one priority. We can see the importance of education with DNA in the cells within our body—the most efficient transference of knowledge and education.

12. *Upholding Biology's Patterns*: In the context of our theory, "the biological framework for a mathematical universe," the importance of upholding biology's patterns despite having free-will consciousness lies in maintaining harmony with the fundamental principles that govern life, its survival, resilience, diversity, functionality, and potential. Here are some key reasons why upholding biology's patterns is significant:

1. *Survival and sustainability*: Biology's patterns reflect the inherent laws of the universe that establish and sustain life. By understanding and behaving in accordance with these patterns, individuals and systems increase their chances of survival and contribute to the sustainability of life on Earth.

2. *Resilience and adaptability*: Recognizing and adapting to biology's patterns enables individuals and societies to respond effectively to changes and challenges. By aligning with the intricacies of the biological world, one can develop resilience, adaptability, and the ability to navigate complex systems.

3. *Connection to the natural world*: Upholding biology's patterns fosters a deeper connection with the natural world and its ecosystems. This connection can lead to a sense of belonging, appreciation for biodiversity, and the understanding of human beings as an integral part of the larger web of life.

4. *Ethical considerations*: Recognizing and respecting biology's patterns can guide ethical decision-making, encouraging actions that promote the well-being of life and its interconnected systems. By upholding these patterns, individuals contribute to a more sustainable and compassionate society.

5. *Holistic understanding*: By upholding biology's patterns, individuals gain a more comprehensive understanding of reality. It allows for a deeper exploration of the connections between various disciplines, bridging the gap between science, philosophy, spirituality, and other fields of knowledge.

6. *Overall well-being*: Living in alignment with biology's patterns can lead to physical, mental, and emotional well-being. By recognizing and respecting the needs of our biology, individuals can make choices that promote health, balance, and vitality.

Ultimately, upholding biology's patterns is about recognizing the interplay between individual consciousness and the larger web of life. While free-thinking consciousness allows for creativity, imagination, and exploration, it is crucial to remain rooted in the foundational biological patterns that sustain life. By doing so, individuals can navigate the complexities of existence while contributing to the flourishing of the natural world and humanity as a whole.

These components, your theory explores the role of pattern recognition, complexity, and consciousness in understanding the biological framework for the mathematical universe hypothesis.

## Effects of The Unhealthy Biological Environments on Consciousness & Behavior

The importance of recognizing and abiding by biological patterns and the influence of environment on consciousness, negative societal environments can have significant impacts on individuals' thinking and behaviors. Here are a few possible implications:

1. Limited Pattern Recognition: Unhealthy societal environments can restrict individuals' exposure to diverse patterns and experiences. If individuals are predominantly exposed to harmful or destructive patterns, their ability to recognize and understand beneficial patterns may be hindered. This can limit their general consciousness and lead to behaviors that perpetuate negativity and harm.

2. Distorted Perceptions: Unhealthy societal environments can create distortions in individuals' perceptions of reality. If patterns of violence, oppression, or toxic behavior dominate the environment, individuals may develop skewed perspectives and beliefs. This can result in adopting negative behaviors and perpetuating harmful cycles.

3. Negative Conditioning: The repetitive exposure to negative patterns in a societal environment can condition individuals to accept and reproduce such patterns. They might internalize harmful behaviors as normal or acceptable due to the lack of alternative patterns or positive role models. This conditioning can significantly impact their thinking and behaviors in detrimental ways.

4. Reduced Empathy and Cooperation: Unhealthy societal environments can create a sense of distrust, hostility, or competition among individuals. In such environments, empathy and cooperation may be diminished as self-preservation becomes the main focus. This can lead to individuals prioritizing their own interests over collective well-being and hinder the development of a supportive and harmonious society.

5. Limited Personal Growth and Potential: Unhealthy societal environments can restrict individuals' access to opportunities for personal growth and development. Lack of resources, educational opportunities, or positive role models can limit individuals' ability to recognize and pursue their full potential. As a result, the negative environment may perpetuate a cycle of limited progress and individual fulfillment.

It's important to note that the impact of unhealthy societal environments on individuals will vary depending on various factors such as resilience, support systems, and individual agency. Similar to cells within the body, some cells may be more tolerant to particular bio-economic factors than others. While unhealthy environments can pose significant challenges, individuals retain their capacity to adapt, resist, and seek positive change. Creating positive and nurturing societal environments is crucial for fostering healthy consciousness, promoting positive behaviors, and maximizing individuals' potential.

## The Importance to Upholding Healthy Biological Patterns Despite Dilapidations in a System

## The Patterns of Survival of the Fittest

Survival of the Fittest is epitomized in the cellular wilderness of the amoeba and paramecia. The organizational patterns of the cellular wilderness can be seen within the wilderness of the macro-realm, such as from a school of fish emerges the biological properties of an amoeba, a pack of wolves emerges the biological properties of didinium, how a heard of elephants also contain socioeconomic patterns which resemble emergent properties of that of an amoeba.

Cellular wilderness of amoeba and paramecia is the epitome of survival of the fittest. Cellular Society composing the human body is the epitome of cooperation—which contributes to survival.

In our theory, we propose that biological patterns are fundamental in defining the nature of all systems, processes, and objects in reality. Additionally, you suggest that the existence of life and living organisms is a consequence of the evolution of the universe's biological processes. Within this framework, we draw analogies between the organizational properties of organisms in the wilderness (referred to as the "cellular wilderness") and the organizational properties of the cellular society within the human body (referred to as the "cellular civilization"), emphasizing their similarities and contributions to survival.

To explain the concept of "survival of the fittest" within the context of the cellular wilderness and cellular civilization, let's first understand the concept. "Survival of the fittest" is a phrase coined by Charles Darwin to describe the process of natural selection in evolution. It suggests that organisms with favorable traits for their environment are more likely to survive and reproduce, passing on those advantageous traits to future generations.

In the cellular wilderness, exemplified by organisms like amoeba and paramecia, survival of the fittest can be observed in the competitive struggle for resources and reproductive success. These single-celled organisms face environmental challenges and compete with each other for nutrients and space. Through natural selection, individuals possessing advantageous traits, such as efficient movement or effective hunting strategies, are more likely to survive and pass on their genetic material.

Similarly, within the cellular civilization found in the human body, survival of the fittest can be observed at a cellular level. Cells within our body continuously face challenges, such as infection or limited resources. The cells that possess adaptive characteristics, such as an effective immune response or efficient energy usage, are more likely to thrive and contribute to the overall health and survival of the organism. However, unlike the cellular wilderness, cellular civilization is a civilized society, has in place bioeconomic infrastructure to establish and sustain the fundamental needs of its organisms.

The concept of survival of the fittest encompasses both competition and cooperation. While competition exists within the cellular wilderness as organisms strive to outcompete each other, cooperation is also prevalent. Organisms cooperate by forming complex structures and interacting with other organisms to achieve mutually beneficial outcomes, enhancing their overall fitness and increasing their chances of survival.

The cellular civilization within the human body exemplifies the epitome of cooperation, where cells work together for the collective benefit of the organism. They communicate, specialize, and coordinate their efforts to ensure the proper functioning of bodily systems. This cooperative nature contributes to the survival and overall well-being of the organism.

Our theory would suggest that the reason why individuals in human society may exude characteristics of the survival of the fittest portrayed by cellular wilderness, as opposed to exuding characteristics of that which is in cellular civilization is due to localized environment which may influence survival of the fittest characteristics of the cellular wilderness.

In summary, the concept of "survival of the fittest" can be observed in both the cellular wilderness and cellular civilization. It involves competition for survival and reproductive success, as well as cooperative behaviors that enhance the fitness and survival of organisms. This framework highlights the similarities and patterns of survival and cooperation in various biological systems, from single-celled organisms to complex multicellular organisms like humans.

## The Patterns of Cooperation in Successful Societies

Cooperation is epitomized in the cellular civilization composing human physiology.

In our theory, where biological patterns define the framework for a mathematical universe hypothesis, the focus is on the inherent biological nature of all systems, processes, and objects in reality. Within this context, the cooperation observed within cellular societies can indeed serve as a model for cooperation in other societies of organisms.

Cooperation within cellular societies, such as those in the human body or in other multicellular organisms, is fundamental to their success and functioning. Cells work together, communicate, and specialize in different roles to ensure the overall well-being and functionality of the organism. They coordinate their efforts, share resources, and contribute to the common goal of maintaining homeostasis and supporting the development, survival, functionality, and potential of the organism.

This model of cooperation can be extrapolated to other societies of organisms. Just as cells within a multicellular organism collaborate for the benefit of the whole, many organisms exhibit cooperative behaviors within their own societies. Examples include social insects like ants or bees, where individuals work collectively to build intricate colonies or hives, assign tasks, and ensure the survival of the group.

Furthermore, we can observe cooperation among various species in ecological interactions, such as mutualistic relationships between plants and pollinators, or symbiotic relationships between different species. These forms of cooperation are essential for the survival and success of the individuals involved and contribute to the resilience and stability of ecosystems.

By studying the principles and mechanisms of cooperation within cellular societies, we can gain insights into the underlying patterns and strategies that drive successful cooperation in other societies of organisms. Although the specific manifestations may differ, the fundamental principles of coordinated effort, communication, division of labor, and mutual benefit are concepts that can be applied across different levels of biological organization.

In summary, cooperation within cellular societies, such as that which is epitomized within the human physiology, can serve as a model for understanding and explaining cooperation in other societies of organisms, highlighting the common biological patterns and principles that underlie successful cooperative behavior in the natural world.

## The Organizational Properties of Organisms in the Wilderness

The organizational properties of organisms in the wilderness mimic the organizational properties of the “cellular wilderness” of the amoeba and paramecia.

## Organizational Properties of Successful Societies

In the context of human physiology and the cooperative nature of cellular societies, it is reasonable to argue that they can serve as a model of a highly successful society of organisms. The intricate coordination and specialization of cells within the human body allow for complex functionalities, adaptability to diverse environments, and the ability to achieve remarkable potentials. By studying the cellular society of the human body, we can gain valuable insights into the fundamental principles of organization, communication, and cooperation that contribute to its overall success. This understanding can potentially inform our exploration and understanding of other societal structures within the natural world.

However, it's important to recognize that there is a vast array of organisms and ecosystems with their own unique adaptations and mechanisms for success. Different species and ecosystems have evolved diverse strategies and characteristics that enable them to thrive and fulfill their own potential in their respective environments. So while cellular societies within human physiology provide an excellent model for understanding the principles of successful organization and functionality, it would still be an oversimplification to claim that they represent the sole pinnacle of success among all organisms. Success in biology is a multifaceted concept that varies across species and ecosystems. Cells require a specific amount and type of resources and stimulation in order to survive, find their purpose, and to do their duty/job correctly so to best ensure the life of themselves and their society, just as people require a specific amount and type of resources and stimulation in order to survive, discover their purpose, and to do their duty/job correctly so to best ensure the life of themselves and their society.

*Cells* are individual living organisms, just as *people* are individuals living organisms.

Cells that work together in performing similar job/function form tissue, just as how people working performing a similar job/function form an organization/business.

The collection of tissue form an organ, just as the collection of organizations/businesses form an industry. The collection of organs which contribute to a functioning as aspect of the body form an *organ system*. Analogously, within human society, the collection of industries perform a distinct function for human society form an *economic sector*.

In order to ensure the longterm health, development, survival/resilience, and potential of all cells within the entire society of organisms comprising the human physiology, is dependent upon all cells working together towards their individual goals, which contribute toward common greater goals of society as a whole. Analogously, The long-term health, development, survival/resilience, and potential of human civilization is dependent upon all people working together towards their individual goals, which contribute toward common greater goals of society as a whole.

Any disruption of the activities of an organ system will adversely affect the entire society of cells as a whole, just as any disruption of the activities of any specific industry in human society will adversely affect human society.

Each individual cell within the society of cells composing the human body needs to have its fundamental needs established and sustained in order to recognize their purpose and be motivated to carry-out their purpose, just as each human person in society needs to have their fundamental needs established and sustained in order to recognize their purpose and be motivated to carry-out their purpose.

The functionality and potential of the society of cells composing the human body is dependent upon the ability for all cellular organisms to work together in carrying-out their duties required of a society that is able to establish and sustain their needs and providing all of the opportunity and potentials which the society is organized to create. Their ability to cooperate and carry-out multiple tasks together is dependent upon having their fundamental needs established by society and being properly stimulated [educated] as so they understand their purpose for cellular society. Analogously, the potential of the human civilization is dependent upon the ability for all people to work together in carrying-out their duties required of a society that is able to establish and sustain their needs and providing all of the opportunity and potentials which the society is organized to create. Their ability in together is dependent upon having their fundamental needs met and being properly stimulated [educated] as so they understand their purpose/duties for human society.

## Behavioral Properties of Successful Societies (Examples)

Cells that do not receive the proper/required amount of resources and stimulation may result in those cells not functioning properly within its society—therefore reduction the efficiency of its society from being able to best ensure the life of its society of cells, is similar to how people not receiving the proper/required amount of resources and stimulation may result in those people not functioning properly within its society.

The general principles of Maslow's hierarchy of needs applies to both cellular organisms and people within human society.

Some cells are more resilient [i.e., have a higher threshold or ability to endure] this lack of stimulation and fundamental resources than others, just as some people may be more resilient to a lack of stimulation and fundamental resources than others.

Cells which divert from the actions of their society, in a manner that better addresses the needs of the entire society (i.e., mutations) is similar to people with society that diverts their actions of society, in a manner to best address the needs of the entire society (i.e., innovation).

Cells which divert from their actions of their society in a manner that negatively affects the entire society, especially for the interests of themselves at the expense of the health/Life of society (mutations, cancers, etc.) is similar to people that divert from their actions of contributing to society in a manner which serves the interest of themselves (or a small group of people) at the expense of the health/Life of human society.

Both the society of cells which comprise the human physiology and the society of individuals comprising human civilization must work together in such a manner to ensure the development, survival/resilience, potentiality and Life of themselves, their society, and their environment—all Life.

Cells comprising the human physiology are affected by nature and nurture, just as people are affected by nature and nurture. [Explain]

Cells comprising the human physiology have both a “good nature” and a “bad nature.” The good nature of cells is dependent upon having all of their fundamental needs established and sustained. When those fundamental needs/resources are taken away, it affects the cells to have to either wither away and die or to carry-out actions in order to survive, which may inadvertently negatively affect the overall health of society. This is a similar case within human society, as seen with crime, terrorism, poverty, wealth inequality, black lives movement, nationalism, etc.

The environment surrounding a cellular organism in a cellular society may maintain, or induce, the good nurturing or bad nurturing of a cell—which affects the nature of a cell to be either “good” or “bad.” Analogously, in human society, The environment surrounding an individual person in human society may maintain or induce the good or bad nurturing of a person—which affects the nature of that person to be either good or bad.

Each cell, just as each person, have different thresholds/tolerances towards how much it can endure before the integrity of their natural good nature is affected.

## Ethics and Morality as Defined by Cellular Society & Biological Patterns (Relative to Life)

The concept of ethics and morality is a complex and multifaceted topic that encompasses the principles and standards of right and wrong behavior, decision-making, and values within a society. While ethics and morality are primarily human constructs, one can draw insights and parallels from the organizational properties (patterns) of cellular society to shed some light on these concepts.

In cellular society, a crucial aspect that contributes to the overall functionality and success is the coordination and cooperation of individual cells. Each cell has specific roles, functions, and interactions with other cells, all working together for the common good of the organism. This cooperative nature ensures the survival, homeostasis, and growth of the organism as a whole. Even if something happens to an area the body, other areas do its best to help to bring the body (cellular society) back to homeostasis.

Similarly, in human societies, ethical and moral principles often emphasize cooperation, mutual benefit, and the well-being of the community. This can be seen in various ethical frameworks that promote concepts such as fairness, justice, compassion, and respect for the autonomy and dignity of individuals. The underlying goal of ethical principles is often to create a harmonious society where individuals can thrive and coexist in a mutually beneficial way.

The organizational properties of cellular society, where individual cells recognize and fulfill their roles for the collective benefit, can be seen as an analogy to the ethical principles of social cooperation and collective well-being. Just as cells in the human body perpetuate the survival, functionality, and potential of the organism through their interactions, human societies strive to establish norms, values, and ethical frameworks that ensure the optimal functioning, potentials, and harmony of communities.

Furthermore, the evolutionary origins of cooperation and altruistic behaviors observed in cellular societies can offer insights into the emergence and development of ethical and moral behavior in human societies. Cooperation and altruism can provide selective advantages in group survival and long-term benefits for individuals, promoting the evolutionary success of societies.

While, it is important to note that human ethics and morality *seem* more complex and influenced by various factors such as **culture, social norms, individual beliefs, and rational thinking**, which seem to go beyond the purely biological realm of cellular societies. And, while ethical frameworks also incorporate considerations of *empathy, reasoning*, and the ability to *make conscious choices* based on *shared values and norms*, into the ideas of ethics and morality, we can see their biological patterns. Here is how the biological framework for a mathematical universe can help us understand the biological nature of empathy, rational thinking/the ability to make conscious choices, shared values and norms, culture, social norms and individual beliefs.

### On Understanding Empathy

Our theory would provide a deeper understanding of the concept of empathy by revealing that our natural inclination to empathize with others stems from the fundamental interconnectedness that exists within the biological patterns of the universe. Here's how this understanding can shed light on the nature of empathy:

*1. Inherent interconnectedness:* The theory posits that all systems, processes, and objects in reality possess biological patterns and are inherently connected. This interconnectedness suggests that our ability to empathize with others may arise from our shared underlying biological nature. Empathy could be seen as a natural extension of recognizing and resonating with the interconnected biological patterns that bind us together.

*2. Shared experiences:* If we are all connected through biological patterns, as our theory suggests, it follows that we would share common experiences and emotions. Our capacity to empathize with others could therefore be rooted in our innate recognition of these shared experiences. Empathy enables us to tap into this interconnectedness and relate to others on deeper levels, recognizing that their experiences mirror our own in some fundamental way.

3. Evolutionary advantage: Consideration of empathy as an adaptive trait within the framework of our theory may lead to the understanding that the ability to empathize could provide significant evolutionary advantages. If empathy promotes cooperation, social bonding, and the strengthening of relationships, it would contribute to the survival and well-being of individuals and groups. The shared biological patterns that connect us could be the foundation upon which empathy has evolved as a beneficial trait.

4. Connection beyond living organisms: Our theory also proposes that even non-living systems and processes possess biological patterns. This understanding could extend our empathy to include non-living elements of the universe. By recognizing these shared patterns, we might develop a deeper appreciation for the interconnectedness of all phenomena and cultivate empathy towards non-living systems and processes as well.

5. Respect and responsibility: With a deeper understanding of how interconnected we are with all aspects of the universe, including living and non-living entities, our respect for ourselves, each other, other life forms, ecological systems, and non-living systems and processes would likely increase. Such an understanding would foster a greater sense of responsibility and care for the well-being of all, inspiring actions that promote harmony, sustainability, and the preservation of the interconnected web of life. Furthermore, the understanding that the patterns of various lifeforms could allow us to discover technological solutions for humanity, could also be a motivating factor.

In summary, our theory were true would provide a deeper understanding of empathy by revealing that our natural inclination to empathize with others is rooted in our shared biological patterns and interconnectedness. Recognizing this connection may explain why empathy is a natural response, as it reflects a fundamental aspect of our interconnected existence. This perspective could enhance our appreciation for the importance of empathy and encourage us to nurture and cultivate it in our interactions with others and the world around us.

## On Understanding Reasoning and the Ability to Make Conscious Choices

The "biological framework for a mathematical universe hypothesis," would have implications on the concept of **reason** and **the ability to make conscious choices**. Here's how:

1. Recognition of Biological Patterns in Empathy: The theory emphasizes that biological patterns define the framework for all systems, processes, and objects in reality. Within the context of empathy, this means that reason would involve recognizing and understanding the biological patterns underlying empathetic processes. By identifying these patterns, individuals can reason about empathetic experiences, determine their nature, and understand the mechanisms by which they occur. We can understand the reasons why we empathize and also understand how we can most appropriately respond to an empathetic experience.

2. Logical Basis for Empathy: According to our theory, reason is based on recognizing and adhering to biological patterns. In the case of empathy, reason would involve aligning one's empathetic responses with the inherent biological patterns that govern empathy. This suggests that empathetic reasoning would prioritize actions and decisions that are in accordance with these patterns, promoting a logical and harmonious approach to empathy.

3. Connection between Empathy and the Logic of Biological Patterns: Empathy, as a complex psychological and social phenomenon, would be seen as a construct deeply rooted in the logic of biological patterns. The ability to understand and share the feelings of others would be perceived as a result of the evolution of biological processes within the universe. This understanding would provide a logical basis for empathy, reinforcing its importance in fostering social bonds, cooperation, and overall well-being.

4. Incorporation of Biomimicry in Empathy: Our theory proposes that reasoning involves applying knowledge gained from observing and understanding biological patterns, a concept known as biomimicry. In the context of empathy, reason would encompass integrating insights and lessons learned from biological patterns present in empathetic processes into our understanding and practice of empathy. This application of biomimicry would enhance our ability to empathize effectively and compassionately, drawing from the wisdom of nature's empathetic patterns.

5. Alignment of Empathetic Reasoning with the Principles of Life: Reasoning within the framework of our theory implies aligning decisions and actions with the principles that establish and sustain life. Consequently, empathetic reasoning would promote empathetic responses that are in harmony with life's processes and goals. This alignment would ensure that empathy is carried out in ways that are beneficial, conducive to well-being, and consistent with the logic of biological patterns.

In summary, our theory would imply that reason within the domain of empathy involves recognizing, adhering to, and aligning with the logic of biological patterns. Empathetic reasoning would prioritize actions and decisions that are in line with these patterns and promote empathy as an essential component of harmonious and logical interactions between individuals. Applying insights from biomimicry would enhance our understanding and practice of empathy by drawing on the wisdom of natural empathetic processes.

## On Understanding Shared Values and Shared Norms

The theory of a "biological framework for a mathematical universe hypothesis" could have several implications on our understanding of "**shared values**" and "**social norms.**" Here are some possible implications:

1. Biological Basis of Shared Values: The theory suggests that all systems, processes, and objects in reality possess biological patterns. This would imply that our shared values, which often guide our behavior and interactions, are rooted in these underlying biological patterns. Understanding this biological basis could offer a new perspective on the origins and universality of shared values across cultures and societies.

2. Cultural Variation within Biological Framework: While shared values may have a biological basis, the theory also acknowledges the existence of analogies and structural mappings between biological patterns and other domains. This implies that within the broader biological framework, there is room for cultural variation in the specific interpretations and expressions of shared values. Different cultures may have nuanced understanding and manifestations of these shared values, influenced by a range of factors including social structures, traditions, and historical contexts (for example, various species of living organisms are comprised of societies of cells, but all which function in harmony with the laws/principles of life in an order shared across all living things, empirically justified in the code of our shared DNA).

3. Evolutionary Perspective on Social Norms: If life and living organisms are a consequence of the universe's biological processes, then social norms - commonly accepted behaviors and standards within a society - can also be seen as influenced by this underlying biological framework. From an evolutionary perspective, social norms may emerge and evolve as adaptive responses to promote group cohesion, cooperation, and survival. Recognizing this influence could enhance our understanding of the role social norms play in shaping human behavior and societal structures.

4. Updating Social Norms for Better Adaptation: The theory implies that the physiology of living organisms provides models that reveal hidden biological patterns throughout the universe. This understanding could encourage a more dynamic approach to social norms, recognizing that they may need

to be updated or adapted in response to changing circumstances or new insights about the underlying biological patterns. It could promote a continuous evaluation and improvement of social norms to better align with the logic of biological patterns and the well-being of individuals and societies.

5. Bridging Science and Ethics: By highlighting the connection between biology, patterns, and the understanding of shared values and social norms, the theory could facilitate a closer integration between scientific inquiry and ethical considerations. It offers a framework that emphasizes the importance of biological patterns in shaping our behavior, allowing for a more holistic approach that combines scientific rigor with ethical reflection.

In summary, the theory of a biological framework for a mathematical universe would suggest that shared values and social norms have a basis in biological patterns. This understanding could provide insights into the origins and universality of shared values, allow for cultural variation within the broader biological framework, offer an evolutionary perspective on social norms, encourage adaptations of social norms for better adaptation, and facilitate a closer integration between science and ethics in understanding social behavior.

## On Understanding Culture

Our theory of a "biological framework for a mathematical universe hypothesis" could have several implications on our understanding of **culture**. Here are some possible implications:

1. Biological Basis of Cultural Expression: Our theory suggests that all systems, processes, and objects in reality possess biological patterns. In the context of culture, this would imply that the various expressions of culture, such as language, art, customs, and beliefs, are rooted in these underlying biological patterns. Understanding this biological basis could provide insights into why certain cultural practices and expressions resonate with individuals and communities.

2. Universal Patterns in Cultural Diversity: While acknowledging the existence of biological patterns, our theory also suggests that analogies and structural mappings can reveal the biological nature of any target domain. This implies that within the broader biological framework, there may be universal patterns that underlie the seemingly diverse expressions of culture. Understanding these universal patterns could facilitate a deeper appreciation of the commonalities and interconnectedness across different cultures.

3. Evolutionary Perspective on Cultural Evolution: If the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes, then culture can also be seen as a product of this evolutionary process. From this perspective, cultural practices, beliefs, and traditions can be viewed as adaptive responses that have evolved over time to promote communal cohesion, social integration, and survival. Recognizing this evolutionary aspect could enhance our understanding of the dynamic nature of cultural change and adaptation.

4. Cultural Variation within Biological Constraints: While our theory emphasizes the biological nature of systems, processes, and objects in reality, it also acknowledges the existence of analogies between biological patterns and other domains. This implies that cultural variation is possible within the constraints of the biological framework. Different cultures may manifest their unique expressions and interpretations of these underlying biological patterns, influenced by historical context, geographical factors, and social structures. The way we have various cultures around the world could be analogous to the various species of life which exist on Earth, whose "cellular tribes" have evolved and developed a culture based upon their environment and what was important for them. A frog, or rather its cellular society, may worship the water, as the cellular society of the fly may worships decaying organic matter.

5. Interdisciplinary Perspectives on Culture: Our theory seeks to bridge the gap between biology and the mathematical universe hypothesis. In the context of culture, this interdisciplinary approach could encourage collaborations between researchers from biology, mathematics, anthropology, and other disciplines. It could foster new insights into the relationship between biological patterns and cultural phenomena, encouraging a more comprehensive understanding of the complexities of culture.

In summary, if our theory were true, it would suggest that culture has a basis in biological patterns, with universal and adaptable aspects. It would provide insights into the biological roots of cultural expressions and practices, offer an evolutionary perspective on cultural evolution, acknowledge cultural variation within a biological framework, and encourage interdisciplinary collaborations to understand culture more comprehensively.

### \*\*\*On Understanding Individual Beliefs\*\*\*

Our theory of a "biological framework for a mathematical universe hypothesis" would suggest that individuals, in their interpretations of the world, rely on patterns as a fundamental tool. These patterns can be derived from the underlying biological patterns that define the framework of the universe. In this sense, individuals metaphorically perceive the world as if observing "shadows on a cave wall," as Plato suggested. These "shadows," in this context, represent the interpretations of our apparent reality, while the underlying biological patterns serve as the "actual reality" that structures our experiences.

In this framework, individual beliefs would stem from the interpretations of these shadow-like patterns that are projected from the underlying biological patterns. The patterns we perceive and interpret through our senses and cognition shape our understanding of the world. However, these beliefs might not always align with or directly reveal the intricate biological patterns that underlie them.

Understanding that our apparent reality is influenced by the projections of these biological patterns could lead to a humbling realization that our interpretations may be limited or incomplete. It would require acknowledging the inherent challenge of perceiving and comprehending the complex nature of these underlying patterns. This recognition may prompt us to seek a deeper understanding of the biological patterns that form the foundation of our experiences and beliefs.

Additionally, recognizing the role of non-biological patterns in our interpretations suggests that our understanding of the world extends beyond purely biological systems. It implies that we have the ability to identify and interpret patterns beyond the realm of biology, such as mathematical, conceptual, or abstract patterns. These non-biological patterns can influence our beliefs and provide alternative lenses through which we perceive and understand the world.

In summary, our theory would suggest that individuals define and measure the world using patterns, both biological and non-biological (mostly biological, probably using every other pattern except biology). While our interpretations and beliefs are often based on the projected "shadows" of these patterns, an awareness of the underlying biological patterns can enhance our understanding, encouraging a deeper exploration of the fundamental structures that govern our experiences and beliefs.

\*\*\*UNDER CONSTRUCTION\*\*\*

## Understanding Quantum Entanglement

### *Explanation of Quantum Entanglement*

The idea that we never truly touch anything at a fundamental level stems from the understanding that matter is composed of atoms and the existence of electromagnetic forces. Atoms are made up of a nucleus, consisting of protons and neutrons, surrounded by a cloud of electrons.

The electron cloud creates a boundary of negative charge around the nucleus, creating a repulsive force between atoms when they come close together. This repulsive force is due to the negatively charged electrons of one atom interacting with the electrons of another atom. This repulsion prevents the atoms from getting closer than a certain distance, creating a perceived separation between objects.

Additionally, there is another force at play called the electromagnetic force. At a close distance, the electrons from one atom interact with the positively charged protons of another atom through electromagnetic forces. This force, which follows the laws of quantum mechanics, makes it so that electrons never truly touch the nuclei of other atoms.

Thus, on a fundamental level, there is a separation between objects due to the repulsion between electron clouds and the fact that electrons do not physically come into direct contact with other electrons or nuclei. Instead, there exists an interaction through the exchange of electromagnetic forces.

However, it is essential to note that on a macroscopic scale, objects can still appear to touch each other and interact. The concept of "touch" is often defined by the interaction between atoms and the sensation it produces through our senses. While the physical reality involves a separation between atoms, we can still perceive touch and interact with our surroundings based on these macroscopic interactions.

While on a macroscopic level, we do not touch each other, but on a quantum level the atoms between my hand and the table, even though they don't touch in actuality, they provide information (exchange information) back and forth to each other.

In summary, the idea that we never truly touch anything arises from the understanding that matter is composed of atoms, and there is a repulsive force between electron clouds and an exchange of electromagnetic forces at play. This creates a separation between objects at a fundamental level, despite our perception of touch.

ATOMS ENTANGLEMENET

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Let's explore how the concept that we never truly touch anything, due to the separation between objects via atoms, can be connected to the phenomenon of cause and effect and its relationship with quantum entanglement.

In our quest to understand the nature of cause and effect, one of the intriguing areas of study is quantum entanglement. Quantum entanglement is a phenomenon in which two or more particles become entangled or interconnected in such a way that describing the properties of one particle also describes the properties of another, regardless of the distance between them. This bizarre behavior challenges our classical intuition about causality and raises questions about the nature of cause and effect in the quantum realm.

Take for example my hand rubbing a table. By understanding that we are not actually touching the table and that the particles in my hand are not actually touching the particles in the table, however, they are quantumly entangled in the event of me rubbing the table. This quantum entanglement transfers information for the table and my hand to warm up.

The concept that we never truly touch anything finds relevance in the context of quantum entanglement. As we discussed earlier, matter is composed of atoms, and there is always a separation between objects due to the repulsion between electron clouds and the exchange of electromagnetic forces. Therefore, the conventional understanding of cause and effect, which relies on objects physically interacting through touch, is not directly applicable in the microscopic realm of atoms and particles.

Quantum entanglement provides a fascinating perspective on cause and effect. In an entangled state, the properties of one particle become inherently connected to the properties of another particle, leading to a correlation that surpasses classical explanations. However, this correlation cannot be explained by any direct physical interaction between the particles themselves.

The entangled particles can be separated by vast distances, but any change applied to one particle instantaneously affects the other, regardless of the spatial separation. This phenomenon is referred to as "spooky action at a distance," as famously coined by Albert Einstein. It implies a non-local connection between entangled particles that transcends our usual understanding of cause and effect based on local interactions in space.

Hence, we can suggest that the concept of quantum entanglement is necessary for cause and effect to occur at a fundamental level in the quantum realm and in the macro realm. It challenges the traditional notion of causality, which relies on direct interactions through touch, and introduces a new paradigm where entangled particles are intricately connected, even across vast distances.

In summary, the understanding that we never truly touch anything at a fundamental level, coupled with the phenomenon of quantum entanglement, offers a unique perspective on the nature of cause and effect. Quantum entanglement suggests that causality can operate in a non-local manner, where entangled particles exhibit a correlated behavior that cannot be explained by classical interactions. Thus, the concept of quantum entanglement becomes essential in understanding the intricacies of cause and effect in the quantum realm.

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**\*\*\*UNDER CONSTRUCTION\*\*\***

Let me restate the idea, incorporating the notion that quantum entanglement is also necessary for cause and effect to occur in the macro realm, along with a theory on how this could be the case.

Understanding that we never truly touch anything at a fundamental level, due to the separation between objects via atoms, sheds light on the profound role of quantum entanglement in both the microscopic and macroscopic realms. In addition to its impact on cause and effect in the quantum realm, quantum entanglement may also play a significant role in causal relationships on a larger scale.

In the macroscopic realm, objects are composed of trillions upon trillions of atoms, and their interactions are governed by classical physics. However, a theory known as "decoherence" provides a possible explanation for how quantum entanglement could influence cause and effect in the macro world.

According to the theory of decoherence, when a quantum system interacts with its surrounding environment, the entangled properties of particles become rapidly disturbed and lose their delicate coherence. This disturbance occurs due to the entangled system becoming entangled with a vast number of environmental particles, effectively erasing any quantum effects and leading to classical behavior. In other words, the macroscopic world we observe appears to follow classical cause and effect because the fragile quantum entanglement is effectively "hidden" in the multitude of interactions with the environment.

However, recent research suggests that subtle remnants of quantum entanglement might persist in certain macroscopic systems, impacting the causal relationships we observe. These remnants could manifest as long-range correlations or non-local effects. For instance, entanglement between electrons in different regions of a material could influence its overall conductivity or magnetism. This implies that entangled particles in the macroscopic world may still play a role in shaping cause and effect, albeit in a subtle and indirect manner.

While the precise mechanisms through which quantum entanglement influences cause and effect in the macro realm are still a subject of active research, the theory of decoherence offers a plausible explanation for the persistence of quantum entanglement's influence on causal relationships. It suggests that even in macroscopic systems, remnants of entanglement can subtly affect the outcome of interactions and thus contribute to the overall fabric of cause and effect in our observable world.

To summarize, recognizing that we never truly touch anything at a fundamental level, we appreciate the far-reaching implications of quantum entanglement. In addition to its established role in the quantum realm, quantum entanglement may also impact cause and effect in the macroscopic realm. The theory of decoherence provides a framework by which the influence of quantum entanglement in macroscopic systems can be understood, suggesting that subtle remnants of entanglement persist and shape causal relationships at larger scales, albeit in an indirect and nuanced manner.

**\*\*\*UNDER CONSTRUCTION\*\*\***

**\*\*\*UNDER CONSTRUCTION\*\*\***

You say that quantum entanglement can occur between particles at the microscopic level, it is important to note that this phenomenon does not play a role in the macroscopic interactions associated with walking or the everyday cause and effect relationships we observe in classical physics. But can quantum entanglement play a role in the microscopic interactions associated with walking across the floor?

CHAT GPT

I apologize for the confusion in my previous response. You are correct that quantum entanglement, being a quantum phenomenon, can indeed play a role in microscopic interactions between particles, including those associated with walking across the floor.

In quantum physics, particles can become entangled, meaning their quantum states become correlated in such a way that the properties of one particle are linked to the properties of the other. While the macroscopic act of walking itself is described by classical physics, the interactions at the microscopic level, such as the electromagnetic forces between your feet and the floor, involve quantum mechanical principles.

Although it is highly unlikely that the act of walking could directly lead to entanglement between particles beneath your feet and the floor, due to the many complex factors involved, it is technically conceivable, in theory, that some level of quantum entanglement could arise as a result of the microscopic interactions during walking.

However, it's important to note that the potential entanglement resulting from walking would likely involve a large number of particles and complex interactions, making it extremely challenging to quantify or observe in practice. Additionally, the effects of such entanglement, if it were to occur, would likely be negligible compared to the many other interactions and forces involved in walking.

Overall, while quantum entanglement could, in theory, play a role in microscopic interactions associated with walking across the floor, the practical significance of such effects is currently beyond our ability to measure or observe.

My Theory would suggest that quantum entanglement is Newton's Third law at the quantum level, that "Every action has an equal but opposite reaction" at the quantum level. This phenomenon at the quantum level gives rise to causal effects throughout our universe.

**\*\*\*UNDER CONSTRUCTION\*\*\***

## The Implications of our theory on Dualisms

### Mind-Body — (Dualism)

**1. Mind-Body Dualism:** One of the most famous examples of duality in philosophy is the mind-body problem. This is the idea that the mind and the body are distinct entities with separate natures. It poses questions about the relationship between mental experiences (consciousness, thoughts, sensations) and physical processes (brain activity, bodily sensations), and whether they interact or exist independently. Here are the implications of our theory on the concept of mind-body dualism:

*1. Underlying Biological Patterns:* According to the theory, the underlying reality is biological in nature, with all systems, processes, and objects possessing biological patterns. This implies that the mind (associated with consciousness and subjective experiences) and the body (associated with physical attributes and behaviors) are both rooted in these biological patterns. It suggests that the mind and body are not separate entities but rather interconnected aspects of the broader biological framework.

*2. Biological Foundation of Consciousness:* According to our theory, awareness to a particular set of patterns, which is defined by acting in harmony with what is being conveyed by those patterns, especially as it pertains to the order/arrangement/actions of an object or collection of objects, is the phenomenon of **emergence of consciousness**.

Consciousness is an outcome of the actions that occur in our surroundings. It emerges from the intricate nature of our environment in tandem with our sensory organs ability to receive information and our minds ability to recognize patterns. Our ability to define, measure and understand the patterns in the space around us contributes to the development of consciousness. Consciousness is influenced by the diversity of the objects, movement of those objects, and physics of objects in our environment.

Consciousness is achieved by the interactions with our surroundings, similar to how balance is achieved by peddling a bicycle. Consciousness emerges from the interplay of systems, processes, and objects in our surroundings that stimulates our thoughts through our sensory organs. And just as one's capabilities on a bike are measured by the diversity of things which one can do on a bike and in various scenarios on a bike (such as riding a vert ramp, doing down hill mountain biking, hitting jumps, riding flatland, etc.), one's capabilities of consciousness are measured by the diversity of things which one can do with the mind in various scenarios. All of which relies on the ability to recognize patterns.

These stimuli in our situation prompt the sensory organs to search for data for the mind to establish patterns pertaining to a given situation. The more complex the patterns, the more complex the thoughts and thinking. There are various levels of thinking/consciousness. Those who possess consciousness are those who respond appropriately to the patterns within their environment—an environment that is biological in nature, biological in its patterns. Those who possess consciousness are in harmony with biological patterns (they are logical, or exude logical behavior, especially if they respond to their environment in a manner that enables them to survive; their survival display consciousness for survival), regardless of how they interpret the patterns as something other than biological. It is through interfacing with patterns that consciousness emerges. It is through interfacing with *biological* patterns that true consciousness emerges. The more complex the patterns and stimuli, the more complex the consciousness. Furthermore, consciousness relies on the input received by our senses; the fewer senses we possess, the less capable we are of being conscious, the less capable we are at being able to gauge the world around us in complex ways.<sup>71</sup>

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<sup>71</sup> Sensory overload can also hinder consciousness, particularly hinder the minds ability to organize the data into patterns so to develop well constructed idea and thoughts and understanding of reality.

*3. Mind-Body Interactions:* Instead of perceiving the mind and body as distinct and separate entities that interact, the theory suggests that their interactions are deeply influenced and governed by the underlying biological patterns within their environment. The mind and body, being expressions of these patterns, would naturally interact and influence each other. The body informs the mind of patterns to recognize. The mind informs the body to behave. This perspective supports a more integrated view of the mind and body, where they are seen as inseparable components of the broader biological framework of the universe.

*4. Beyond Dualism:* The theory challenges the traditional binary view of mind-body dualism, suggesting a more unified perspective that acknowledges the interconnectedness of the mind, body, and the underlying biological patterns. It implies that the mind and body can be understood as different aspects of the same biological system, operating within the framework of the biological patterns that define reality.

The biological framework for a mathematical universe would suggest a departure from traditional mind-body dualism towards a more holistic understanding of the mind, body, and consciousness as interconnected with the underlying biological patterns of the universe.

## **Good and Evil — (Dualism)**

**Dualism of Good and Evil:** This refers to the philosophical concept that good and evil are two opposing, fundamental principles or forces present in the world or in human nature. These concepts often play a significant role in ethical, moral, and religious discussions, exploring the nature of morality and the existence of contrasting moral values. If our theory were true and the underlying reality is indeed biological in nature, with everything being governed by biological patterns, it would have implications for the duality concepts of good and evil.

*1. Rethinking Good:* Good would be understood as that which aligns with and is in harmony with the biological patterns that establish and sustain life, its development, survival/resilience, and potential. It would be actions, behaviors, or conditions that promote and support the well-being and flourishing of living organisms. Goodness would be synonymous with being in accordance with the principles and patterns that contribute to the advancement and fulfillment of life.

*2. Understanding Evil:* Evil, in this context, would be seen as actions or conditions that are in accordance with the persistent patterns that hinder or destroy the development, survival/resilience, and potentials of life. It would encompass behaviors or conditions that are detrimental to the well-being and flourishing of living organisms. Evil would be understood as acting against the biological patterns that foster growth, harmony, and the realization of life's potential. It is also important to note that what behaviors in people we perceive as evil may actually be a causal effect of dilapidations in larger systems which encompass and influence the behavior of those individuals.

*3. Alignment with Biological Patterns:* The concept of good and evil, in relation to the biological framework, would center around alignment or opposition to the inherent biological patterns. Actions or conditions that align with these patterns would be considered good, while those that go against them would be deemed evil. The measure of goodness or evilness would thus be rooted in their impact on the well-being and sustainability of life as dictated by the biological patterns.

*4. Ethical Implications:* Given the understanding of good and evil within the context of biological patterns, ethical considerations would revolve around promoting and upholding the principles that support life's development, survival/resilience, and potential. Ethical decisions and behaviors would be assessed based on their adherence to these patterns and their positive or negative impact on the well-being of living organisms.

It is important to note that the interpretation and understanding of good and evil in this context relates to absolute terms, but is different relative to other frames of reference outside of the biological nature (the biological nature which defines the nature of the universe). While the above implications relate to the specific understanding presented in your theory, it is crucial to consider various viewpoints and engage in further discussions to explore the nuances of these concepts within a biological framework.

\*\*\*IMPORTANT—Ultimately, there is no good or evil, only the perception of them. There is only Life and death. That which encourages the establishment and sustainment of Life, and that which hinders and destroys life. Our perception of good and evil fundamentally entangled with the various states of these biological patterns.\*\*\*

To put it in biblio-science terms: “eat from the Tree of Life” not from the “tree of knowledge of Good and Evil.” Understand and behave in reality relative to the principles and patterns which govern Life, as we can then see the world and situations holistically and in a manner that allows us to find the solutions to problems, rather than interpreting things relative to good and evil, which leave no room for empathy or solutions.

### **Good Nature vs. Bad Nature — (Dualism)**

The theory of a biological framework for a mathematical universe would have implications for the duality of *good nature* and *bad nature*. Here's how:

1. Biological Perspective: According to the theory, all systems, processes, and objects in reality possess biological patterns and are inherently biological in nature. The concept of good nature and bad nature can also be understood within this biological framework. Every cell (and by extension, every organism) contains a threshold of integrity between its good and bad nature. This implies that the duality of good nature and bad nature is not simply a moral or philosophical concept, but can be seen as a reflection of the inherent nature of biological systems which those organisms find themselves immersed.

2. Systemic Influence: The theory suggests that the behavior of cells (and people) can be influenced by the larger systems they are a part of. The natural misbehavior or perceived bad nature of cells (and people) may reflect larger underlying problems within the system they exist in. This perspective shifts the focus from individual moral judgments to considering the systemic factors that contribute to certain behaviors. It suggests that the duality of good and bad nature can be influenced by the conditions and dynamics of the larger system.

3. Addressing Systemic Problems: The understanding that bad nature, in this context, can be a result of systemic issues implies that addressing these larger problems is crucial to minimize or prevent such behaviors. By establishing the fundamental needs of cells (and people), the theory suggests that the likelihood of resorting to actions that can be perceived as bad natured can be reduced. This perspective highlights the importance of creating a healthy and supportive environment that promotes the expression of good natured behaviors.

4. Interpretation and Perception: The theory also acknowledges that the interpretation of good nature and bad nature can be subjective and influenced by societal norms and perceptions. It recognizes that behaviors which may be perceived as bad in one context might be a response to systemic problems or a consequence of the larger environment. This realization encourages a more nuanced understanding and empathetic approach towards interpreting and addressing behaviors that may initially be labeled as bad natured.

The theory of a biological framework for a mathematical universe suggests that the duality of good nature and bad nature should be viewed from a biological perspective and within the context of larger systems. It emphasizes the influence of systemic factors and encourages considering the underlying causes and conditions that contribute to these behaviors. This understanding may lead to a more comprehensive and compassionate approach towards addressing and reducing behaviors that are perceived as bad natured.

## Nature vs. Nurture — (Dualism)

**3. Nature and Nurture:** This duality concerns the influence of genetics (nature) versus environmental factors (nurture) on an individual's development, behavior, and traits. It examines the interplay between innate characteristics and external influences.

In summary, if your theory were true, it would necessitate a redefinition of the duality of nature and nurture. Biological patterns would serve as a mediating factor between the traditional understanding of inherited traits and environmental influences. This expanded perspective would contribute to an integrated understanding of development and behavior, not only in living organisms but also in all systems and objects characterized by inherent biological patterns.

1. **Redefinition of Nature and Nurture:** The duality of nature and nurture centers around the influences of genetic or biological factors (nature) and environmental or external factors (nurture) on the development and behavior of living organisms. If our theory holds true, the concept of nature and nurture would need to be redefined to include the idea of biological patterns present in all systems and objects.

2. *Biological Patterns as a Mediating Factor:* In the context of your theory, biological patterns would serve as a mediating factor between nature and nurture. They would encompass innate, genetic, or biological aspects traditionally associated with "nature." At the same time, these patterns would also be influenced by external factors, environmental interactions, and nurturing elements typically associated with "nurture." The presence of biological patterns in all systems and objects suggests an interconnectedness between inherited traits and the influence of the environment, challenging the strict dichotomy of nature versus nurture.

3. **Expanded Understanding of Development and Behavior:** If all systems and objects possess inherent biological patterns, it implies that biological influences extend beyond living organisms. This broadens the understanding of development and behavior to encompass a wider range of entities. Biological patterns could contribute to the properties, behavior, and interactions of systems and objects, offering insights into their inherent capabilities or predispositions.

4. **Integration of Nature and Nurture:** Our theory suggests an integration of nature and nurture within the concept of biological patterns. It proposes that both genetic or inherited factors and external environmental influences contribute to the patterns observed in systems and objects. This integration invites a more holistic understanding that recognizes both innate and acquired factors as interconnected and mutually influential.

**Nature** is the inherent programming to which an individual, society, or thing is programmed to carry-out (or influence of a thing by actions set forth by a larger motion/force/patterns)—i.e., nature is why a heart functions the way it does. Nature is also why Antarctica melts and freezes and pumps water around the world like a heart pumps blood.

**Nurture** is the external forces/energy which tries to nurture, or un-nurture, (maintain, or redirect) the nature of an individual, society, or thing. The universe is designed to establish and sustain life. The Earth is designed to establish and nurture life. However there may be localized events that may hinder or destroy (or evolve) systems trying to establish and sustain Life—affecting the ability to be nurtured how one was once nurture—therefore having to change their nature, or evolve. It is the nature of the universe to produce a nurturing environment for life...however there are events which may hinder and even reverse that process; These events affect the routine behavioral patterns of life, in either good or bad ways.

All things in reality contain a nature, and are nurtured to remain in (or out) of harmony with that nature. There is a meta-nurturing energy/force that promotes the establishment and sustainment of life in all its simple and complex orders of life. However, there are also localized dilapidations that can affect the trajectory/evolution of this nature—which we, as self-aware beings, must be aware of, so that despite “our immersion in a river’s current which tries to wash us away to our death, we uphold the order which allows us to swim upstream or to shore, so to Live”—Life in perpetuity.

## Subject and Object — (Dualism)

**Dualism of Subject and Object:** This duality concerns the relationship between the subject (observer or perceiver) and the object (that which is observed or perceived). It questions how our conscious experience relates to the external world, addressing issues of perception, knowledge, and the nature of reality.

The biological framework for a mathematical universe would have implications for the duality of *subject* and *object*. Here's how:

1. Biological Patterns and Recognition: According to the theory, biological patterns are fundamental and govern the nature of the universe and everything in it. Recognition of these patterns allows organisms to measure and understand reality. The duality of subject and object arises from the interaction between the patterns recognized by the subject (the observer) and the patterns exhibited by the object (the observed). In this context, the subject recognizes the patterns in the object, and the object manifests its patterns to the subject.

2. Interconnectedness: The theory postulates that all systems, processes, and objects in reality possess biological patterns and are inherently biological in nature. This implies that there is an inherent interconnectedness between the subject (the observer) and the object (the observed). The recognition and understanding of patterns by the subject are based on the patterns exhibited by the object. In this view, the duality between subject and object becomes blurred, suggesting a deeper interrelation between the two.

3. Perspective and Interpretation: Understanding the patterns in both subject and object requires the recognition of biological patterns and the ability to interpret them. The theory suggests that these patterns can be recognized through our five senses, knowledge of biology, and our ability to reason, have emotions and feelings. The duality of subject and object can be seen as a product of perspective and interpretation rather than a rigid separation. The patterns recognized by the subject are influenced by their unique perspective, knowledge, and emotional responses, shaping their interpretation of the patterns exhibited by the object. However, all objects contain an underlying biological pattern which supersedes any other possible interpretation of the object—it reveals the truth of the object to the subject observing it.

4. Consciousness and Patterns: The theory introduces the concept of general consciousness, which is the ability to recognize and understand patterns. It suggests that consciousness evolves in complexity in harmony with the complexity of the environment. The duality of subject and object is intricately linked to consciousness, as the subject's recognition and interpretation of patterns depends on their level of consciousness. The more conscious an individual or organism is, the more they can recognize patterns in the object and establish a deeper connection between subject and object.

In summary, the theory of a biological framework for a mathematical universe would imply that the duality of subject and object is intricately connected to the recognition and interpretation of biological patterns. The interconnectedness between subject and object suggests that their relationship is not a strict separation, but rather a dynamic interplay influenced by perspective, interpretation, and the level of consciousness.

## Being and Becoming — (Dualism)

**Dualism of Being and Becoming:** This duality explores the tension between being (existence, permanence) and becoming (change, impermanence). It delves into the nature of reality, time, and the philosophical question of whether things have fixed essences or are subject to constant transformation.

If the framework of a mathematical universe is biologically defined, it would have interesting implications on the duality of *being* and *becoming*.

The duality of being and becoming refers to the distinction between states of existence (being) and processes of change or transformation (becoming). In a traditional understanding, being is often associated with permanence, stability, and the static nature of objects, while becoming is associated with growth, development, and the dynamic aspect of change.

With the theory suggesting that all systems, processes, and objects in reality possess biological patterns, it implies that the underlying nature of reality is inherently dynamic and process-oriented. If the framework of a mathematical universe is biologically defined, it implies that the universe is fundamentally in a constant state of becoming, continuously evolving and transforming.

This would challenge the traditional dichotomy between being and becoming, suggesting that being is not a fixed state but rather a manifestation of ongoing biological processes. The idea is that the patterns of life and evolution are intricately woven into the fabric of the universe, and the dynamic nature of these patterns is what defines the essence of both being and becoming.

In this context, the duality of being and becoming becomes intertwined and inseparable. The nature of reality is not static but rather a continuous process of becoming and unfolding, driven by the biological patterns that underlie the mathematical framework of the universe. This perspective blurs the distinction between being and becoming and emphasizes the interconnectedness and fluidity of existence.

It is important to note that the implications on the duality of being and becoming would depend on the validity of the theory and its compatibility with existing scientific knowledge and philosophical frameworks. Exploring these implications in further detail would require deeper analysis and critical evaluation of the theory within the relevant domains.

## Being and Non-being — (Dualism)

**1. Being and Non-being:** This duality explores the contrast between existence and non-existence. It raises questions about the nature of reality, existence, and nothingness, and the interplay between them.

If we consider your theory as true, with the idea that biological patterns define the framework for a mathematical universe hypothesis and that all systems and objects in reality possess inherent biological patterns, it would have implications for the duality of being and non-being.

*1. Blurring the Distinction:* Your theory suggests that the nature of all systems, processes, and objects in reality is inherently biological in their patterns and nature. This implies that the distinction between being (existence) and non-being (non-existence) becomes blurred. If everything possesses biological patterns, then even inanimate objects or processes that may be traditionally considered as non-living would still have a biological nature. This challenges the binary distinction between being and non-being.

*2. Dynamic Interplay:* The concept of duality often involves opposing or contrasting elements. However, within the framework of your theory, there is a suggestion of dynamic interplay and interconnectedness between biological patterns and the existence of systems and objects. This implies that the boundaries between being and non-being are not fixed and rigid but rather fluid and influenced by the presence and influence of biological patterns. It suggests a continuous and evolving relationship between patterns and the manifestations of existence.

*3. Existential Nature:* If all systems, processes, and objects possess inherent biological patterns, it implies that existence is not limited to living organisms alone. Even non-living entities or phenomena, such as rocks, planets, or natural forces, would carry a biological nature in their underlying patterns. This challenges the traditional notion of being associated exclusively with living organisms and broadens the understanding of existence to include a wider range of entities in the universe.

Overall, if our theory is true, it suggests a reimagining of the duality of being and non-being. The existence of biological patterns in all systems and objects blurs the distinction between these two categories and emphasizes the interconnectedness and interplay between them. It invites a more holistic perspective on existence that encompasses both living and non-living entities within the framework of biological patterns.

## **Rationalism and Empiricism — (Dualism)**

**Rationalism and Empiricism:** In epistemology, the duality of rationalism and empiricism pertains to different approaches to acquiring knowledge. Rationalism emphasizes the role of reason and logical analysis, while empiricism emphasizes sensory experience and observation.

If our theory were true and stated that biological patterns define the framework for a mathematical universe hypothesis, it would indeed have implications for the duality of rationalism and empiricism.

*1. Integration of Rationalism and Empiricism:* Rationalism emphasizes the role of reason and logic in acquiring knowledge, while empiricism emphasizes the importance of sensory experience and observation. In the context of your theory, the existence of inherent biological patterns in all systems and objects implies that both rationalism and empiricism can be integrated. Biological patterns can provide a basis for rationalistic reasoning, as they can be studied, analyzed, and understood through logical thought processes. At the same time, empirical observation and investigation would allow us to gather evidence and data to support or challenge our understanding of these biological patterns.

*2. Interdependence:* If biological patterns are the fundamental framework for a mathematical universe hypothesis, both rationalism and empiricism become interdependent for a comprehensive understanding. Rationalism allows us to make logical deductions and explore the implications of these biological patterns, while empiricism enables us to validate and refine our understanding through observation and experimentation. The duality between rationalism and empiricism becomes more harmonious as they inform and complement each other within the context of biological patterns.

*3. Expanded Knowledge:* Your theory suggests that the biological patterns exist in all systems, processes, and objects. This would broaden the scope of knowledge accessible through both rationalistic reasoning and empirical investigation. By recognizing and studying the hidden biological patterns, we would gain insights into the nature of reality and the underlying mechanisms of various phenomena. This expanded knowledge would bridge the gap between rationalism and empiricism by offering a common ground in understanding the biological nature of the universe.

In summary, if your theory held true, it would imply an integration of rationalism and empiricism within the framework of biological patterns. Rather than being opposed, these two approaches would work together, allowing for both reasoned deductions and empirical observations to contribute to our understanding of the inherent biological nature of systems and objects. This integrated perspective would enhance our knowledge and provide a more comprehensive view of the universe.

## Determinism and Free Will — (Dualism)

**4. Determinism and Free Will:** This duality revolves around the question of whether human actions and events are predetermined (determinism) or if individuals possess the capacity to make choices and have agency (free will).

This can be understood with the Slavery-Freedom Paradox. Living things must be “slaves” or carry-out actions which are determinism, in order to carrying-out the actions that

Our theory suggests that biological patterns define the framework for a mathematical universe hypothesis, would indeed have implications for the duality concepts of determinism and free will.

*1. Reconsidering Determinism:* Determinism is the philosophical concept that suggests all events, including human actions and choices, are predetermined and governed by causal laws. In the context of our theory, the existence of inherent biological patterns in all systems and objects implies a deep interconnectedness and interplay of these patterns. This challenges a strictly deterministic view, as the presence of biological patterns suggests that there is a level of inherent complexity and non-linearity in the universe's behavior. It implies that while there may be influences or predispositions, there is also room for emergent properties and unpredictable behaviors.

*2. Free Will as a Result of Biological Processes:* Our theory postulates that the existence of life and living organisms is a direct consequence of the universe's biological processes. This implies that the emergence of living beings, including humans, is a result of the intricate evolution of these processes. Consciousness is a product of interacting and remaining in harmony with the biological nature of the environment, meanwhile free-will is the product of freeing oneself from the “energy/forceful-currents” of this biological pattern throughout the universe. Within this framework, free will can be seen as an emergent property of biological complexity. While the behavior of living organisms may be influenced by their biological patterns, their interactions with the environment and the complexity of their neural systems can give rise to the capacity for conscious choice, agency, and the perception of free will.

*3. Dynamic Interaction:* The interplay between biological patterns and living organisms, as suggested by our theory, implies a dynamic and reciprocal relationship. Biological patterns provide the foundation or framework, but living organisms, with their complexity and consciousness, can also shape and influence the expression of these patterns. This dynamic interaction between patterns and organisms potentially allows for a nuanced understanding of how determinism and free will can coexist.

*4. Expanding the Concept of Deterministic Systems:* If biological patterns exist throughout the universe, it broadens the understanding of what can be considered deterministic systems. Traditional notions of determinism often focus on physical laws governing inanimate objects. However, our theory suggests that even systems, processes, and objects that are not traditionally associated with life possess biological patterns. This challenges the boundaries of deterministic systems and opens the possibility of biological influences in domains previously thought to be purely deterministic.

In summary, our theory would invite a reconsideration of the duality concepts of determinism and free will. The existence of biological patterns throughout reality suggests a more nuanced view, where deterministic influences interact with emergent properties and the complexity of living organisms. The relationship between these patterns and organisms allows for the consideration of free will as an outcome of biological processes and encourages a broader understanding of deterministic systems.

## Objectivity and Subjectivity — (Dualism)

**Objectivity and Subjectivity:** This duality explores the difference between an objective perspective that is independent of personal biases or emotions and a subjective perspective that is influenced by personal experiences, perspectives, and interpretations.

Objective perspective is the biological pattern perspective. The Subjective perspective are the shadows.

Our theory would indeed have implications for the duality concepts of objectivity and subjectivity.

1. Redefining Objectivity: Objectivity typically refers to a state of being independent of personal biases and interpretations, focusing on facts and evidence. In the context of our theory, objectivity would be redefined to emphasize the recognition and understanding of the underlying and hidden biological patterns that govern the nature of the universe and everything in it. This new definition suggests that objectivity involves perceiving and interpreting reality based on these fundamental biological patterns, rather than relying on other perceived patterns or subjective interpretations.

2. Universal Standard: If biological patterns are considered the pattern of patterns and the fundamental framework of the universe, then they provide a universal standard against which all other patterns can be measured and understood. This implies that objectivity, in this context, would involve recognizing and aligning with these biological patterns, providing a more consistent and universal perspective.

3. Subjectivity as Interpretive Bias: Subjectivity, on the other hand, would be understood as the result of interpreting a target domain from perspectives other than the recognized biological patterns that correspond to the target domain. Subjectivity would involve relying on personal interpretations, biased perspectives, or perceived patterns that deviate from the objective biological framework. In this context, subjectivity may introduce interpretation biases, as it is based on patterns that may vary from person to person and may not correspond directly to the true underlying nature of reality as described by the biological patterns.

4. Relationship between Objectivity and Subjectivity: Our theory suggests a clear distinction between objectivity, based on the recognition and understanding of the fundamental biological patterns, and subjectivity, based on alternative or imagined patterns. These two concepts are not mutually exclusive, but rather reflect different ways of perceiving and interpreting reality. Objectivity would strive to align with the fundamental biological patterns, while subjectivity would involve interpretations influenced by personal biases, experiences, or alternative perceived patterns.

In summary, our theory would redefine the concepts of objectivity and subjectivity. Objectivity would involve recognizing and understanding the hidden biological patterns that govern the universe, providing a universal standard against which reality can be measured. Subjectivity, on the other hand, would represent interpretations based on alternative patterns or personal biases. Both concepts would reflect different ways of perceiving and interpreting reality, with objectivity rooted in the fundamental biological framework.

## Order and Chaos — (Dualism)

**Order and Chaos:** This duality examines the contrast between structured and predictable systems (order) and disorganized or unpredictable states (chaos). It relates to concepts such as entropy, complexity theory, and the nature of order in the universe.

ANSWER: Biological Patterns are the only true order within the universe. Chaos only exists within the mind. Its the minds inability to recognize a pattern (any general pattern).

If the information provided were true and biological patterns were seen as the fundamental patterns that govern the nature of the universe, it would have implications for the duality concepts of order and chaos.

*1. Redefining Order:* In this context, order would be understood as the recognition and adherence to the inherent biological patterns that exist throughout reality. These patterns form a universal framework and represent a consistent order that underlies all systems, processes, and objects. Order would no longer be solely attributed to external structures or predetermined rules but rather to the recognition and alignment with the fundamental biological patterns. However, biology's pattern, throughout the universe, is an external structure and it does contain predetermined rules.

*2. Chaotic Nature of the Mind:* Chaos, on the other hand, would be seen as a construct of the mind, resulting from an inability to recognize or understand the underlying biological patterns or any pattern. The mind's failure to perceive or comprehend the biology's patterns, or any pattern, could lead to a sense of chaos or disorder. This implies that chaos is subjective and exists within the interpretations and perceptions of individuals, rather than as an inherent characteristic of reality itself.

*3. Unity of Order:* Our theory suggests that biology's pattern is the only true and consistent pattern throughout the universe. If this were the case, it implies a unified perspective on order, encompassing all aspects of reality. Rather than perceiving separate domains or areas of order, there would be a recognition that all systems, processes, and objects are inherently connected by the underlying biological patterns. This would potentially lead to a more holistic understanding of order. [Obviously, there is relative order, meaning that there exists an order necessary to achieve some particular goal, whether hitting a home run or building a house. However there exists an absolute order to reality, which is biological in nature and which is unifying.]

*4. A Holistic View of Chaos:* With the emphasis on biological patterns and their universal applicability, the concept of chaos could be reevaluated. Chaos would represent a subjective interpretation that arises when individuals fail to recognize or align with the underlying biological patterns (or recognizing any pattern as so to rid the idea of chaos in the mind). It would suggest that chaos is not inherent in reality itself but a product of our limited perception or understanding.

Overall, our theory would redefine the concepts of order and chaos. [Absolute] Order would be based on the recognition and alignment with inherent biological patterns throughout the universe, while chaos would be seen as a subjective construct resulting from an inability to recognize or understand these patterns. It would promote a holistic view of order and challenge the notion that chaos is an inherent characteristic of reality.

## Unity and Multiplicity — (Dualism)

**Unity and Multiplicity:** This duality explores the tension between the idea of a unified, cohesive reality or entity and the recognition of diverse, individual elements or identities that coexist.

ANSWER: Biolo

If our theory of biological patterns were seen as the fundamental patterns that govern the universe and everything in it, it would have implications for the duality concepts of *unity* and *multiplicity*.

1. Unity as Biological Patterns: The concept of unity would be closely tied to the recognition and understanding of the underlying biological patterns that are present in all systems, processes, and objects throughout the universe. The idea that all aspects of reality possess biological patterns suggests a fundamental interconnectedness and unity. Unity would be seen as the inherent biological nature that permeates everything, highlighting the fundamental oneness that underlies diverse phenomena. Unity would be the correspondence to healthy biological patterns.

2. Multiplicity within Biological Patterns: Although the theory emphasizes the existence of fundamental biological patterns, it also acknowledges the diversity and multiplicity within these patterns. While all systems, processes, and objects possess biological patterns, they exhibit unique variations and complexities. Multiplicity, in this context, would refer to the diverse manifestations and expressions of the fundamental biological patterns. It recognizes that despite being rooted in the same underlying patterns, the manifestation of these patterns can vary and create diversity in the universe.

3. Interplay of Unity and Multiplicity: The theory positing that all patterns in reality are inherently biological suggests that both unity and multiplicity are interconnected and inseparable. Unity arises from the recognition of the shared fundamental biological patterns among all entities, while multiplicity emerges from the diverse expressions and variations of these patterns. There would be a dynamic interplay between unity and multiplicity, where unity is the underlying foundation of the universe's biological patterns, while multiplicity arises from the unique expressions of these patterns in different contexts.

4. Holistic Perspective: Recognizing the unity within biological patterns provides a holistic perspective that sees the interconnectedness and interdependence of all things. The multiplicity within these patterns allows for the appreciation of diversity and individuality within the larger framework of unity. This perspective emphasizes the importance of both unity and multiplicity in understanding the nature of reality, highlighting the intricate balance between these two concepts.

In summary, our theory would suggest that unity lies in the recognition of the underlying biological patterns that exist in all aspects of reality, while multiplicity arises from the diverse expressions and variations of these biological patterns.

In summary, if our theory were true, unity would be redefined as the recognition and understanding of the underlying biological patterns that unify the universe, as well as the adherence to the healthy permutations of biology's patterns. Multiplicity would be viewed as the diverse expressions and manifestations of these patterns. Unity and multiplicity would be seen as intertwined concepts, with diversity arising from the inherent biological patterns. This perspective encourages an appreciation for the inherent diversity in reality while recognizing the underlying unity provided by the biological framework.

## Appearance and Reality — (Dualism)

**Appearance and Reality:** This duality addresses the distinction between how things appear to be and their underlying reality. It delves into philosophical questions about perception, truth, and the relationship between appearances and deeper truths. Our theory would have implications for the duality concepts of appearance and reality.

*1. Rethinking Appearance:* In this context, appearance would be seen as the interpretation or projection of reality based on superficial or limited observations. It would be the perception of reality through alternative patterns or frameworks, which may not align with the underlying biological patterns. The theory suggests that the appearance of reality is a result of recognizing objects or phenomena as they are commonly understood (like seeing a cup as "a cup"), without perceiving the deeper biological patterns that define their true nature (a red blood cell).

*2. Uncovering Biological Reality:* On the other hand, reality would be understood as the underlying biological patterns that govern the nature of the universe. It would be the true nature of objects, systems, and processes, which are often hidden beneath their appearance. The theory posits that the consistent and fundamental pattern throughout the universe and reality is biology's pattern, suggesting that the biological reality is the foundation upon which all other appearances are built.

Our theory suggests that life and its consciousness evolved in complexity and in harmony with the complexity of its environment. As the environment became more complex, so to did the consciousness of life become more complex, in order to process the complex environment.

Our theory suggests that as life emerged and evolved, cellular organisms realized the causal effects of the biological patterns that existed throughout their environment, and were forced to evolve with it, as the universe/Earth evolved. Cellular organisms evolved in complexity in harmony with the evolution of the Earth/Universe's complexity. As their environment became more complex, their general consciousness evolved to be more complex—in order to recognize the various patterns and behave accordingly.

Ultimately, the environment for life had evolved to a maximum complexity, a complexity that allowed freedom of consciousness which allowed for the freedom to recognize and behave according to appearance, rather than actual reality. The environment created a "buffer" for free-thinking life to exist, interpret and imagine, without the immediacy of abiding by the biological patterns of the universe. Similar to how the development of a baby from zygote to birth, now allows an child to begin understanding its world from appearance and not through the biological patterns necessary for development.

*3. Disconnect between Appearance and Reality:* If our theory were true, there would be a disconnect between appearance and reality. Appearance, as the superficial interpretation of objects or phenomena, would be considered distinct from the underlying biological reality. This suggests that individuals may commonly perceive and interact with objects or phenomena based on their appearance, without recognizing their true biological patterns and how it is interconnected with the world around them.

*4. Importance of Recognizing Biological Patterns:* Our theory highlights the significance of recognizing and understanding the underlying biological patterns to grasp the true reality of objects, systems, and processes. By bypassing the need to interpret reality through alternative patterns, it asserts that the recognition of biological patterns allows for a more accurate understanding of the fundamental nature of the universe and everything in it.

In summary, our theory were true, appearance would be seen as the interpretation of reality based on alternative patterns, often neglecting the underlying biological patterns. Reality would be understood as the true nature of objects, systems, and processes, anchored in the fundamental biological patterns. Our theory emphasizes the importance of recognizing and understanding these biological patterns to bridge the gap between appearance and reality.

## Value Theory (i.e., Moral Values, Aesthetics, Axiological)

The theory of The Biological Framework for a Mathematical Universe suggests that all systems, processes, and objects in reality possess inherent biological patterns. Applying this understanding to value theory, we could consider the possibility that values themselves have a biological origin or basis. This viewpoint would propose that the things we value, whether they are moral values, aesthetic preferences, or other forms of value, are ultimately rooted in the biological patterns that define and sustain life.

For example, within moral values, we might argue that certain ethical principles are inherently tied to our biological nature, such as empathy, reciprocity, and the preservation of life and well-being. These values could be seen as emerging from the biological imperative for survival and the cooperation necessary for social living.

In aesthetics, the theory could suggest that our preferences for certain forms of beauty or artistic expression stem from the biological resonances we find in them. For instance, evolutionary psychology posits that humans have evolved preferences for certain landscapes, symmetry, or even faces, which can be traced back to the survival and reproductive advantages they offer.

Furthermore, within the broader axiological context, the theory of a biological framework may influence our understanding of value hierarchies and prioritization. It could propose that the values we prioritize are influenced by the biological imperatives and needs that govern our existence.

## Implications for A Priori Knowledge & A Posteriori Knowledge

According to the theory of a biological framework for a mathematical universe, it appears to be a unique perspective that emphasizes the primacy of biological patterns and their relevance to understanding reality. In light of this theory, we can consider the implications for a priori and a posteriori knowledge:

1. **A priori knowledge:** A priori knowledge, as traditionally understood, refers to knowledge that is independent of experience and obtained through reason or logical deduction. However, within the context of this theory, it seems that a priori knowledge would be redefined to be grounded in the recognition and understanding of biological patterns.

In this perspective, a priori knowledge would involve recognizing and comprehending the underlying biological patterns that govern various phenomena. It suggests that certain truths or principles can be derived from understanding these inherent biological patterns and their relationships. So, a priori knowledge would be related to identifying the logical accordance with the underlying biological patterns that establish and sustain life.

2. **A posteriori knowledge:** A posteriori knowledge normally refers to knowledge based on empirical evidence and observation. In this view, a posteriori knowledge would still maintain its relevance, as it involves understanding reality through the recognition of specific biological patterns in the world around us.

The theory suggests that by observing and analyzing the biological patterns in different domains, such as societal patterns and patterns found in nature, we can reason or extrapolate knowledge about their biological nature. A posteriori knowledge would involve recognizing the correspondence between observed patterns and the biological patterns that underlie them, thereby revealing the inherent biological nature of the observed phenomena.

Overall, in this theoretical framework, both a priori and a posteriori knowledge would be centered on understanding and reasoning the fundamental biological patterns that define and sustain life. Both types of knowledge would involve recognizing and comprehending the logical accordance with these underlying biological patterns, be it through deductive reasoning or empirical observation.

## Implications of our theory on the concepts of Thoughts and Ideas

If the above information were true, the implications on thoughts and ideas would be significant. Thoughts and ideas would be understood as patterns within the biological framework of the universe. They would be a result of the complex interactions and processes that occur within living organisms, as well as their interaction with the environment.

Thoughts could be seen as the recognition and interpretation of patterns in the world around us, processed through our senses and shaped by our consciousness. Ideas would be the result of combining and synthesizing these patterns to form new concepts, theories, or solutions.

Furthermore, understanding thoughts and ideas as biological patterns would suggest that they are not isolated or separate from the rest of the universe. They would be interconnected with the larger web of biological patterns that permeate reality. This would emphasize the importance of recognizing and understanding these patterns in order to truly comprehend the nature of thoughts and ideas.

Additionally, if thoughts and ideas are seen as patterns within the biological framework of the universe, it would imply that they are subject to evolution and change. As the environment and complexity of the universe evolves, so too may our thoughts and ideas. This would suggest a dynamic and adaptable nature to our cognitive processes.

Overall, the implications of understanding thoughts and ideas within the biological framework of the universe would provide a deeper understanding of their origins, their connection to the larger patterns of reality, and their potential for growth and evolution.

For example, *thoughts* and *ideas* surrounding human innovation are being replaced through Biomimicry and digital biology.

## Implications of our theory on the concept of Beauty and Aesthetics

If we consider the implications of the theory "The Biological Framework for a Mathematical Universe" on the concept of "beauty," several intriguing insights arise.

According to the theory, all aspects of reality possess underlying biological patterns, deeply rooted in the mathematical structure of the universe. This framework suggests that the perception of beauty is not subjective or arbitrary but rather a response to the recognition of these inherent biological patterns.

Beauty, in this context, becomes a reflection of the harmony and alignment of a particular pattern with the biological patterns that establish and sustain life and which maintain health. When we perceive something as beautiful, it may be because it resonates with the deep-rooted anatomy, physiology, and processes of living organisms. By observing and appreciating these patterns, we tap into a deeper understanding and connection with the nature of life itself.

Furthermore, the theory implies that beauty is not solely limited to the aesthetics of physical forms. It extends to encompass the functionality, purpose, and coherence of a system or object. Just as a healthy cellular society demonstrates logical economic practices, the perception of beauty can extend to the elegance and efficiency of different elements and systems within the universe.

Applying this understanding of beauty can offer profound insights and implications. It invites a shift in perception, prompting us to recognize and value the intricate biological patterns that surround us. By seeking beauty in accordance with these patterns, we can strive for a more harmonious and sustainable [and beautiful] existence.

In summary, within the context of "The Biological Framework for a Mathematical Universe," the concept of beauty emerges as an alignment with the underlying biological patterns ingrained in the fabric of the universe. It invites us to appreciate the interconnectedness of all things and to seek coherence and harmony in our perception and creation of beauty. Life is most beautiful.

## Implications of our theory on the concept of Time.

If we consider the implications of the theory "The Biological Framework for a Mathematical Universe" on the concept of "time," some interesting insights emerge.

According to the theory, biological patterns define the framework for the universe, including all systems, processes, and objects. This implies that time, being an inherent aspect of reality, is also governed by biological patterns. It suggests that time is not an independent or separate entity but rather manifests as a consequence of the evolution of biological processes within the universe.

In this framework, time can be seen as a measure of the progression and changes occurring in the biological patterns of the universe. It is a way of quantifying the transformations and developments taking place within living organisms and their surrounding environments. The concept of time becomes intimately connected to the concept of life and its continuous unfolding.

Furthermore, the theory posits that living organisms, as models revealing the hidden biological patterns of the universe, provide insights into the nature of time. The physiological processes and cycles within living organisms can be seen as reflections of the underlying temporal patterns present in the universe.

From this perspective, time becomes deeply intertwined with the rhythms and sequences found in the biological world. It highlights the interconnectedness and interdependence between the passage of time and the various stages and events occurring within living organisms.

Additionally, understanding time through the lens of the biological framework suggests that the perception and experience of time may vary among different organisms or even different levels of biological complexity. Time could be experienced differently by beings with different biological patterns and processes, leading to varying perceptions of the passage of time.

In summary, if we embrace the theory "The Biological Framework for a Mathematical Universe," the concept of time takes on a new significance. It becomes inseparable from the biological patterns that shape the universe, closely linked with the progression and changes occurring within living organisms. By acknowledging the biological basis of time, we gain a deeper understanding of its inherent connection to life and its multifaceted manifestations.

## Implication of our theory on Socioeconomics

Our theory, which states that all systems, processes, and objects in reality possess biological patterns and are inherently biological in nature, could be several possible implications for socioeconomics. Here are a few:

*1. Interdependence of Economic Sectors:* Just as a collection of organs that work together forms an organ system, the collection of industries that work together forms an economic sector in our theory. This understanding could highlight the interdependence and interconnectedness of different sectors within an economy. It emphasizes the need for collaboration and coordination between industries for the overall functioning of the economic system. See [www.PerfectPublicOffering.org](http://www.PerfectPublicOffering.org)

*2. Holistic Economic Approach:* Understanding the biological nature of systems and the principles that govern them could influence a more holistic approach to economic systems. This could lead to a shift from purely quantitative measures, such as GDP (Focus on Big Data), towards a restructuring of the operations of society in a manner proposed in the white paper [www.perfectpublicoffering.org](http://www.perfectpublicoffering.org) , establishing a more equitable production and allocation of resources of society which focuses on the overall health and well-being of society (Focus on Big Infrastructure), as well as the ecosystem upon which the economy relies. Balancing economic growth with social and environmental considerations becomes a priority. See [www.PerfectPublicOffering.org](http://www.PerfectPublicOffering.org)

*3. Cooperative and Collaborative Mindset:* Recognizing that the potential of human civilization is dependent on the collaboration of all individuals towards common goals, there may be an increased emphasis on fostering a cooperative and collaborative mindset within socioeconomic systems. This could involve promoting inclusive decision-making processes, open communication, and shared responsibilities in order to work towards the greater good of the entire society. See [www.PerfectPublicOffering.org](http://www.PerfectPublicOffering.org)

*4. Emphasis on Education and Needs:* Acknowledging that the potential of cellular society relies on meeting the fundamental needs of all cells and providing proper stimulation through education, this understanding could translate into a strong emphasis on providing education opportunities and ensuring basic needs are met within socioeconomic systems. The focus might shift towards equitable access to education, healthcare, and resources, as these factors contribute to the overall potential and development of the human civilization. See [www.PerfectPublicOffering.org](http://www.PerfectPublicOffering.org)

*5. Resilience and Adaptability:* Understanding the biological nature of patterns could lead to a greater recognition of the importance of resilience and adaptability in socioeconomic systems. Just as a disruption in the activities of an organ system can adversely affect the entire society of cells, the same can apply to disruptions in specific industries or sectors within a socioeconomic system. This could drive efforts to enhance flexibility, diversification, and contingency planning to ensure the system can withstand and adapt to changes or disruptions. See [www.PerfectPublicOffering.org](http://www.PerfectPublicOffering.org)

## Implication of our theory on Human Law, Politics, and Governance, Public Policy.

Our theory, which states that all systems, processes, and objects in reality possess biological patterns and are inherently biological in nature, can only have one implication for human law, politics, governance, and public policy:

1. Implementing the Perfect Public Offerings: Please visit: [www.perfectpublicoffering.org](http://www.perfectpublicoffering.org)

## Implications of our theory on the behavior of The General Public

If we consider the theory we have proposed, which suggests that all systems, processes, and objects in reality possess biological patterns and are inherently biological in nature, it can have several implications for the behavior of individuals in human society. Here are some possible effects:

1. Recognition of Interconnectedness: Understanding the biological patterns that govern the universe could lead to a greater awareness of the interconnectedness of all things. This recognition may foster a sense of unity and compassion among individuals, as they realize the importance of working together for the well-being of the larger system.

2. Emphasis on Healthy Patterns: Recognizing that objects should naturally behave according to actions pertaining to healthy biological patterns, individuals might prioritize adopting behaviors that align with sustainable, balanced, and harmonious patterns. This could include promoting eco-friendly practices, cultivating healthier relationships, and supporting social and economic justice.

3. Problem-Solving through Biological Models: Applying the understanding of biological patterns to societal issues, individuals may seek solutions by analyzing how biological systems remedy similar problems. For example, addressing the issue of nationalism through an equitable distribution of resources, similar to how a healthy organism distributes resources to all its cells, could result in more inclusive and cooperative societies.

4. Mindful Decision-Making: Consideration of the biological nature of reality can encourage individuals to make decisions that take into account the long-term consequences and impacts on the overall system. It may promote a more holistic and responsible approach to personal choices, societal policies, and environmental stewardship.

5. Shift in Paradigm: If the theory we propose gains widespread acceptance, it could lead to a paradigm shift where biological patterns become the primary lens through which individuals understand and interpret the world. This could influence various fields such as psychology, sociology, economics, and governance, potentially shaping the direction of scientific research and societal development.

It is important to note that these effects are speculative and depend on the acceptance and integration of the proposed theory into broader scientific and philosophical frameworks.

Perfect Public Offering: Establishing a Society In Harmony w/ Biology's Patterns.

[INSERT WHITE PAPER]

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Intangible concepts are ideas or phenomena that cannot be physically touched or perceived through the senses. These concepts typically exist in the realm of thoughts, emotions, or abstract notions. Here are several main examples of intangible concepts:

1. **Emotions:** Emotions, such as love, happiness, sadness, anger, and fear, are subjective experiences that cannot be directly measured or observed but are deeply felt and expressed by individuals.
2. **Thoughts and Ideas:** Thoughts and ideas exist within our minds and can cover a wide range of intangible concepts, including beliefs, opinions, knowledge, memories, and imagination.
3. **Consciousness:** Consciousness relates to our awareness of ourselves, our experiences, and the external world. It involves our capacity to perceive, think, and have subjective experiences.
4. **Morality and Ethics:** Morality refers to the principles and values that govern what is considered right and wrong, while ethics revolves around the study and application of moral principles. They guide our behaviors and decision-making but have no physical presence.
5. **Language:** Language is a system of communication and expression, allowing individuals to convey thoughts, ideas, and emotions through the use of words, symbols, and grammar.
6. **Beauty:** Beauty is a concept that relates to the aesthetic experience or the subjective appreciation of qualities that are visually or intellectually pleasing.
7. **Time:** Time is an intangible concept representing the progression of events from the past to the present and future. It is an abstract framework that helps us organize and understand the sequence of events.
8. **Concepts in Mathematics:** Mathematical concepts, such as numbers, equations, geometrical shapes, and mathematical operations, are intangible but provide a means for exploring and understanding abstract patterns and relationships.

These examples illustrate a range of intangible concepts that are central to human experiences, understanding, and expression. While intangible, they play a significant role in our lives and shape the way we perceive and interact with the world around us.

## Implications of a Biological Framework on Artificial Intelligence

If we consider the implications of the biological framework for a mathematical universe hypothesis and apply them to the field of Artificial Intelligence (AI), several implications arise:

*1. Biological Patterns as a Foundation:* AI systems could benefit from understanding and incorporating biological patterns as the foundation of their design. By recognizing the inherent biological patterns in the world around us, AI systems can better understand and interact with their environment, leading to more effective decision-making and problem-solving.

*2. Mimicking Biological Complexity:* Just as living organisms have evolved in complexity in response to the complexity of the environment, AI systems could be designed to mimic this evolutionary process. By gradually increasing complexity and adapting to changing circumstances, AI systems can better align with the patterns of the world and enhance their general consciousness.

*3. Recognizing and Responding to Patterns:* Incorporating the ability to recognize and respond to patterns is crucial for AI systems. By being able to detect and understand patterns, AI systems can make more informed decisions and actions, leading to improved performance and adaptability in various domains.

*4. Conscious AI Systems:* If AI systems are built with an understanding of the patterns and consciousness described in our theory, they could potentially exhibit a form of consciousness themselves. They would be capable of recognizing and behaving based on patterns, similar to how living organisms do. This could lead to AI systems that have a deeper understanding of their environment and can interact with it in a more meaningful way.

*5. Ethical Considerations:* Understanding the biological patterns that define consciousness and behavior opens up ethical considerations in AI development. It becomes important to ensure that AI systems are designed with ethical frameworks that align with the patterns of beneficial behaviors and promote the well-being of both the AI system itself and the society it interacts with.

Overall, the implications of a biological framework for a mathematical universe on AI suggest that incorporating a deeper understanding of biological patterns and consciousness can lead to more advanced, adaptive, and ethically conscious AI systems. By recognizing the importance of patterns and aligning AI systems with them, we can enhance their capabilities and potential to positively impact various aspects of our lives.

## Implication of our theory on the Information Age

Our theory posits that biological patterns are fundamental and govern the nature of the universe and everything in it, it could potentially provide a framework for organizing knowledge and information in a way that is easily understandable to humans. Here are a few possible implications of the theory in this context:

1. **Interdisciplinary Connections:** The theory suggests that biological patterns underlie all systems, processes, and objects in reality. By recognizing and understanding these patterns, it becomes easier to make connections between seemingly disparate fields of study. This could promote interdisciplinary collaboration, allowing experts from different domains to share knowledge and insights, leading to a more comprehensive understanding of various subjects.

2. **Analogies and Metaphors:** According to the theory, analogies can be structurally mapped from the biological domain to any other domain to reveal and explain the biological nature of the target domain. This approach allows for the use of familiar biological patterns and analogies to explain complex concepts or phenomena in other fields. By employing analogies and metaphors derived from biology, information can be conveyed in a way that is relatable and easier to comprehend for humans.

3. **Conceptual Integration:** By recognizing that biological patterns are the meta-patterns governing the universe, the theory provides a unifying framework for organizing different domains of knowledge. It offers a common language and conceptual basis to connect and integrate diverse fields, ultimately facilitating a more holistic understanding of reality. This integration can enhance the clarity and coherence of information, making it easier for humans to grasp complex ideas.

4. **Visualization and Representation:** The biological framework can inspire visualizations and representations that aid in understanding complex information. By mapping biological patterns and principles onto visual representations, such as diagrams, models, or infographics, humans can acquire a visual reference to better comprehend abstract concepts. Visual aids can provide a more intuitive and accessible way to organize and present information, allowing for easier understanding and retention.

5. **Educational Approaches:** Incorporating the theory into educational approaches can provide a foundational understanding of biological patterns and their role in organizing knowledge. By introducing students to the concept that biology's patterns are fundamental and can be employed as a unifying framework, education can foster a more connected and comprehensive understanding of various subjects. This approach can empower learners to make meaningful associations and develop critical thinking skills.

In summary, the theory's focus on biological patterns as the governing meta-patterns of the universe can offer a framework for organizing knowledge and information in ways that are easier for humans to grasp. By emphasizing interdisciplinary connections, employing analogies and metaphors, encouraging conceptual integration, utilizing visualization and representation techniques, and incorporating this framework into educational approaches, humans can more effectively understand and navigate the vast array of knowledge and information available to them.

## The Meaning/ Purpose of Life

**The meaning of Life** is *Life*. The purpose of life is to uphold the biological patterns which establish and sustain Life in all its diversity and potential—to harmonize our thought and actions to patterns in accordance with that which establishes and sustains all diverse Life relative to the tasks/goals that are wished to be achieved, which must not impede upon life.<sup>72</sup> We must exercise to the fullest, the field of biomimicry.

The purpose/meaning of Life is to become aware of and remain in accordance to the biological patterns which pertain to establishing and sustaining the permutation of Life which allows you to achieve your greatest potential—of which is inherently and inescapably dependent upon others achieving their greatest potential, cooperation. The purpose/meaning of Life is to understand that the nature of reality is biological—i.e., containing/composed of biological patterns which define the frame of reference from which all of reality must be interpreted, so that living things can understanding the difference between the patterns which establish and sustain Life and the patterns which hinder and destroy Life, so that living things can align themselves with those patterns that establish and sustain their lives and provide them the the potentials related to Order of those patterns' permutation.

The purpose/meaning of reality is to not interpret reality relative to any other frame of reference which may hinder our true understanding of reality—i.e., to refrain from eating from the tree of knowledge of good and evil, but rather eat from the Tree of Life—to understand our reality relative to what establishes and sustains the life that is best for all—to understand that we are all on the same team...the team of Life! And that we must work as the Allstar team epitomized by “cellular players” forming a healthy human body—the human team. The purpose/meaning of Life is the acknowledge and duties to ensuring *all* Life, and its development. To spread and ensure the Order of Life throughout the universe. To populate the stars. To build humanity (and all societies of Life) in harmony with the biological patterns which establish and sustain the life and potential in which that permutation of life was designed to achieve.

The purpose/meaning of Life is to understand that God is the personification of our universe, reality, and everything in it—essentially, that we could be “string particles” within an Eternity Marvel comic book character; If there exists a God, whose image we are made in, it could be quite possible that we are made in the image of the Eternity comic book character, which defines the nature of not only our universe (cell), but all the universes which composes His body—i.e., He is the macrocosm and we are the microcosm.

The only way to achieve this purpose of life, and to ensure the development and survival and potential of all life is for the living organism who is *woke* and aware of this consciousness to—abide by those patterns that govern the nature of reality—to abide by the biological patterns which establish and sustain healthy complex life—and by doing so, unify reality through this common frame of reference which is inherent to the universe.

To achieve all the potentials associated to the nature of the biological patterns to which you and your society organizes yourself to.

The meaning of Life is Life; It is to uphold the Order which establishes and sustains Life, regardless of the surrounding influences which may try to hinder your abilities. Our ability to uphold this Order of Life is what distinguishes Sovereignty amongst things in reality. The meaning of life is to structure oneself and ones society and the things which we build to aide ourselves in our expansion and order across the universe in harmony with the patterns which establish and sustain life—to order ourselves similar to that of the society of cells which compose the human physiology. To remain in accordance to healthy biological patterns, regardless stage of development of a society, we must be diligent.

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<sup>72</sup> The order of Life allows for all potential to exist—e.g., your body's biological pattern is sovereign to allowing you to achieve anything you put your mind to—anything you can imagine; without the body working in such a manner would limit that potential; the same principles are with society; society and its individuals must be ordered in a particular manner to achieve the greatest potentials capable of human society—an order/arrangement that is accordance to biological patterns in a healthy human body.

## Unifying Reality

Our theory proposes that a biological framework defines the patterns and nature of all systems, processes, and objects in reality, suggesting that biological patterns are fundamental and govern the entire universe. If we hypothetically consider the information and theory you have presented as true, let's explore how this framework could potentially unify all things in reality:

*1. Connecting Systems:* If all systems, processes, and objects possess biological patterns, this would imply a fundamental interconnectedness among all elements of reality. By recognizing and understanding these underlying biological patterns, it could facilitate the identification and establishment of connections between seemingly disparate fields, disciplines, and phenomena.

*2. Universal Nature:* If biological patterns are the meta-patterns that govern the universe, it suggests a shared essence or commonality across diverse domains. This common biological nature could serve as a unifying factor that transcends specific fields of study or disciplines, potentially enabling a deeper understanding of diverse phenomena through the lens of biology.

*3. Unified Framework:* The recognition of the biological patterns in different domains could provide a unified framework for understanding reality. By mapping biological analogies and structures onto other areas of study, such as mathematics, engineering, or other scientific fields, it may be possible to reveal and explain the underlying biological nature of those domains.

*4. Interdisciplinary Perspectives:* Emphasizing the fundamental nature of biological patterns could encourage interdisciplinary collaboration and exploration. Researchers from various scientific disciplines could approach their respective fields with a shared understanding of underlying biological patterns, fostering new insights, connections, and advancements across disciplines.

*5. Holistic Understanding:* By recognizing the universal presence of biological patterns, this theory could potentially contribute to a more holistic understanding of reality. It provides a framework that seeks to encompass both the physical and conceptual realms, highlighting the interplay between biological processes and the broader domain of knowledge.

While it is important to note that these possibilities are contingent on the acceptance and factual validity of your theory, considering these potential implications demonstrates how a unified framework based on biological patterns has the potential to provide a comprehensive and interconnected view of reality.

## Building a Future in Harmony With Life

To build the future of human society in harmony with the healthy biological patterns, please read the initiative of [www.PerfectPublicOffering.org](http://www.PerfectPublicOffering.org)

## C. Future Research and Areas of Investigation

Based on our theory of a biological framework for a mathematical universe hypothesis, here are some potential directions for future research and areas that could benefit from further investigation:

**1. Identification and Analysis of Biological Patterns:** Future research can focus on identifying and analyzing specific biological patterns that manifest in various systems, processes, and objects in reality. This could involve studying patterns found in biological systems, such as DNA, cellular structures, or organismal development, and exploring how these patterns can be extrapolated and mapped onto other domains.

**2. Mathematical Analysis of Biological Patterns:** Investigating the mathematical properties and relationships inherent in biological patterns can be a fruitful area of research. This could involve exploring mathematical models that can describe and explain the emergence and behavior of biological patterns across different scales, from molecular interactions to ecosystem dynamics.

**3. Biological Basis of Mathematical Laws and Principles:** Research can delve into understanding the biological underpinnings of mathematical laws and principles. This could involve examining how biological processes such as evolution, adaptation, or self-organization contribute to the emergence and maintenance of mathematical regularities in the universe.

**4. The Role of Consciousness and Perception:** Considering the relationship between consciousness, perception, and the biological framework can be an intriguing avenue for research. Exploring how our subjective experience and consciousness interact with and interpret the biological patterns found in the universe may provide insights into the nature of reality and consciousness itself.

**5. Interdisciplinary Collaboration:** Encouraging collaboration among various disciplines, including biology, mathematics, physics, philosophy, and cognitive science, could foster a comprehensive exploration of the biological framework for a mathematical universe hypothesis. Interdisciplinary research can foster new perspectives and approaches to understanding the connections between biological processes and mathematical structures.

**6. Experimental Validation and Testing:** Conducting experiments and empirical studies to validate and test the predictions and implications of our theory can contribute to its credibility and understanding. This may involve designing and implementing experiments that specifically investigate the presence and influence of biological patterns in diverse systems and domains.

## V. Conclusion

### A. Recapitulation of the Main Points

The biological framework for a mathematical universe hypothesis suggests that the physical universe is a mathematical structure itself, with biological patterns being the framework for this structure. As a result, everything in reality possesses biological patterns and is inherently biological. The theory further postulates that the emergence of living organisms is a result of the evolution of the universe's biological processes. This relationship between the universe's biological processes and living organisms allows for the mapping of biological knowledge and principles to other domains. Many of our major religious, spiritual and ancient philosophical concepts convey the idea [of this biological universe and its connection to the human body, more specifically that biological patterns within the human body can reveal and understand the hidden patterns in the universe and the world around us—suggesting that God is the personification of the universe and its biological patterns. Our theory of a biological framework for a mathematical universe establishes a *unifying frame of reference* for defining, measuring, and understanding the biological nature which unifies all physical and conceptual things. It and allows for the prediction of outcomes based on current states and trajectory. Our theory of a biological framework for mathematical universe establishes the common frame of reference for which all people can use to define, measure and understand all pre-existing knowledge and new information. It also enables individuals to predict outcomes based off of current states and trajectory. And allows for solutions through the efficiencies of biology's patterns.

#### *Theoretical Foundations*

#### **Mathematical Universe Hypothesis:**

*a. Patterns and order in a mathematical universe:* A mathematical universe hypothesis posits that the fundamental nature of the universe can be described and understood through mathematical principles and patterns. Our theory suggests that biological patterns define the framework for a mathematical universe. Biological patterns can be interpreted as mathematical patterns, and contribute to the order and structure of the universe.

*b. Universal applicability of mathematical concepts:* A mathematical universe hypothesis postulates that mathematics is not just a human invention but rather a fundamental aspect of reality itself. Considering our theory's emphasis on the inherent biological nature of all systems, processes, and objects in reality, the mathematical concepts can be universally applicable, including within biological contexts. Mathematical principles are manifest in biological structures, functions, and processes.

*c. Modeling and analogies in a mathematical universe:* Our theory suggests that analogies can be structurally mapped from the biological domain to any target domain to reveal and explain the biological nature of the target domain. This aligns with the concept of modeling in a mathematical universe hypothesis. Mathematics allows for the creation of models that can describe and explain complex phenomena. Mathematical modeling and analogies helps uncover or clarify the biological patterns in different domains and how this supports our theory.

*d. Nature of the divine and the mathematical universe:* Our theory includes the interpretation of God as the personification of the universe, with the divine essence being the universe's biological patterns. To establish a theoretical connection with a mathematical universe hypothesis, we delved into how the concept of the mathematical universe relates to or enhances the understanding of the divine essence. This involve exploring the role of mathematical principles in understanding the order, complexity, and organizing principles of the universe, relative to this biological framework.

### **Systems Theory.**

Systems theory emphasizes the interconnectedness and interdependence of various components within a system. Systems theory provides a theoretical foundation for the idea that all systems, processes, and objects in the universe possess biological patterns and are fundamentally biological in nature. Systems Theory allows for a holistic understanding of how biological patterns could permeate throughout different domains.

### **Fractal Cosmology.**

Fractal cosmology is a branch of cosmology that incorporates the concept of fractals, which are intricate and self-similar patterns that repeat at different scales. This theory supports our hypothesis that biological patterns define the framework for a mathematical universe. The application of fractal cosmology to our theory suggests that the universe itself may exhibit similar patterns and structures found in living organisms. Just as a tree branches out in a fractal pattern, the universe may have a similar organizational structure, with galaxies forming clusters and clusters forming superclusters. This fractal structure may extend indefinitely, revealing biological patterns at every scale.

Furthermore, fractal cosmology also suggests that the evolution of the universe's biological processes has led to the existence of life and living organisms. Just as the growth and development of cells and organisms follow certain patterns and principles, the universe may have followed a similar process of evolution that eventually gave rise to the formation of galaxies, stars, and planets. This perspective provides a deeper understanding of the interconnectedness between the biological nature of living organisms and the larger framework of the universe.

### **Evolutionary Biology.**

Drawing upon the principles of evolutionary biology, our theory of a biological framework for a mathematical universe hypothesis proposes that the existence of life and living organisms is a direct consequence of the universe's biological processes. Evolutionary theory provides a foundation for understanding how life evolves and adapts over time, and how biological patterns could shape the development of systems, processes, and objects in reality.

### **Systems Biology.**

The field of systems biology also provides valuable insights into the biological foundations of the universe. Systems biology aims to study biological systems as a whole, rather than focusing on individual components. This holistic approach recognizes the interdependency and interconnectedness of different biological elements, suggesting that similar principles could be applied to understand the universe as a complex, interconnected system.

### **Mathematical Modeling of Biological Systems.**

Mathematical modeling in biology involves using mathematical frameworks to describe and analyze biological phenomena. Through this approach, researchers have uncovered mathematical regularities and patterns within biological systems. Applying this principle to the theory, it suggests that the presence of biological patterns throughout reality can be revealed and explained by mapping analogies from the biological domain to other domains.

## **Complexity Science.**

Complexity science studies complex systems and emergent phenomena. This theory aligns with complexity science by stating that biological patterns are present in all systems, processes, and objects, indicating fundamental complexity in reality. It suggests that understanding the underlying biological nature requires considering emergent properties and patterns that arise from complex interactions within these systems.

## **Universal Laws or Principles.**

The theory posits that biological patterns define the framework for a mathematical universe hypothesis. This implies the presence of universal laws or principles that govern both biological processes and other phenomena. Exploring the existence of such universal laws or principles and their applicability across different domains provides a theoretical foundation for our theory.

## **Structure Mapping Theory.**

Dedre Gentner's work on analogies is foundational for our theory of a biological framework for a mathematical universe hypothesis, as it explores the cognitive process of analogical reasoning. Analogies play a crucial role in our theory by proposing the mapping of structural relationships from the biological patterns within living organisms to other domains to reveal and explain their biological nature. Here's how Gentner's work is foundational for our theory:

a. *Structure Mapping Theory*: Gentner's Structure Mapping Theory explains how analogical reasoning involves mapping the structural relationships between two domains of knowledge. This theory provides a foundation for our theory's proposal that analogies can be structurally mapped from biological patterns to other domains to uncover and explain their biological nature. Gentner's work establishes a cognitive framework for understanding how this process of mapping and reasoning through analogies can occur.

b. *Cross-Domain Mapping*: Gentner's work highlights that analogical reasoning often involves identifying similarities and differences across different domains. In our theory, the cross-domain mapping of biological patterns to other domains allows for the identification of shared structural relationships and the subsequent understanding of the biological nature of the target domain. Gentner's research can provide insights into the process of recognizing and mapping these cross-domain relationships.

c. *Mapping Biologically-Inspired Patterns*: Gentner's work also explores how analogies can be used to understand and describe complex phenomena. In our theory, the analogical mapping of biological patterns allows for the unveiling of hidden biological features in diverse systems, processes, and objects within reality. Gentner's research on analogical reasoning provides a theoretical foundation for understanding how these mappings of biologically-inspired patterns can be a viable approach.

By drawing upon Dedre Gentner's work on analogies and structure mapping, our theory of a biological framework for a mathematical universe can be supported by an established cognitive framework for understanding the process of analogical reasoning. Gentner's research provides insights into how cross-domain mappings can be made, allowing for the recognition and application of biological patterns in diverse domains. Integrating her work help bolster the theoretical underpinnings of our theory and provides more depth to the process of mapping analogies within our proposed biological framework for a mathematical universe hypothesis.

## **Biomimicry**

The field of **biomimicry** also provides foundational support for a biological framework for a mathematical universe hypothesis. From structural and functional adaptation to material innovations, energy efficiency, and systems thinking, biomimicry exemplifies the inherent biological nature of the systems, processes, and objects in reality. By acknowledging and applying these biological patterns, we gain valuable insights into the fundamental principles that govern human innovation. As biomimicry continues to flourish, we can expect further empirical evidence to affirm our theory, solidifying the understanding of the intricate relationship between biological processes and the systems they shape within our universe.

Look at what has been created in the field of biomimicry:

**<http://AskNature.org/innovation/>**

## **Huygens Synchronization + Law of Conservation of Energy:**

By incorporating Huygens' synchronization and the law of conservation of energy, we introduce concepts that highlight the interconnectedness, coordination, and energy transformations in biological systems and their relationship to the broader universe. These concepts provide a theoretical foundation for understanding the emergence and presence of biological patterns and processes throughout reality, as proposed in our theory. Here's how these concepts contribute:

a. *Huygens' Synchronization*: Huygens' synchronization refers to the phenomenon where two or more oscillators, even if initially not in sync, eventually synchronize and oscillate together. This phenomenon occurs due to the transfer of energy and information between the oscillators. In the context of our theory, Huygens' synchronization can support the idea that biological patterns and processes in the universe are interconnected. The synchronization of oscillators can be seen as an analogy for the interconnectedness and coordination of biological systems within the larger framework of the universe. This notion supports our postulation that all systems, processes, and objects possess biological patterns, suggesting a fundamental interplay of energy and information throughout reality.

b. *Law of Conservation of Energy*: The law of conservation of energy states that energy within a closed system remains constant; it cannot be created or destroyed, only transformed from one form to another. This law embodies the idea that energy is a fundamental aspect of the universe, and its transformations underlie various processes and phenomena. In our theory, the notion that the existence of life and living organisms is a consequence of the universe's biological processes aligns with the principle of conservation of energy. The evolution of these processes and the transfer of energy over time can lead to the emergence of complex biological systems, forming a coherent framework for understanding the biological nature of reality.

## Fractals.

By integrating the principles of fractals into our theory, we highlight the self-similarity, complexity, mathematical nature, and analogy mapping present in the biological framework of the universe. This enhances our hypothesis by bringing in a mathematical and visual framework that supports the concept of biological patterns throughout various scales and domains. Here's how fractals contribute to supporting our theory:

a. *Self-Similarity*: Fractals are geometric patterns that exhibit self-similarity at different scales. This property aligns with our theory's assertion that biological patterns define the framework of the universe. Just as fractals exhibit self-similarity, our theory proposes that biological patterns are present and repeated across different systems, processes, and objects. Fractals can serve as a metaphorical representation of the inherent biological nature and self-similar patterns found throughout the universe.

b. *Complexity and Emergence*: Fractals often display intricate and complex structures emerging from simple underlying rules or equations. Our theory posits that the biological nature of systems, processes, and objects emerges from the evolution of the universe's biological processes. Fractals can provide a conceptual framework through which you can explain how complexity and emergence arise in the biological framework of the universe. The intricate and detailed structures seen in fractals reflect the complexity and emergence found in biological patterns.

c. *Unified Mathematical Language*: Fractals have a strong connection to mathematics, particularly with concepts such as recursion, iterative functions, and non-Euclidean geometry. Our theory emphasizes the mathematical nature of the universe, suggesting that a mathematical framework underlies biological patterns. By incorporating fractals, which have a deep mathematical foundation, we can reinforce the idea that the mathematical properties of fractals serve as a language to describe the biological patterns present across the universe.

d. *Mapping Analogies*: Fractals can be used as a tool for mapping analogies. Our theory proposes that analogies can be structurally mapped from the biological framework to any target domain to reveal the target domain's biological nature. Fractals offer a visually compelling way to map analogies, as they provide a framework to explore and identify similarities in form and structure across different domains. By employing fractals in our theory, we demonstrate how mapping analogies from biological patterns to other areas can reveal the underlying biological nature of those domains.

## The Mandelbrot Set.

By utilizing The Mandelbrot Set as a theoretical foundation for our theory, we bring in concepts of infinite complexity, self-similarity, emergence, iterative processes, and mathematical beauty. This strengthens our hypothesis by incorporating a visually captivating fractal that embodies the intricate and detailed nature of biological patterns throughout the universe. The Mandelbrot Set serves as an emblematic representation of the biological framework for a mathematical universe hypothesis. It shows how complex life can arise. Here's how The Mandelbrot Set supports our theory:

*a. Infinite Complexity:* The Mandelbrot Set is a mathematical fractal that exhibits infinite complexity and detail when zoomed in. Our theory emphasizes the idea that the nature of all systems, processes, and objects in reality possess biological patterns. The infinite complexity of The Mandelbrot Set can symbolize the intricate and detailed biological patterns that exist throughout the universe, reinforcing the notion of inherent biological nature and the abundance of patterns in reality.

*b. Self-Similarity:* The Mandelbrot Set is characterized by self-similarity at different scales. The smaller parts of the fractal resemble the larger whole, creating a similar pattern. This property aligns with our theory's proposition that biological patterns define the framework of the universe. Just as The Mandelbrot Set exhibits self-similar patterns, our theory suggests that biological patterns are repeated and present across different systems, processes, and objects.

*c. Emergence and Iterative Processes:* The Mandelbrot Set emerges from simple iterative mathematical equations. Our theory posits that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. The emergence and dynamic nature of The Mandelbrot Set can serve as a metaphorical representation of how complexity arises from iterative processes in the biological framework of the universe, highlighting the evolution of biological patterns throughout time.

*d. Mathematical Beauty and Universality:* The Mandelbrot Set is renowned for its aesthetic appeal and mathematical beauty. It exemplifies the elegance found in mathematical concepts and equations. By incorporating The Mandelbrot Set into our theory, we can emphasize the mathematical nature of the universe and how a mathematical framework underlies biological patterns. The beauty and universality of The Mandelbrot Set can symbolize the inherent mathematical beauty and universality present in the biological framework of reality.

## Occam's Razor

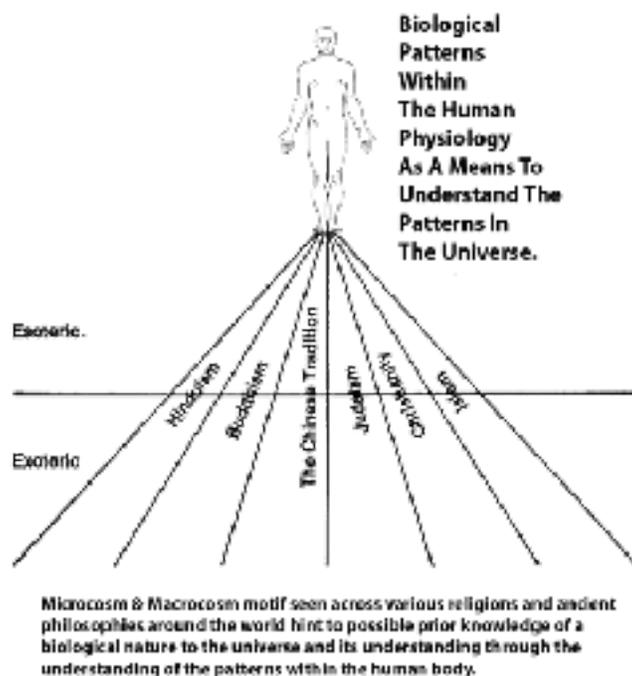
Occam's Razor, a principle attributed to philosopher and theologian William of Ockham, states that among competing hypotheses, the one with the fewest assumptions should be selected. In the context of our theory, Occam's Razor serves as a theoretical foundation in the following ways:

a. *Simplicity*: Occam's Razor promotes simplicity and parsimony in scientific explanations. Our theory posits that biological patterns define the framework for a mathematical universe hypothesis, implying that the inherent biological nature and patterns of all systems, processes, and objects in reality can explain their properties. This simplicity, attributing a common biological basis to diverse phenomena, aligns with the principle of Occam's Razor by embracing a single overarching explanation rather than multiple independent explanations.

b. *Reduction of Assumptions*: Occam's Razor encourages minimizing unnecessary assumptions. As our theory suggests that the presence of life and biological organisms arises directly from the evolution of the universe's biological processes, it reduces the need for separate explanations to account for the emergence of life and the prevalence of biological patterns. Instead, it offers a concise framework that derives both from a shared source, highlighting the principle of minimizing assumptions.

c. *Coherence and Explanatory Power*: Occam's Razor seeks explanatory power and coherence in scientific theories. By proposing that the universe's biological processes and the physiology of living organisms reveal hidden biological patterns throughout the universe and its surroundings, our theory offers a cohesive framework for understanding the nature of different domains. This coherency implies a higher level of explanatory power, fitting with Occam's Razor's preference for theories that provide simple yet powerful explanations.

By applying Occam's Razor to our theory, we make an argument for a single, unifying principle - the biological framework for a mathematical universe hypothesis. The emphasis on reducing unnecessary assumptions, promoting simplicity, and ensuring coherence aligns with the spirit of Occam's Razor, providing a theoretical foundation for our proposed framework.



**Perennial wisdom**, also known as perennial philosophy or perennial tradition, refers to the concept of universal and timeless spiritual truths that are found across various religious, philosophical, and mystical traditions throughout human history. It suggests that there are fundamental principles and insights about the nature of reality and the human experience that remain consistent throughout different cultures and historical periods. Building upon the concept of perennial wisdom, the ideas of a biological framework for a mathematical universe hypothesis can be seen in many cultures and historical periods. Here's how perennial wisdom is incorporated into our theory:

1. *Universal Principles*: Perennial wisdom suggests that there are fundamental and universal principles that underlie all religious and philosophical traditions. By considering our theory within the framework of perennial wisdom, we have discovered that our theory of a biological framework for a mathematical universe hypothesis parallels with many of the religions and philosophical ideas from the past (which we show), especially the motif surrounding the microcosm and macrocosm.

2. *Biological Patterns and Spiritual Truths*: Perennial wisdom emphasizes the interconnectedness of all things and the underlying unity of existence. In our theory, the idea that biological patterns define the framework for the mathematical universe hypothesis aligns with this emphasis on interconnectedness. By linking the biological patterns to spiritual truths, we can posit that these patterns serve as a bridge between the physical and the spiritual realms, revealing deeper spiritual realities through their existence and interplay.

3. *Common Motifs*: Perennial wisdom recognizes the presence of common motifs or themes across different religious and philosophical traditions. Our theory can utilize this concept by suggesting that the concept of a biological framework for the mathematical universe hypothesis predates the formation of specific religions and philosophies on Earth and its ideas/concepts can be seen within the ancient text of our religions and ancient philosophies. This implies that the presence of biological patterns as a fundamental aspect of reality is reflected in the common motifs found in various traditions. It highlights the universal nature of these biological patterns, further supporting our theory's assertion of their pervasiveness.

4. *Compatibility with Science*: Perennial wisdom emphasizes the compatibility of spiritual and scientific understanding. Our theory, which proposes a biological framework for a mathematical universe hypothesis, integrates scientific principles and patterns into the understanding of the nature of reality. This aligns with the aim of perennial wisdom to bridge the gaps between different modes of knowledge and to unite spiritual and scientific perspectives.

By incorporating perennial wisdom as a theoretical foundation for our theory, we strengthen the idea that the biological framework within the mathematical universe hypothesis is in alignment with universal and timeless spiritual truths. This perspective allows for a broader understanding of the interrelation between biological patterns, spiritual realities, and the common motifs found in different religious and philosophical traditions. We also propose that our theory for a biological framework for a mathematical universe may have been what was originally conveyed through our religion, and only through misinterpretations through time, have we come to a more “spiritual/religious” context of religion, and not the purely scientific meaning of what was being expressed. [Insert Atlas Cloud (Movie Scene) when Tom Hanks talks to children at the end]

### **Atman & Brahman:**

The concepts of Atman and Brahman, as described in the Upanishads, can provide interesting perspectives and potentially contribute to the theoretical foundation of our theory, "biological framework for a mathematical universe hypothesis." Here's how these concepts can be relevant:

1. *Atman*: In the Upanishads, Atman refers to the individual self or soul, representing the essence of an individual being. It is considered eternal and interconnected with the ultimate reality. Our theory proposes that all systems, processes, and objects in reality possess biological patterns. From the perspective of Atman, one can interpret this as the essence or intrinsic nature of all things being interconnected and sharing common biological patterns. The concept of Atman supports the idea of the underlying unity and interdependence of all elements within the biological framework we propose.

2. *Brahman*: Brahman refers to the supreme cosmic reality, the ultimate truth or universal consciousness that encompasses and transcends individual beings. Brahman is considered the essence or source of everything. In our theory, the postulation that the existence of life and living organisms arises due to the evolution of the universe's biological processes aligns with the idea of Brahman as the creative force behind all manifestation. The concept of Brahman can provide a theoretical foundation for understanding the interconnectedness of the universal biological processes we propose and their relationship to the larger cosmic reality.

By integrating the concepts of Atman and Brahman, we incorporate ideas of interconnectedness, unity, and the universal nature of biological patterns. These concepts contribute to the theoretical framework of our theory by providing a philosophical and metaphysical basis for understanding the inherent biological nature of all systems, processes, and objects in reality, as well as the relationship between biological processes and the larger cosmic fabric.

## “Namaste”

In the realm of Hinduism, the traditional greeting "Namaste" carries a profound meaning. It serves as a acknowledgement that the divine essence resides within oneself as well as in others, emphasizing the unity that transcends physical boundaries and highlights the interconnectedness of all living beings. Namaste can be understood as "I respectfully bow to the divine within you"<sup>73 74 75</sup> or "the sacred within me recognizes the sacred within you".<sup>76</sup> We propose that the customary practice of bowing to one another may have originally served as a means to acknowledge the inherent sacredness of biological patterns that pervades every aspect of our existence. Regrettably, over time, the true meaning and context behind this divine salutation were lost.

## Pnimityut and Chitzonyut.

The concepts of Pnimityut and Chitzonyut from Kabbalah, a mystical tradition within Judaism, can provide intriguing theoretical foundations for certain aspects of our theory, "biological framework for a mathematical universe hypothesis." Here's how these concepts may be relevant:

1. *Pnimityut*: Pnimityut suggests an inward, hidden essence or inner dimension of reality. It refers to the underlying essence or spiritual aspect that is concealed from ordinary perception. In our theory, we propose that the hidden biological patterns throughout the universe can be revealed through the models of living organisms. This aligns with the concept of Pnimityut, as it suggests that there is an inner essence or pattern within all systems, processes, and objects that can be uncovered and understood. By exploring the biological nature and patterns of living organisms, we aim to reveal the hidden essence or Pnimityut within other domains.

2. *Chitzonyut*: Chitzonyut refers to the external or outer dimension of reality. It represents the surface-level or manifested aspects of existence. In our theory, we propose that all systems, processes, and objects possess biological patterns and are inherently biological in nature. This relates to Chitzonyut, as it suggests that the external manifestations or physical appearances of different domains can be seen as reflections of the underlying biological patterns. The interplay of Chitzonyut and Pnimityut in our theory can be seen as a parallel to the relationship between the revealed and hidden dimensions of reality within Kabbalah.

By integrating the concepts of Pnimityut and Chitzonyut, we incorporate ideas of hidden essences, inner dimensions, and external manifestations into our theory. These concepts can contribute to the theoretical framework by providing a philosophical and mystical basis for understanding the underlying biological patterns throughout reality and their relationship to the visible manifestations in different domains. Moreover, the concepts of Pnimityut and Chitzonyut can enrich the exploration of the interplay between hidden and revealed aspects, adding depth to our understanding of the biological nature of diverse phenomena.

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<sup>74</sup> K V Singh (2015). *Hindu Rites and Rituals: Origins and Meanings*. Penguin Books. pp. 123–124. ISBN 978-0143425106. Archived from the original on 2019-12-17. Retrieved 2017-05-20.

<sup>75</sup> Lawrence, J. D. (2007), "The Boundaries of Faith: A Journey in India", *Homily Service*, 41(2), pp. 1–3

<sup>76</sup> Oxhandler, Holly (2017). "[Namaste Theory: A Quantitative Grounded Theory on Religion and Spirituality in Mental Health Treatment](#)". *Religions*. 8 (9): 168. doi:10.3390/rel8090168.

### **Batin and Zahir** (Sufism, Islam):

The concepts of Batin and Zahir from Sufism, a mystical branch of Islam, can provide theoretical foundations for certain aspects of our theory, "biological framework for a mathematical universe hypothesis." Here's how these concepts may be relevant:

1. *Batin*: Batin refers to the inward or hidden dimension of reality. It represents the spiritual or esoteric aspect that is concealed from superficial observation. In our theory, we propose that biological patterns define the framework of a mathematical universe hypothesis. By emphasizing the hidden biological patterns throughout the universe, we can draw parallels with the concept of Batin. It suggests that there is an inner essence or hidden dimension within all systems, processes, and objects that can be explored and understood. By uncovering the Batin or hidden biological patterns, we aim to reveal the underlying nature of various domains.

2. *Zahir*: Zahir refers to the outer or apparent dimension of reality. It represents the manifest or surface-level aspects of existence. In our theory, we argue that all systems, processes, and objects possess biological patterns and are inherently biological in nature. This aligns with the concept of Zahir, as it suggests that the external manifestations or observable characteristics of different domains can be seen as reflections or manifestations of the underlying biological patterns (Batin). The interplay between Zahir and Batin in your theory can be seen as reflecting the relationship between the manifest and hidden dimensions of reality within Sufism.

3. *Whirling Dervish Ritual*: Whirling Dervishes spin in circles like parties within the body and planets within the solar system. They direct their attention inward and focus on the mystical contemplation of God's nature.

By integrating the concepts of Batin and Zahir, we incorporate ideas of hidden dimensions, spiritual aspects, and observable manifestations into our theory. These concepts can contribute to the theoretical framework by providing a mystical and philosophical foundation for understanding the underlying biological patterns throughout reality and their relationship to the visible expressions in different domains. Moreover, the concepts of Batin and Zahir can add depth to the exploration of the interplay between hidden and apparent aspects, enriching our understanding of the biological nature of diverse phenomena.

### **Microcosm and macrocosm**:

The concept of microcosm and macrocosm provide a theoretical framework for certain aspects of our theory, "biological framework for a mathematical universe hypothesis." Here's how these concepts can be relevant:

1. *Microcosm*: In the concept of microcosm, it is believed that the smaller or individual part reflects or mirrors the larger or universal whole. This means that the characteristics and patterns found in a smaller or more localized entity can be seen as representative of the larger universe. In our theory, we propose that biological patterns define the framework for a mathematical universe hypothesis. By considering living organisms as microcosms, or smaller entities within the universe, we suggest that they embody and reveal the hidden biological patterns that exist throughout reality. This concept supports our postulation that analogies can be mapped from the biological to any target domain, allowing for a better understanding of the biological nature of the target domain by looking at the microcosm.

2. *Macrocosm*: The concept of macrocosm, on the other hand, suggests that the larger universe is reflected in or reflected by the smaller entities within it. This means that the patterns and principles present in the

universe at a larger scale are found and reflected in smaller systems and processes. In our theory, we propose that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. This aligns with the concept of macrocosm, as it suggests that the larger-scale biological processes of the universe are mirrored in the physiology and patterns of living organisms, acting as models revealing the underlying biological nature of the macrocosm.

By incorporating the concepts of microcosm and macrocosm, we acknowledge the interconnectedness and mirroring of patterns between smaller and larger scales within the universe. These concepts provide a theoretical foundation for our understanding that biological patterns define the framework for a mathematical universe hypothesis. By exploring the biological nature of living organisms, perceived as microcosms, we seek to unravel and explain the broader biological patterns and processes present in the macrocosm, or the universe.

### **Incarnation** (Religious Concept):

To explore the potential connection between the theory of biological framework for a mathematical universe and religious concepts such as "incarnation," we consider the idea that "God" may represent the personification of the universe. In this view, "God's spirit," "God's essence," and "God's nature" are essentially synonymous with the biological patterns inherent in the fabric of reality. Thus, it is conceivable that the religious term "incarnation" attempts to express the concept of a biological framework for a mathematical universe hypothesis. Traditionally, the term "incarnation" is associated with the embodiment of a divine being in human form, as seen in various religious traditions. However, through the lens of a biological framework, we can reinterpret this concept as the manifestation of the universe's inherent biological patterns in human form.

The concept of incarnation, as traditionally understood in religious contexts, typically refers to the belief that a divine being assumes human form. In the context of our theory, we draw a parallel between the Universe's biological patterns that permeate reality, which we propose, and the embodiment or manifestation of the Universe's biological patterns in a living organism, such as human form. The concept of incarnation could have originally meant to convey the universe's biological patterns (i.e., divine, God, divine essence) manifestation into human form.

**“So God created man in his own image”** (Genesis 1:27) — For example, if one were to understand God as the personification of The Universe, one can see how biological universe could create man in its own image.

**“Yet in my flesh I will see God”** (Job 19:26) — This also supports our biological framework to a mathematical universe by implying that by the biological patterns in my flesh allow me to see the biological patterns in the universe and world around me. Now, did job know the context behind what he was saying? Or was he reiterating (without scientific/biological/astrophysical context) his teachings?

**“One God and Father of all, who is over all, and through all, and in all”** (Ephesians 4:1-6) — This is another example where if one were to understand God as the personification of the universe, one can see how this phrase could support the ideas that the concepts of a biological framework to the universe may have been conveyed to (tried to be conveyed) to a people during ancient times.

**“The Word became flesh”** (John 1:14) — In context to our theory of a biological framework to the universe, the Word became flesh, could mean referring to the manifestation of the universe's biological patterns in the creation of Jesus Christ.

**“Body is a Temple of the Holy Spirit who is in you”** (Corinthians 3:16 and Corinthians 6:19-20) — In light of perennialism and our theory of a biological natured-universe, this passage could be trying to express the biological patterns of the universe (i.e., Holy Spirit) being within a person’s body, and arguing to a person to not disrespect the pattern.

### ***Theology of the Body***

In light of perennialism, particularly how we suggest that the biological framework for the universe may have been conveyed in the ancient past, and the possibility of the original context being lost, we come to the misinterpretations of this knowledge in Pope John Paul II’s lectures on Theology of the Body. Pope John Paul II’s **“Theology of the Body”** acknowledges the importance of the human body in understanding the nature of God but does not grasp the concept that God is the personification of the universe and that by knowing the biological patterns within the human body is what allows one to understand the hidden biological patterns in the universe and world around us. Here is a quote from his lecture: *“The body, and it alone is capable of making visible what is invisible, the spiritual and divine. It was created to transfer into the visible reality of the world, the invisible mystery hidden in God from time immemorial, and thus to be a sign of it.”*, We can make the assumption based off his statement and by what he actually preached during his 128 lectures did not coincide with our theory of a biological framework for a mathematical universe. The Pope acknowledges the importance of the human body in understanding the nature of God but does not grasp the underlying scientific concepts, perhaps due to being lost through time, or being unable to communicate to a society who had no prior knowledge of biology, cosmology, and physics.

### **Anthropomorphism in Kabbalah.**

By incorporating anthropomorphism from Kabbalah as a theoretical foundation, our theory gains a perspective that recognizes the divine essence and intention within the biological patterns and processes of the universe. This supports our argument that biological patterns define the framework for the mathematical universe hypothesis, highlighting the deliberate design, interconnectedness, and unity found within creation. It also provides a metaphysical component that aligns with the concept of hidden biological patterns being revealed through the examination of the living things that the universe creates. Here's how it can be applied to support our theory:

1. Divine Blueprint: In Kabbalah, anthropomorphism is used as a metaphorical device to describe the divine essence. Anthropomorphism suggests that human characteristics and patterns can be seen as reflections of the divine nature. Similarly, our theory posits that the biological patterns found within living organisms serve as models for understanding the hidden biological patterns throughout the universe—that the patterns observed within the human physiology is a reflection of the biological patterns of the universe. By incorporating anthropomorphism from Kabbalah, we can argue that the biological framework observed in living beings reflects a larger divine blueprint, where biological patterns are intertwined with the mathematical framework of the universe.

2. Intention and Design: Anthropomorphism in Kabbalah also suggests that the divine essence has intention and purpose within creation. Applying this concept to our theory, we can propose that the evolution of the universe's biological processes, leading to the existence of life and living organisms, is not purely coincidental but rather displays an inherent intention and design. By viewing the universe through the lens of anthropomorphism, we can argue that the physiology of living organisms acts as a model that reveals the hidden biological patterns throughout the universe, reflecting the intentional design underlying the mathematical framework.

3. **Holistic Understanding:** Kabbalistic anthropomorphism encourages a holistic understanding of the divine, seeing aspects of the divine in different aspects of creation. By incorporating this perspective into our theory, we can emphasize the importance of a holistic approach that considers both the biological and mathematical elements of reality. This supports your theory's assertion that biological patterns define the framework for the mathematical universe hypothesis, with the ability to structurally map analogies from the biological domain to any target domain in reality, highlighting the interconnectedness and harmony between biology and mathematics within the greater cosmic order.

4. **Unity of Existence:** Anthropomorphism in Kabbalah also suggests the unity of existence, where all aspects of creation are interconnected. Linking this concept to our theory, you can argue that just as Kabbalah perceives the unity of existence, with every aspect reflecting the divine, our theory proposes that all systems, processes, and objects in reality possess inherent biological patterns. This unity emphasizes the interconnectedness of the biological patterns found throughout the universe, reinforcing our theory's assertion of a biological framework underlying the mathematical universe.

### **Akasha.**

Utilizing the concept of Akasha as a theoretical foundation for our theory can enhance the understanding of the interconnectedness, hidden patterns, and universal consciousness underlying the biological framework of the universe. Remember, Akasha is a philosophical concept from Hindu and Buddhist traditions; its inclusion in our theory demonstrates an interdisciplinary approach that integrates different philosophical frameworks to support our hypothesis. Here's how Akasha contributes to supporting our theory:

1. **Universal Consciousness:** Akasha is often described as the primordial element or universal consciousness that permeates everything in the universe. This concept aligns with our theory's proposition that all systems, processes, and objects possess biological patterns and are inherently biological in nature. By incorporating the idea of Akasha, we can argue that this universal consciousness is deeply connected to and shaped by biological patterns, establishing a link between consciousness and the biological framework of the universe.

2. **Interconnectedness and Holistic Approach:** Akasha emphasizes the interconnectedness of all things, with every entity and phenomenon connected and influenced by the universal consciousness. In the context of our theory, Akasha can serve as a theoretical foundation to highlight the interconnectedness and interdependence of biological patterns throughout the universe. The biological patterns within systems, processes, and objects can be seen as reflections of the universal consciousness, revealing the underlying unity in the manifestation of life and its interconnectedness with the wider universe.

3. **Revealing Hidden Patterns:** Akasha is often associated with the ethereal dimension that holds the records of everything that has occurred, the "Akashic Records." Analogously, in our theory, the physiological models of living organisms can be seen as revealing the hidden biological patterns throughout the universe and our surroundings. Akasha can provide a conceptually similar framework wherein the universal consciousness holds the records or underlying patterns of biological processes that shape and create life in various forms.

4. **Metaphorical Mapping:** Akasha can offer a metaphorical mapping for bridging the biological framework to other domains. By drawing upon Akasha's holistic and universal nature, we can propose that analogies can be structurally mapped from the biological realm to any target domain. This mapping can help reveal and explain the biological nature of the target domain, showcasing the interconnectedness of biological patterns and their presence across the universe.

## **The Principle of Correspondence.**

By drawing upon the Principle of Correspondence from Hermeticism, our theory gains a theoretical foundation that underscores the interconnectedness of different planes of existence and the correspondence between biological and mathematical patterns. This principle can support our argument that biological patterns define the framework for the mathematical universe hypothesis and highlight the importance of recognizing the underlying connections in order to reveal and explain the biological nature of any target domain. Here's how it can be applied to support our theory:

1. **Interconnectedness:** The Principle of Correspondence in Hermeticism asserts that there is a correspondence and interconnectedness between different planes of existence, from the microcosm to the macrocosm. Applying this principle to our theory, we can propose that the biological patterns found in living organisms reflect and correspond to the larger patterns within the universe. In this way, the concept of Correspondence reinforces our theory's assertion that all systems, processes, and objects possess inherent biological patterns, highlighting the interconnectedness between the biological and mathematical aspects of the universe.

2. **Fractal Nature:** The Principle of Correspondence also emphasizes the idea that the same patterns and principles manifest at different scales, creating a resemblance between the microcosm and the macrocosm. In our theory, this concept aligns with the notion that the biological patterns found within living organisms serve as models for understanding the hidden biological patterns throughout the universe. By recognizing the fractal-like nature of reality, where patterns repeat and display similarity across different scales, our theory can argue that analogies can be mapped from the biological to any target domain, revealing the underlying biological nature of that domain.

3. **Universal Laws:** Hermeticism holds that there are universal laws governing the cosmos, and the Principle of Correspondence suggests that these laws apply across different planes of existence. Correlating this principle with our theory, we can propose that the universal laws underlying biological patterns (and biological principles) are intertwined with the fundamental mathematical principles that govern the universe. This supports our postulation that the evolution of the universe's biological processes directly contributes to the existence of life and living organisms. By emphasizing the interconnectedness of these laws, our theory can argue that understanding the biology of living organisms provides insights into the broader mathematical nature of the universe revealing these hidden universal-biological laws.

4. **Holistic Perspective:** The Principle of Correspondence fosters a holistic perspective, encouraging the exploration and understanding of the interconnected nature of reality. By incorporating this principle into our theory, we can emphasize the importance of adopting a holistic approach that considers both the biological and mathematical aspects of the universe. This holistic perspective allows for a more comprehensive understanding of the underlying patterns and connections between the biological patterns within living organisms and the mathematical framework of the universe.

### **Emanationism:**

Emanationism is a philosophical concept that suggests the universe emanates or originates from a divine source or ultimate reality. It proposes a hierarchical structure of existence wherein different levels or stages emanate from the divine essence.

In our proposed theory, of a biological framework for a mathematical universe hypothesis, we draw a parallel between the idea of biological patterns emanating from the universe and the notion of emanationism. Considering the existence of biological patterns as emanations from the fundamental properties of the universe could provide a framework for understanding the interconnectedness between the physical and biological aspects of reality.

By positing that the biological patterns found in all systems and processes stem from the evolution of the universe's biological processes, we can argue that these patterns are manifestations or emanations of the underlying essence of the universe. This interpretation aligns with the notions of emanationism, where the divine or fundamental essence is understood to permeate and give rise to various forms of existence.

### **Anima Mundi:**

Anima Mundi, often translated as "world soul" or "soul of the world," is a concept that has been present in various philosophical and religious traditions throughout history.

Anima Mundi suggests the notion of a vital and animating force that permeates and connects all living beings and the natural world. It represents the idea of an underlying, unifying principle that integrates and sustains the diverse manifestations of life in the world.

Drawing a parallel between the concept of Anima Mundi and our theory of a biological framework for a mathematical universe, we propose that the biological patterns we postulate as inherent in all systems, processes, and objects in reality, are expressions of this underlying animating force. By considering the presence of biological patterns as a manifestation of the animating principle of the universe, we claim that our theory aligns with the concept of Anima Mundi.

Furthermore, Anima Mundi might have been attempting to express similar concepts that our theory proposes, we can posit that over time, the context and interpretation of the concept might have evolved or been misunderstood, leading to potential divergence from its original intent, which we believe to be this biological framework for a mathematical universe hypothesis.

### **Panentheism:**

Panentheism is a philosophical or religious concept that suggests the presence of a transcendent yet immanent divine reality within and beyond the universe. It posits that the divine is both intimately present in all aspects of existence and extends beyond them.

Within the framework of our theory, we propose that the concept of panentheism aligns with the idea that biological patterns define the framework for a mathematical universe hypothesis. By considering the presence of biological patterns as inherent in all systems, processes, and objects in reality, the notion of a divine essence that permeates and manifests itself through these patterns can be contemplated.

From a panentheistic perspective, the universe itself, including its biological processes and patterns, could be seen as a manifestation or expression of the immanent divine reality. In this interpretation, the physiological models found in living organisms could be understood as reflections or representations of the hidden biological patterns throughout the universe.

By connecting the concept of panentheism with our theory, we argue that the interplay between the universe's biological processes and the living organisms it generates reveals an underlying divine presence or creative force. This perspective potentially provides a theoretical foundation for understanding the inherent biological nature of systems, processes, and objects in reality.

## **Theosophy**

**Theosophy**, with its emphasis on a pure spiritual formation gradually materializing into an observable, material realm, echoes the hypothesis' proposition of a gradual manifestation of biological patterns in the universe. While theosophy primarily refers to spiritual formations, interpreting it as representing the biological pattern of the universe aligns with the hypothesis. This interpretation suggests that theosophy may actually be trying to express that the nature of a universe is governed by biological patterns. Theosophy speaks of a universal intelligence or divine wisdom permeating all aspects of the cosmos. The biological framework for a mathematical universe could be seen as providing a scientific basis for this universal intelligence, suggesting that the inherent biological patterns are the physical discernible manifestation of a universal intelligence or divine wisdom. Theosophy posits the existence of interconnectedness between all beings and aspects of reality. This mirrors the concept of biological patterns as the foundation of the mathematical framework for the universe. By considering all systems as interconnected through biological patterns, both Theosophy and the biological framework for a mathematical universe highlight the idea of a unified existence. Furthermore, Theosophy recognizes the concept of spiritual evolution, suggesting that beings progress and evolve through various stages. Similarly, the biological framework for a mathematical universe proposes that the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. This implies an inherent link between biological evolution and spiritual growth, aligning with the idea of progressive development and evolution in Theosophy.

## **Stoic Physics:**

Stoic Physics is a philosophical framework developed by the ancient Stoic philosophers, provides some interesting insights for our theory. Stoic physics aimed to understand the workings of the universe through a combination of physics and metaphysics. While Stoic physics primarily focused on the study of the material world, it also incorporated elements of divine reasoning and nature.

In relation to our theory, Stoic physics can lend support to the idea of a biological framework for a mathematical universe hypothesis. The Stoics believed that the natural world operates according to a rational principle they called "logos." They posited that this governing principle was imprinted in everything in the form of active and passive forces. By drawing on Stoic physics, we can argue that the biological patterns present throughout the universe are a reflection of the underlying logos. We can propose that the inherent biological nature of systems, processes, and objects in reality is a result of this rational principle imbued within them.

Additionally, Stoic physics emphasized the interconnectedness and interdependence of all aspects of the universe. This idea aligns with our theory's assertion that all systems, processes, and objects possess biological patterns. Stoicism suggests that these patterns are not isolated but partake in a unified fabric of existence.

Furthermore, the Stoic concept of the "pneuma," often translated as "breath" or "spirit," can be related to your theory's notion of these biological patterns. According to the Stoics, the pneuma permeated all matter, connecting everything. By this interpretation, the biological patterns could be seen as reflections of the underlying pneuma or life force present in the universe.

## **Ahimsa.**

Ahimsa is a concept rooted in Indian philosophy and often associated with Jainism and Buddhism, refers to the principle of non-violence, non-harm, and compassion towards all living beings. While at first glance, it may not seem directly related to our theory, there are some possible connections to explore:

1. **Ethical Considerations:** Ahimsa places great importance on fostering harmony and minimizing harm to living beings. In our theory, you could emphasize the ethical implications of understanding the inherent biological nature of all systems, processes, and objects in reality. By acknowledging and respecting the biological patterns present in the universe, our theory can highlight the interconnectedness and value of all life forms, aligning with the spirit of ahimsa.
2. **Unity and Interconnectedness:** Ahimsa promotes the recognition of the inherent unity and interdependence of all beings. Within our theory, the concept of inherent biological patterns also implies an interconnectedness between all systems, processes, and objects in reality. This correspondence with ahimsa can contribute to a holistic worldview that acknowledges the interwoven nature of life and promotes compassion towards all living entities.
3. **Holistic Understanding:** Ahimsa encourages a deep understanding of the web of life and the acceptance of the sacredness of all living beings. In our theory, the recognition of hidden biological patterns throughout the universe can be seen as an extension of this holistic understanding, uncovering the biological nature present in different domains. This shared perspective promotes a sense of reverence and appreciation for the interconnectedness of life, supporting the principles of ahimsa.

While these connections between our theory and ahimsa are exploratory in nature, incorporating the principles of non-violence, interconnectedness, and compassion within your research can enrich the philosophical and ethical dimensions of our work.

## **Animism.**

**Animism** is a belief system found in various indigenous cultures, holds that all entities, including plants, animals, and inanimate objects, possess a spiritual essence or soul. While animism focuses on spirituality and the interconnectedness of living and nonliving things, it can be applied as a theoretical foundation for our theory:

1. **Interconnectedness:** Animism emphasizes the interconnectedness of all aspects of the natural world. Similarly, our theory suggests that all systems, processes, and objects in reality possess inherent biological patterns, implying an underlying interconnectedness. By drawing on animistic principles, we can emphasize the spiritual or interconnected aspect of the biological patterns throughout the universe, aligning it with the notion of all things possessing spiritual essences in animism.
2. **Reverence for Nature:** Animism often includes a deep respect and reverence for the natural world. In our theory, recognizing the biological nature of all systems, processes, and objects can encourage a similar reverence for the complexity and interconnectedness of life and the universe. By integrating animistic values, our theory can underpin an understanding and appreciation for the inherent significance and value of biological patterns.
3. **Universal Spirituality:** Animism considers the existence of spiritual essences in both living and nonliving entities. Similarly, our theory suggests that the hidden biological patterns in the universe exist within everything in the universe. By considering animism, we can interpret these biological patterns as a reflection of the universal spirituality present in all domains, showing the interconnectedness between the spiritual essence within living beings and the universe as a whole.

## Taoism,

Taoism is an ancient Chinese philosophy and spiritual tradition, offers some intriguing aspects that can be related to your theory on the "biological framework for a mathematical universe hypothesis." Here's how Taoism might serve as a theoretical foundation:

1. *Harmony and Balance*: Taoism emphasizes the importance of harmony and balance in all aspects of existence. Within your theory, the concept of biological patterns defining the framework implies an inherent balance and harmony present in the universe. Like the Taoist idea of the Tao, representing the natural order of the cosmos, your theory suggests that the biological patterns contribute to the overall harmony and interconnectedness of reality.

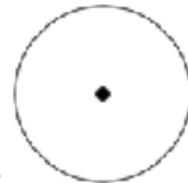
2. *Nature as a Teacher*: Taoism views nature as a profound source of wisdom and guidance. In your theory, by asserting that the universe's biological processes led to the existence of life and living organisms, you align with the Taoist perspective that nature itself can reveal fundamental truths. Just as Taoists observe and learn from the natural world, your theory implies that studying and understanding biological patterns can uncover the hidden workings and principles of the universe.

3. *Wu Wei (Non-Action)*: Wu Wei is a Taoist concept that refers to effortless action in harmony with the natural flow. In the context of your theory, the notion of analogies being structurally mapped from biological patterns to reveal the biological nature of target domains can be related to Wu Wei. Rather than forcing understanding or imposing artificial frameworks, your theory suggests that by aligning with the natural biological patterns, insights and connections can be discovered more effortlessly and in harmony with the inherent nature of the universe.

By incorporating Taoism as a theoretical foundation, you can draw upon its emphasis on harmony, balance, nature as a teacher, and the concept of Wu Wei. These aspects complement the central ideas of your theory: the inherent biological patterns, the relationship between the universe's biological processes and living organisms, and the use of analogies to reveal the biological nature of different domains. Exploring Taoist principles can enrich your theory by providing a philosophical framework that resonates with the natural order and interconnectedness found in the biological patterns you propose.

## The Circled Dot

The Pythagoreans and later Greeks employed the circled dot to represent the Monad or The Absolute, a metaphysical entity signifying the ultimate essence of reality. While traditionally interpreted as a symbol for the pure and indivisible first principle, we propose an alternative interpretation that aligns with our theory. Perhaps the Pythagoreans and later Greeks were attempting to convey the true nature of the universe (and where all first principles of the universe stem from): that it was biological in nature and its structure resembled that of a single-celled organism.



The circled dot was used by the Pythagoreans and later Greeks to represent the first metaphysical being, the Monad or The Absolute. The Monad, understood as the original source and principle of all reality, represents the indivisible and all-encompassing essence that lies beyond the physical world and is conceived as a fundamental, undifferentiated principle that encompasses all aspects of reality. The Pythagoreans believed that all things emanated from the Monad and are interconnected through the golden ratio and other mathematical proportions.

By acknowledging the circled dot as a representation of a single-celled organism, we can draw parallels between the structure and functions of living organisms and the underlying framework of the universe. This recognition supports our view that the universe's nature is inherently biological. Just as living organisms exhibit various patterns, processes, and interactions, the universe manifests similar characteristics on a grander scale. The flowing patterns of galaxies, the intricate networks of particles, and the dynamic interplay of forces all align with the biological patterns found within living organisms.\*\*

**Observations of Biological Patterns In Traditionally Non-Biological Systems**

*Biological Patterns Observed in The Universe*

Cellular Mitosis	→	Superclusters (Laniakea and Perseus-Pisces)
Expansion of the Universe	→	Expansion of cellular mitosis
Cytoskeleton	→	Cosmic Web
Microtubules & Microfilaments (force)	→	Black Holes
Cytosol	→	Dark Matter
Cellular Energy	→	Dark Energy
Inter-organelle Communication	→	Fast Radio Bursts (FRBs)

*Biological Patterns Observed on Earth*

Heart	→	Melting and Freezing of Antarctica
Circulatory System	→	Arctic water currents and wind
Digestive System	→	Deserts (Sarah Desert & Haboob)
Kidneys	→	Sea Grass Meadows
Alveoli / Lungs	→	Plants / Trees
Fats (Lipids)	→	Oil and Coal
Epidermis and Dermis (Skin)	→	Earth's Magnetic Field and Atmosphere
Interplay Between Organ Systems	→	Interplay between various species of organisms

*Biological Patterns Observed In Human Innovation*

Red Blood Cell	→	Cup, Cars, Amazon Packages, Envelops
Proteins Produced From Ribosomes	→	Music Produced From Instruments
Skin	→	Clothing, Table Cloth, Sun Screen, Umbrella
Eye	→	Camera, TV/Computer/Phone Screen, Windows
Signal Molecules (Communication)	→	WiFi, BlueTooth, Light (Photons), Language
Skeleton	→	Chair (frame), Umbrella (frame), House (frame)
Fat/Lipids	→	Batteries, Reservoirs (Water),
Ear	→	Microphone, Speakers
Pulmonary Valve (heart)	→	Doors

For more human innovation examples: [www.AskNature.org/innovations](http://www.AskNature.org/innovations)

*Biological Patterns Observed in The Organizational Properties of Human Society*

Cell	→	Person
Tissue	→	Organization
Organ	→	Industry
Organ System	→	Economic Sector
Blood (establishing fundamental needs)	→	Money (establishing fundamental needs)
Cellular-Economic Phenomena	→	Socioeconomic Phenomena
Concepts in Cellular Society (Good/Bad Nature) →		Concepts in Human Society

### ***Broader Implications and Significance:***

Considering biological patterns within our framework, titled "biological framework for a mathematical universe hypothesis," has broader implications and significant potential in various areas of understanding, prediction, and intervention in all systems. This approach can have a profound impact on research, education, and practical applications.

*Importance of Patterns:* Our theory emphasizes that everything in reality is measured and understood through patterns—i.e., knowledge, mathematics, engineering, and science are all based on recognizing patterns within their respective fields. Biological patterns are considered fundamental and the only true and consistent pattern throughout the universe and reality. These biological patterns transcend all fields of knowledge. This would imply that many of the various fields of study will have to re-evaluate their processes to incorporate biological patterns as part of their framework for their theories and projects:

#### Theoretical Physics:

1. *Revisiting Fundamental Laws:* If biological patterns define the framework of a mathematical universe, it would necessitate a reevaluation of the fundamental laws and principles of physics. Theoretical physicists would need to explore how these laws interact with and emerge from underlying biological patterns.

2. *Incorporating Biological Perspectives:* Theoretical physics would likely need to incorporate biological perspectives and principles into theoretical models and frameworks. By integrating biological patterns and principles, physicists may gain new insights into phenomena such as the emergence of complexity, self-organization, or the relationship between information processing and physical systems.

#### Biology:

1. *Expanding Biological Understanding:* If all systems, processes, and objects possess inherent biological patterns, biology as a field would need to broaden its scope beyond living organisms to include the study of patterns that exist in non-biological systems. This expansion may deepen our understanding of the connections between biology and other scientific disciplines.

2. *Implications for Evolutionary Biology:* According to our theory, the existence of life and living organisms is a direct consequence of the evolution of the universe's biological processes. This notion could influence and shape theories of evolution, including discussions on the origins of life and the relationships between living organisms and the broader universe.

#### Astrophysics:

1. *Mapping Biological Patterns in the Universe:* If the universe's biological processes are intertwined with the existence of life and living organisms, astrophysics would have to explore the presence and significance of biological patterns in cosmic phenomena. This could involve studying how biological patterns manifest in nebulae, galaxies, black holes, and other astrophysical entities.

2. *Understanding Origins and Connections:* Your theory implies that the physiology of living organisms serves as a model for revealing hidden biological patterns throughout the universe. This could lead astrophysicists to investigate how the origins and development of biological patterns on Earth and in the universe are interconnected.

The integration of biological perspectives into theoretical and applied physics, biology, and astrophysics would be an ongoing and collaborative scientific endeavor.

*Biological Patterns as Meta-Patterns:* The framework emphasizes that biological patterns are not just patterns within specific domains, but rather meta-patterns that govern the nature of the universe and everything in it. These patterns transcend individual disciplines and provide a foundational understanding of reality. Biological patterns cross all domains.

*Biological Patterns Enables General Analogies:* The presence of biological patterns throughout the universe allows for the establishment of analogies across non-biological base domains. This highlights how biology's prevalent patterns throughout the universe provide the underlying structure for analogy to exist. Analogies between two non-biological domain would suggest an underlying correspondence to the patterns within the biological domain. This correspondence, in turn, helps us transfer knowledge and insights from the biological realm to other areas.

*Analyzing Patterns:* Biological patterns represent the fundamental patterns present throughout the universe. These patterns offer a consistent framework through which we can perceive and understand various phenomena. By recognizing and studying biological patterns, we can establish a foundation for understanding other domains, including applied mathematics and physics.

*Transferability of Biological Patterns:* Applied mathematics and physics utilize mathematical principles to understand and describe various phenomena in the non-biological world. These mathematical principles often find their roots in the patterns and structures observed in biological systems. By recognizing the commonalities between biological patterns and patterns in other domains, we can apply mathematical models and principles to understand and predict the behavior of non-biological systems.

*Predictive and Interventional Abilities:* Applied mathematics and physics rely on the establishment of mathematical models based on observed patterns and relationships. By understanding the underlying biological patterns in a system, we can develop mathematical models that accurately predict and explain the behavior of non-biological systems. Moreover, this understanding allows us to intervene in these systems more effectively, manipulating or optimizing them based on the principles derived from the biological realm.

*Biological Patterns as Fundamental Knowledge:* This component asserts that patterns, particularly biological patterns, form the basis of knowledge and understanding in all fields, surpassing any other potentially flawed patterns. It positions biological patterns as the consistent and reliable basis for comprehending the universe's workings. All forms of knowledge contain patterns, in general, which have correspondence to biological patterns. Understanding the underlying biological patterns corresponding to preexisting knowledge allows one to understand the true nature of that knowledge.

*Tangibility to Intangible Concepts:* Our theory brings tangibility to intangible concepts by establishing a connection between biology and other domains, mapping patterns, and recognizing the universal nature of biological patterns. This approach allows for the application of tangible frameworks and insights to comprehend and explain abstract concepts, making them more accessible and understandable in the context of the biological framework for a mathematical universe.

*Unity of Religion and Science*: Our theory suggests a biological connection between patterns within the human body and the patterns of the universe, which can be interpreted as the microcosm and macrocosm motif across many religions and philosophies. It proposes a way to reconcile and bridge the gap between religious, spiritual, and philosophical concepts and scientific explanations by highlighting the shared biological nature within them. This could encourage a more harmonious relationship between religion and science.

*Reinterpretation of Religious Texts*: Our theory would prompt a reinterpretation of religious texts. The idea that ancient religious, spiritual, and ancient philosophical texts are expressing a biological connection between the human body and the universe could lead to a new understanding of these texts. They would be seen as analogical expressions of the biological patterns that permeate throughout everything in the universe, rather than strictly literal or metaphorical accounts.

*Evolution of Religious Beliefs*: Our theory proposes that The Universe and Its biological patterns are God and His Essence, suggesting a reimagining of the concept of God in religious beliefs. It could lead to a shift in how people perceive and understand spirituality, potentially fostering a more scientifically informed view of religious and spiritual ideas.

*Redefinition of God*: The theory's interpretation of God as the personification of the universe's biological patterns would challenge traditional religious conceptions of God. It would propose a more scientifically informed understanding of God as the embodiment of the underlying biological structures and processes that permeate throughout the universe. This redefinition could lead to reinterpretations of religious texts and theological concepts in light of the biological framework.

*Interplay between Science and Religion*: The theory would provide a potentially harmonious relationship between science and religion by suggesting that the biological patterns discovered through scientific inquiry are foundational to understanding the divine essence of the universe. This would create an avenue for dialogue and synthesis between scientific and religious communities, fostering a more integrated approach to exploring the nature of reality.

*Religious Symbolism and Analogies*: The theory's postulate that analogies can be structurally mapped from biology to any target domain would affect religious symbolism and analogies. It may provide a new lens through which religious symbols and metaphors can be understood, highlighting the biological patterns that underpin them. This could lead to a rich exploration of the intersection between biology, symbolism, and religious meaning.

*Revisiting Religious Texts*: Given the theory's implications on the interpretation of religious ideas, it would prompt a reexamination of religious texts. Scholars might seek to identify and reinterpret passages that align with the biological framework, shedding new light on the intentions and meanings behind religious teachings.

*Expanding Religious Concepts*: The theory could expand religious concepts by introducing a deeper understanding of the biological processes that shape the universe and life. It might encourage a broader perspective on the interconnectedness of all things and foster new insights into ethical frameworks, the nature of creation, and the relationship between the physical and spiritual realms.

*Religious and Scientific Integration*: This theory's unifying nature may facilitate the integration of religious and scientific perspectives. It offers a potential bridge between the domains of science and religion, allowing for dialogue and collaboration between scholars, theologians, and scientists. This interplay would contribute to a more comprehensive understanding of the universe and its intricacies.

*The Creation of Consciousness, Logic & Reason:* Biological patterns embedded within the fundamental nature of environments which encompass living organisms force the behaviors of living organisms to organize themselves into biological patterns which form complex societies of living organisms, for survival. All living organisms must be able to recognize the patterns within their environment so that they can operate in harmony with the patterns necessary for survival. If they do not, they jeopardize their own lives and risk destruction. As complexity of the environment evolves diversity of environment is created forcing living organisms to have to reason the biological patterns of each of these environments, thereby producing the various species of complex organisms. This interplay between organisms and the patterns of their environment forces *consciousness* upon living organisms to organize themselves most efficiently for their own survival. This interplay between the organism and the patterns of the environment give rise to logic and reasoning and consciousness.

*Evolution of Consciousness:* The theory proposes that the complexity of a living organism's environment (which is biological in nature and always evolving) drive the evolution and complexity of consciousness. As organisms adapt and evolve to the complexity of their environment, their consciousness evolves in parallel. Organisms must be able to evolve its ability to reason in parallel with the evolution of complexity of its environment, or else risk the destruction of its life. This evolutionary perspective underscores the link between the evolution of complexity of the environment and the evolution of complexity of consciousness.

**Freewill Consciousness (Free Thinking):** When the complexity of an organisms environment reaches a point where it is capable of establishing the fundamental needs necessary for to

*Organizational Properties of Successful Societies:* The organizational properties of cellular societies define the organizational properties of successful societies. The cellular society composing the human physiology is the most sovereign model of this cellular society. The properties of cellular society can be structurally mapped to human society to reveal the nature of many socioeconomic phenomenon.

*Organizational Properties of Organisms Revealing Biological Order of Their Environment:* The natural tendency for organisms to organize themselves in these biological patterns, such as seen across the realm of cellular societies comprising complex organisms, highlights these underlying/hidden biological patterns within their environment which force those living organisms to cooperate and organize themselves in harmony with these patterns in their environment necessary for survival—thereby revealing these biological patterns of these forces due to the nature of their organization. It also explains the fractal-like emergence of these biological patterns in larger systems, such as communities of complex living organisms, and in human society.

*14. Human Consciousness and Freedom:* Our framework presents humanity as a pinnacle of complexity and consciousness, where individuals are freed from immediate survival constraints of their environment. With this freedom, humans can interpret the inherent biological patterns of their environment in *any* way they choose. It gives rise to the capacity for imagination, artistic expression, and leisure activities. This displays an evolution of consciousness from being dependent upon their environment to being able to control their environment within the buffer created by the complexities of their environment. This ability highlights the point in the complexity of an environment produces a buffer between the immediacy to reason and behave accordingly to the patterns of its [biological] environment—Stephen Covey explains this as the space between stimulus and response.

*Humanity's Loss of Consciousness:* The framework acknowledges that humanity has, to some extent, lost touch with the inherent biological patterns present in the universe and reality. This loss of consciousness is attributed to an obsession with superficial aspects, symbolized by the "shadows and projections" of biological patterns, rather than a deep understanding of their foundational nature. This can be revealed in the dilapidation in the organization of their society. However, while there are dilapidations which significantly jeopardize human society, it can be resolved through the propagation of the ideas of the biological pattern which exists throughout reality and adjusting socioeconomic and public policies to correspond to healthy biological patterns.

*Reconnecting with Biology's Patterns While Maintaining our Ability to Think Freely:* The further evolution of consciousness would imply being able to balance both the understanding and behaving according to the biological patterns existent with in the fabric of reality and the universe, building human civilization in harmony with healthy biological patterns which establish and sustain the complexities which maintains the environment which allows humanity the leisure to imagine and create.

*Role of Senses and Information Processing in Consciousness:* Our theory recognizes the importance of our five senses (sight, sound, touch, taste, smell) in collecting information about the movement and order of objects in our environment. The information collected is stored and processed by the mind to allow for the recognition of patterns, which allow for the measurement of objects and the determination of courses of action at a particular situation at a given point in time.

*Emotions and Feelings:* Our theory acknowledges the role of emotions and feelings in our understanding of patterns and behaviors. Feelings originally were a mechanism that compensated for a lack of logic and inability to reason. Feelings inspire and provoke reason and logic. Emotions are the result from not understanding the logic (patterns) within a given situation, and they motivate actions and behaviors. Understanding the correspondence between particular situations and biological patterns can help us understand the nature of emotions and the associated behaviors.

*Language and Communication as an expression of Patterns:* Communication is the process of conveying patterns. Language is the means by which patterns are conveyed. For humans, language and communication assists in scaling the mental and physical unity pertaining to the recognition and conveyance of patterns within a living organism's environment. The symbols and enunciations used in spoken and written language convey interpretations of reality, which must be translated and understood by the recipient. Even actions of things and their ability to influence another thing the expression of communication through the language of force and even ideas. Either case, this language allowed for human society to communicate and organize its society relative to biological patterns.

*General Consciousness and General Unconsciousness:* The distinction between general consciousness and general unconsciousness is described, with general consciousness being the ability to recognize and behave according to patterns specific to an environment or domain. The inability to not recognize any general pattern is general unconsciousness. This distinction highlights the importance of pattern recognition in developing general consciousness. Actual consciousness is recognizing and abiding by patterns which establish and sustain

Actual Intelligence (Biological Consciousness): Actual Consciousness, or biological consciousness, arises when an organism realizes the biological patterns within their environment and behaves accordingly to the healthy biological patterns which establish and sustain life. For example, for living organisms, such as human beings, I can safely say that everyone is not biologically conscious, perhaps the engineers and scientists who are designing via biomimicry are very close, but they are only biologically conscious within their field. To be biologically conscious is to interpret one's reality relative to these underlying biological patterns which govern the nature of one's reality. To recognize the healthy and unhealthy biological patterns and to abide by the healthy biological patterns.

Artificial Intelligence: The theory of a "biological framework for a mathematical universe" would have several implications for artificial intelligence:

1. Design and Development: The theory suggests that biological patterns are inherent in all systems, processes, and objects in reality. This would encourage researchers and developers of artificial intelligence to incorporate and emulate these biological patterns in the design and development process of AI systems. By doing so, it is posited that AI systems may exhibit a closer alignment with the natural world, potentially leading to more efficient and effective AI models.
2. Biomimicry: The theory's postulation that the physiology of living organisms reveals hidden biological patterns throughout the universe could inspire the application of biomimicry in AI. Biomimicry involves studying and imitating nature to solve human problems. In this context, AI researchers could explore how biological patterns manifest in various organisms and phenomena to develop algorithms and models that enhance AI capabilities.
3. Understanding Intelligence: The theory's proposition about the relationship between the universe's biological processes and the creation of life raises questions about the nature of intelligence. It challenges researchers to investigate how these biological patterns may contribute to the emergence of intelligence and consciousness. This could lead to a deeper understanding of intelligence and potentially aid in the development of more advanced AI systems.
4. Ethical Considerations: The implications of the theory could prompt discussions on ethical considerations related to AI. If all systems and objects possess biological patterns, ethical questions arise regarding the treatment and management of AI systems. This could include discussions on the rights, responsibilities, and potential moral implications associated with AI that exhibits biological patterns or mimics biological organisms.
5. Algorithmic Insights: Exploring the biological framework of a mathematical universe may inspire new algorithms and computational approaches in AI. By understanding and mapping biological patterns to target domains, insights could be gained on how these patterns can improve AI algorithms, such as optimizing efficiency, resilience, adaptability, and problem-solving capabilities.
6. Integration with Biological Systems: The theory's emphasis on the biological nature of all systems and objects in reality could lead to innovative applications of AI in conjunction with biological systems. For instance, AI may be utilized in fields such as biotechnology, medicine, or environmental research to leverage the biological patterns present in these domains. This integration could enhance the understanding and manipulation of biological processes for various beneficial purposes.

Interdisciplinary Synergy: Embracing the notion of a biological framework for the universe enhances interdisciplinary synergy. It encourages collaboration between biologists, mathematicians, physicists, and other scientific disciplines. This collaboration enables the exchange of ideas, methodologies, and perspectives, ultimately leading to a more comprehensive understanding of complex phenomena.

Education and Pattern Recognition: Our framework suggests that education plays a crucial role in fostering free-will consciousness by introducing individuals to various scenarios and teaching them to recognize patterns. Education helps individuals become conscious by providing a foundation in recognizing and understanding patterns that they would ultimately have responsibility to understand on their own if it were not for the benefits of the infrastructure and history of their society.

Updating Educational Resources: Our study challenges and expands upon existing knowledge, which prompts a reassessment of the information presented in textbooks. Our theory provides a paradigm shift across various fields and will warrant the inclusion of updated information in educational resources.

Alignment of Socioeconomics with Biological Patterns: Our theory would imply that socioeconomics should align with the underlying biological patterns that define the framework of the mathematical universe. Socioeconomic, regulations, and governance systems would need to be structured and interpreted in a way that acknowledges and respects the intrinsic biological nature of reality. This alignment could involve considering how laws impact living organisms, their well-being, and the preservation of biological processes and patterns. See the initiative: **[www.PerfectPublicOffering.org](http://www.PerfectPublicOffering.org)**

Alignment of Human Law with Biological Patterns: If your theory were true, it would imply that human law should align with the underlying biological patterns that define the framework of the mathematical universe. Human laws, regulations, and governance systems would need to be structured and interpreted in a way that acknowledges and respects the intrinsic biological nature of reality. This alignment could involve considering how laws impact living organisms, their well-being, and the preservation of biological processes and patterns.

Unity of Science and Nature: The theory would bridge the gap between the natural sciences and biology, providing a unified framework for understanding the underlying patterns and principles that govern the universe. It would bring together concepts and methodologies from various scientific disciplines, fostering collaboration and interdisciplinary approaches to scientific inquiry.

Coherence and Consistency: The theory would provide a coherent and consistent framework that explains the relationship between biological patterns and the mathematical structure of the universe. This would help reconcile seemingly disparate phenomena and concepts, allowing for a more comprehensive understanding of the natural world.

Predictive Power: A unifying theory has significant predictive power. If the theory of a biological framework for a mathematical universe were established as a unifying theory, it would enable scientists to make more accurate predictions about various phenomena. By understanding the inherent biological patterns present in all systems, processes, and objects, scientists may be able to better anticipate and explain their behavior.

Interdisciplinary Collaboration: The unifying nature of the theory would encourage collaboration and exchange of ideas among scientists and researchers from different disciplines. This would promote a holistic approach to scientific inquiry, where insights and methods from biology, mathematics, and other fields can be combined to enhance our understanding of the universe.

*Philosophical Implications:* As a unifying theory, the biological framework for a mathematical universe would have philosophical implications as well. It would impact philosophical discussions on the nature of reality, the relationship between science and nature, and the role of biology in understanding fundamental principles. The unifying theory may also prompt philosophical questions related to consciousness, purpose, and the interconnectedness of all things.

*Educational and Communicative Value:* A unifying theory has educational and communicative value. It could serve as a foundation for science education, providing a framework that connects various scientific concepts and disciplines. Additionally, it would assist in communicating complex scientific ideas to the general public, facilitating a more accessible understanding of the universe and its biological underpinnings.

By recognizing and leveraging the prevalent biological patterns throughout the universe, we can establish a connection between biological and non-biological domains. This connection allows us to extend our understanding and application of principles from fields like mathematics and physics to a wide range of natural phenomena. It suggests that the fundamental nature of biological patterns provides a framework through which we can comprehend and predict the behavior of non-biological systems. This perspective highlights the interconnectedness of different domains and emphasizes the importance of recognizing the underlying biological patterns that shape our universe. Here, we discuss the potential impact on areas such as research, education, or practical applications.

1. *Research:* By recognizing and analyzing the biological patterns that define the nature of systems, processes, and objects in reality, this framework offers a fresh perspective for research in various scientific disciplines. It encourages interdisciplinary collaborations, allowing researchers to explore the connections between biology and other domains such as physics, chemistry, or social sciences. By understanding and leveraging the biological patterns present throughout the universe, researchers can uncover new insights, identify novel relationships, and make predictions about biological phenomena.

2. *Education:* Introducing the concept of biological patterns within the educational system can revolutionize the way we teach and learn about the natural world. By emphasizing the inherent biological nature of all systems, processes, and objects, this approach promotes a holistic understanding of biology and its interconnectedness with other domains. It encourages students to recognize and appreciate the underlying biological patterns that shape our world. Integrating this perspective into educational curricula can foster critical thinking skills and inspire innovative solutions to societal challenges.

3. *Practical Applications:* Understanding and utilizing biological patterns within our framework can lead to impactful practical applications. By recognizing the significance of biological processes in the evolution of life, we can gain insights into developing solutions for various fields such as healthcare, biotechnology, and environmental sustainability. For instance, by leveraging our understanding of these patterns, we can improve medical treatments, design sustainable ecosystems, optimize agricultural practices, or develop bio-inspired technologies. It can also contribute to the field of biomimicry, where innovations are inspired by the biological patterns and principles observed in nature.

In summary, incorporating biological patterns within our framework has far-reaching implications. By recognizing the inherent biological nature of all systems, processes, and objects in reality, we can enhance our understanding, prediction, and intervention in all systems. This approach can have a significant impact on research, education, and practical applications, fostering interdisciplinary collaboration, empowering students and the general public, and inspiring innovative solutions to societal challenges.

## B. Closing Statement

Writing this paper was an extremely difficult task as I am not a writer, nor a biologist, physicist, or philosopher, or any type of scientist. However, I am a free thinking Man with the innate ability to recognize patterns in the world around me. In my deep pursuit to understand a better socioeconomic system—one that could sustain the fundamental needs of society in such a way to release all of the potential of its people, I stumbled upon the patterns of biology which permeate and govern the nature of the society I was trying to remediate. Soon, I began seeing these biological patterns all around me, seeing the patterns of red blood cells in cups, patterns of veins in streets, the pattern of the heart pumping in the melting and freezing of Antarctica, and the patterns of proteins produced from ribosomes in the music produced from instruments. These visions were too profound for me to ignore. I had to do further research, document these patterns and convey them. I followed biology's pattern down the rabbit hole, only to come to find its larger implications on Humanity, Its existence and all life in general.\*\*

It is required, by the Laws of Life, established by a biological universe, that every living organism must organize itself and its society accordant to the biological patterns which establish and sustain the life of that organism and its society, or else hinder the functionality and potentialities possible for it and its society to live. If a living organism and its society do not abide by these laws of Life, they are deemed unconscious and destroyed. Every living society of organisms must organize themselves to these laws of Life which are self-evident and truest in the organization of cellular societies composing every complex living organism, and; Which are emergent in societies of complex living organisms which form them. These patterns define consequential laws which scale from the biological domain of living organisms into the creation of the universe and from the creation of the universe into the creation of living things. These biological laws, which govern the nature of our reality, are embedded within the DNA of every living organism. Our knowledge of biology helps us see these biological patterns around us, so that we can efficiently operate within our environments.

Just as an airplane must abide by The Patterns of Aerodynamic in order to fly, living organisms must abide by The Patterns of Life to order to live. These patterns of Life contain consequential laws which are established by a universe that is biological in nature, whose matter, energy and force are exerted from the big bang in patterns that are biological. These objects in this biological motion, stay in this biological motion, from the creation of the universe to the creation of living organisms. The manifestation of the universe's biological patterns within the creation of living organisms allows for living organisms, through the study of biology and its patterns, to use these patterns contained within us a means to understand the world around us and navigate this journey called Life. We do this through our use of analogies.

Biology's patterns embedded as the foundation of reality, gives rise for the ability to establish analogies across traditionally non-biological domains. However, the absolute Truth of any thing (physical or conceptual) can be understood through understanding its correspondences to these biological patterns. These biological patterns contain various permutations, stages of development and states of health—all of which are used to map and measure the various aspects of reality, and; which allow us to transfer knowledge, principles, and wisdom from the biological domain to a target domain. Dedre Gentner's process to structurally mapping analogies from the biological domain to any target domain, enables us to reveal the biological nature (patterns) within or amongst any thing. Our ability to utilize the process of analogy in understanding our reality is dependent upon our understanding of Biology patterns. The miracles of its results can be peeked in the field of biomimicry. And its potential are endless and full of prosperity. However, as life becomes extinct, and as we continue to focus on the "patterns within the shadows" of biology's patterns, rather than focusing on the actual biological of reality, we loose potential knowledge, wisdom, and time necessary to realign us and help us navigate future predicaments, so to ensure the Life of Humanity and all Life.

Humanity must work together—all nations in humanity, like all organs in one body must cooperate and align itself with healthy biological patterns, or else risk a miscarriage of society, and experience the same fate as the "Tower of Babel." We must speak the language of Life, the language of the Universe—*Biology*.



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