

# An Integrated Model of Cosmology

by Dennis William Hauck

The Integrated Model of Cosmology has its roots in the Middle Ages and represents a syncretic melding of Pythagorean philosophy, Hermetic principles, and spiritual chemistry. Expanded interpretations appeared in the 20<sup>th</sup> century based on new understanding from such diverse disciplines as astrophysics, quantum mechanics, and psychology.

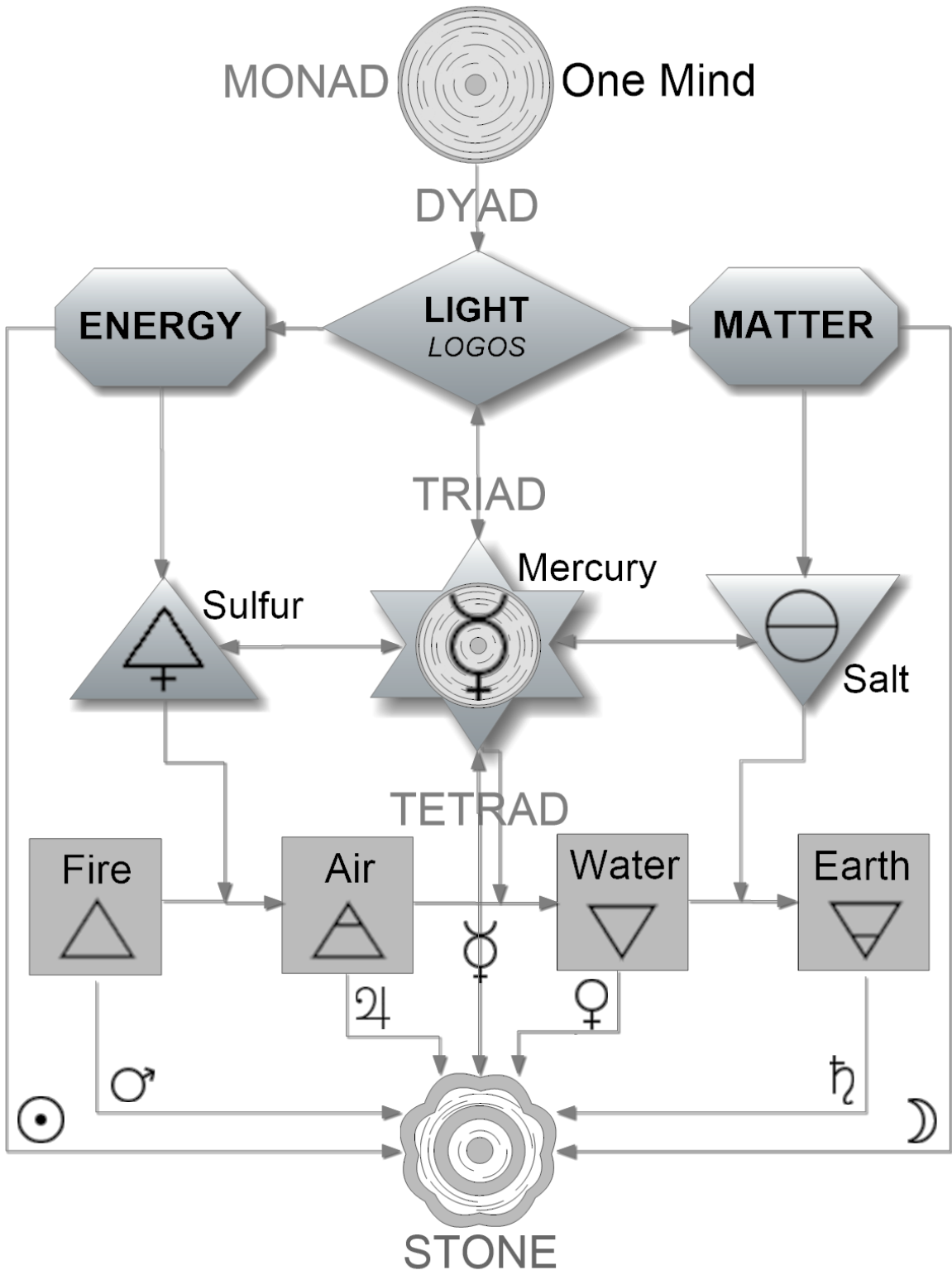
In this unique view of the universe, spiritual wisdom and scientific knowledge are combined in a transformative philosophy that can be applied on all levels of matter, mind, and spirit. The system follows the ancient Pythagorean Tetractys in its structure but adds new insights from the modern study of consciousness and what we now know about the creation of the universe.

## **The Monad: The Unfathomable Singularity**

At the top of the Integrated Model (shown on next page) is a circle with a point at its center, which is the ancient symbol for the Monad. The Greek philosophers who created the cipher wanted to depict the essence of unity and indivisibility in the dimensionless point at the center and also capture the idea that the brilliant point of light kept back the darkness of the nothingness surrounding it. This concept is similar to what really happened during the Big Bang. Since there was no space at the beginning of time, the monadic singularity created and stretched space itself—expanding the universe from the inside like a balloon.

For Pythagoras, the Monad cipher represented order and the perfection of Nature. For alchemists, the cipher symbolized the Sun and its perfected metal gold. The Supreme Being of the Gnostics was also the Monad, which equates to the *Atzmus* (“Essence of the World”) in the Kabbalistic model. It exists beyond finite/infinite duality yet transcends and permeates all levels of reality. In Hermetic philosophy, the Monad is the One Mind beyond the universe that exists at the highest level in a dimensionless realm called the *Empireum*.

We now know the universe began as just a single point that appeared out of nowhere, yet the first moments of creation are well beyond the power of modern science to explain.



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Chart showing the Integrated Model of Cosmology.



According to Hermetic and Gnostic teachings, the Monad originated from outside our reality and can never be approached or understood completely. German mystic Jakob Boehme said it arose from an unfathomable “Abyss,” a Greek word for the chaotic plethora of potential that existed before anything came into being. The discontinuous dashed lines I’ve added to the original cipher indicate the chaos of the dark Abyss from which the Monad appeared, as well as the probabilistic uncertainty inherent in modern physics in trying to understand how matter was formed in the early moments of creation. In the Hermetic drawing at left “*Fiat Lux*” (“Let there be light.”), the light of the Monad manifests all (*Alpha* to *Omega*) in the chaos of the Abyss.

Interestingly, in mathematics the Monad is defined as “0” because zero represents nothing. Yet the numeric Monad is the source of all the positive and negative numbers, and numbers that grow out of it grow eternally into infinity. In other words, zero as the Monad is real eternity and will never lose its eternal state because, literally, it has nothing to lose.

The mysterious number zero is neither positive nor negative, and multiplying any number by zero always results in an answer of zero. Zero (as nothing) does not alter other numbers through addition or subtraction, yet any number with a zero exponent always returns to unity (1), and even zero to the zero power still equals 1. Dividing by zero is fraught with enigmatic consequences, and mathematicians simply refuse to do it.

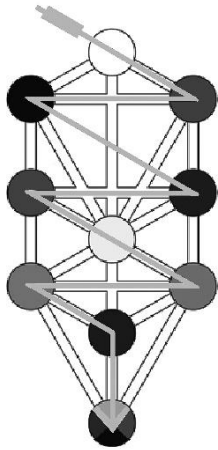
Alchemists called the chaotic substance at the border between the zero-state Abyss and physical reality the *Materia Prima* (“First Matter”). They described it as the ubiquitous starting point from which primordial matter is created—a roiling sea of virtual matter that exists in the etheric fabric of space.

Modern physicists seem to have discovered the First Matter hidden in the space around us at the Planck level (less than  $10^{-35}$  meters). They call it the “Quantum Foam,” which is a randomly fluctuating wave of potential particles. Alchemists believed they could control the First Matter with prayer and deep focus, and modern physics has proven that the conscious observation of subatomic particles necessarily changes their behavior.

### **The Dyad: Establishing Polarity**

In our chart, the Dyad level of duality is created by the light of *logos* (“logical thought”) originating from the Monad. It divides reality into the complementary opposites of Energy and Matter, which is depicted in alchemical engravings as the

masculine/feminine polarity of the Solar King and Lunar Queen. The active-passive dichotomy of positive and negative polarities is the engine that drives our physical and mental reality.



In the Hermetic tradition, the first and only act of the Monad or “One Mind” is the utterance of the Word (or *logos*)—the first thought that causes the Big Bang and sets our universe in motion. This event is called the “First Cause” and is visualized as a brilliant light emerging from the highest Tenth Heaven. In the Kabbalistic scheme (shown at left), it is visualized as a lightning bolt from the *Ein Sof* (“Infinite”) striking the top of the Tree of Life at the *Kether* (“Crown”) sephira and grounded in the earth at Malkuth (“Kingdom”).

After that event, only the grounded light of *logos* remains, as depicted in our model by the crystallized light in the diamond-shaped emanation from the Monad. It echoes through spacetime in the Mind of Nature or what Hermeticists called “Mind the Maker.”

This primal emanation is embedded in our reality in the laws of mathematics. The *logos* as the Mind of Nature can only be expressed in terms of dyadic duality, which is depicted in the diagram by the two opposing positive and negative poles shown in the first created opposites of Energy and Matter.

The divine *logos* can only be expressed in duality because the universe was created from nothing, and it must always add up to zero. This is a fundamental principle of both Hermetic philosophy and modern science. So, every positive thing must be neutralized with its opposite negative thing, and every particle of matter must have its corresponding particle of antimatter. Everything must add up to zero. Thus, the first principle of Zero Ontology is the reason for the oppositional duality of the universe.

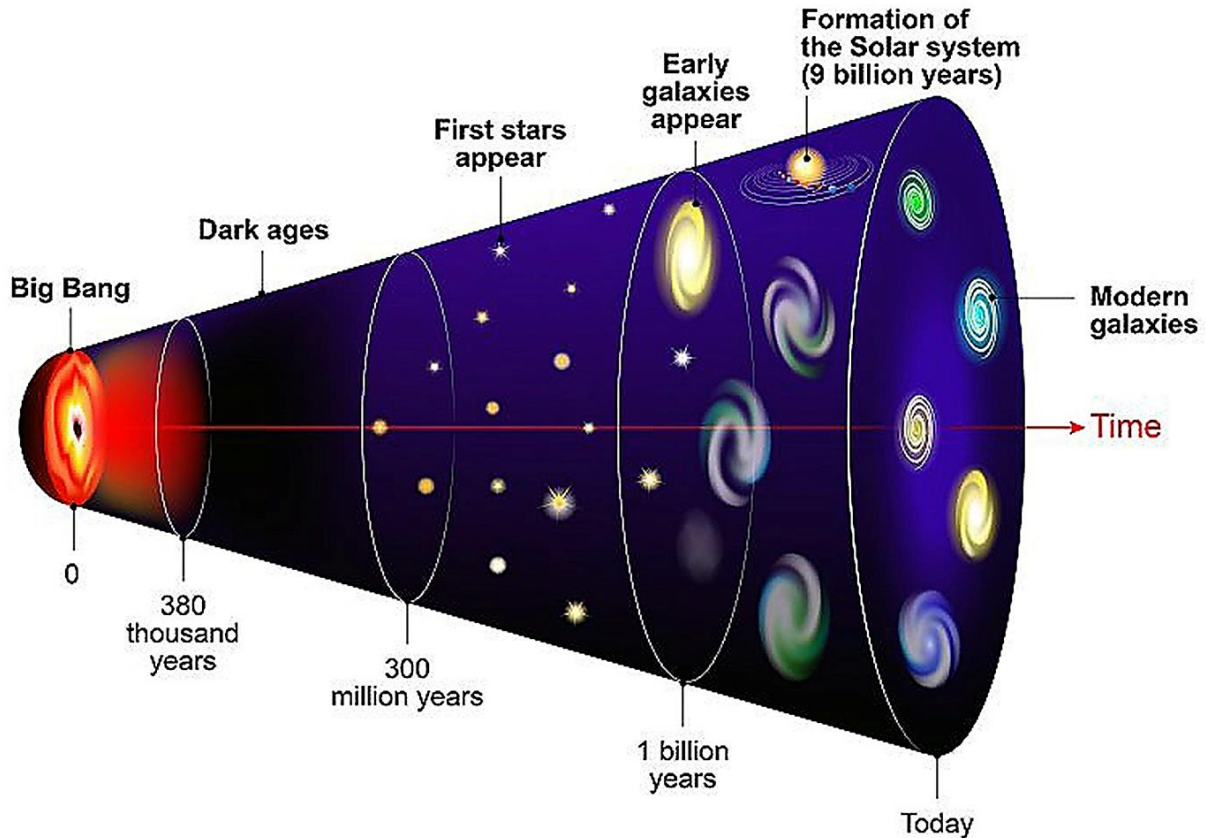
In ancient cosmology, the brilliant light projected from the Monad carried all the information (*logos*) necessary for creating the world. This is exactly what happened during the Big Bang. About 13.8 billion years ago, an infinitesimally small point of light appeared out of nothing and expanded at the speed of light in all directions. That light carried all the information necessary for creating the universe. (See Big Bang diagram on next page.)

Within this first interval of time—known as Planck Time ( $10^{-43}$  of a second)—that infinitesimal point of light inflated into a solid ball of light the size of a golf ball. During this initial inflation, photons of light released tremendous energy to create a primal duality of particles and antiparticles (neutrinos, electrons, protons, and neutrons).

In this dyadic cauldron, a miraculous event occurred that violated the law of Zero Ontology. Only the unexplainable fact that there was about one extra matter neutrino

created for every billion antimatter neutrinos kept the early universe from disappearing into oblivion.

To summarize, the primal opposites in the universe are Energy and Matter connected through the *logos* of light. Energy is expressed in fields of force or waves, while matter is expressed in particles and solid objects.



Psychologically, energy is associated with the masculine archetypes of aggressive expansion and spirit, while matter is associated with the feminine archetypes of passive contraction and soul. These primal archetypes are conveyed in the alchemists' images of the Solar King and Lunar Queen.

Energy and matter are constantly changing into one another—they are really just One Thing—but we will never know what that looks like, because we see everything through the lens of duality. Duality appears on every level of our existence—physically, biologically, psychologically, and spiritually. There is a never-ending series of opposites that determine our reality—male and female, wave and particle, liberal and conservative, hot and cold, light and dark, virtue and vice, love and hate, peace and war, good and evil, life and death.

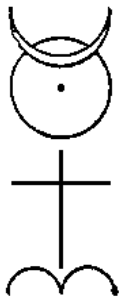
### **The Triad: Reconciliation of Opposites**

The third emanation or Triad level is the Three Essentials, which alchemists represented as the three archetypal forces of Sulfur, Mercury, and Salt. These forces

of creation are engendered through the primal opposites of Energy and Matter through the intermediary of light. Thus, Sulfur is a manifestation of Energy; Salt is a manifestation of Matter; and Mercury is a manifestation of light and consciousness. Albert Einstein discovered that these ancient concepts have the mathematical relationship of  $E = Mc^2$ .

In our chart, Sulfur (Energy) is carried in the upward-pointing triangle of Fire, and Salt (Matter) is carried in the downward-pointing triangle of Water. Mercury is represented by the star-shaped figure made by merging the triangles of Fire and Water. The Mercury star is also a symbol for the Philosopher's Stone, an alchemical state of consciousness that frees us from illusions and allows us to see true reality. So, obviously, Mercury at the center of this chart is the reconciling force. At its central position, it is connected to all levels represented here—horizontally and vertically.

Interestingly, the Mercury star symbol in three dimensions forms an eight-pointed star that is associated with an ancient Egyptian symbol for the body of light called the *Merkaba* ("light spirit body"). Early Jewish mystics taught the *Merkaba* was the throne-chariot in which the prophet Ezekiel ascended into heaven. The *Merkaba* rotates constantly—thereby combining energy, light, and matter into a living astral vehicle of universal awareness.



Renaissance alchemist-mathematician Dr. John Dee chose Mercury as the basis of his elegant "Hieroglyphic Monad" cipher (shown at left), which brings together all the same levels of reality we have tried to capture in our chart. The point at the center of his Mercury is a repetition of the dimensionless singularity in the Monad. In other words, Mercury shares the same kind of consciousness as the Monad (or the One Mind of creation).

Mercury also stands at the heart of our Integrated Model, where it can access all levels of reality from heaven above to the myriad of manifested things below and everything in-between. The surprising implication is that our reflected consciousness can reach any level of the embedded divine consciousness in the universe using contemplation, concentration, focusing, meditation, imagination, and other tools of mental discipline.

### **The Tetrad: Four Kinds of Manifestation**

The archetypal Four Elements (Fire, Air, Water, and Earth) are shown in our chart in four boxes of manifestation. They are created from the interaction of the Three Essentials. Fire and Air are signatures of Sulfur (Energy), and Water and Earth are signatures of Salt (Matter). The reconciling force of Mercury (light) expresses itself in the "grounding" of Air and Water in the Earth Element.

No matter how you look at it, the universe manifests through four elemental (or interactive) forces. The original thought or Word of the One Mind is fulfilled in

materialization. Or as the Emerald Tablet puts it: “Its inherent strength is perfected if it is turned into Earth.”

In modern physics, the Four Elements have been reinterpreted as the Four Fundamental Interactions in matter. These interactive forces control everything that happens in the material universe. By far, the strongest interactions in matter are with the cohesive Strong Nuclear Force, which is associated with the alchemists’ primary agent of change, the Fire Element.

The next strongest interactive force is Electromagnetism, which is the source of visible light and the spectrum of invisible frequencies carried in the air. Alchemists associated light and other “invisible spirits” with the Air Element.

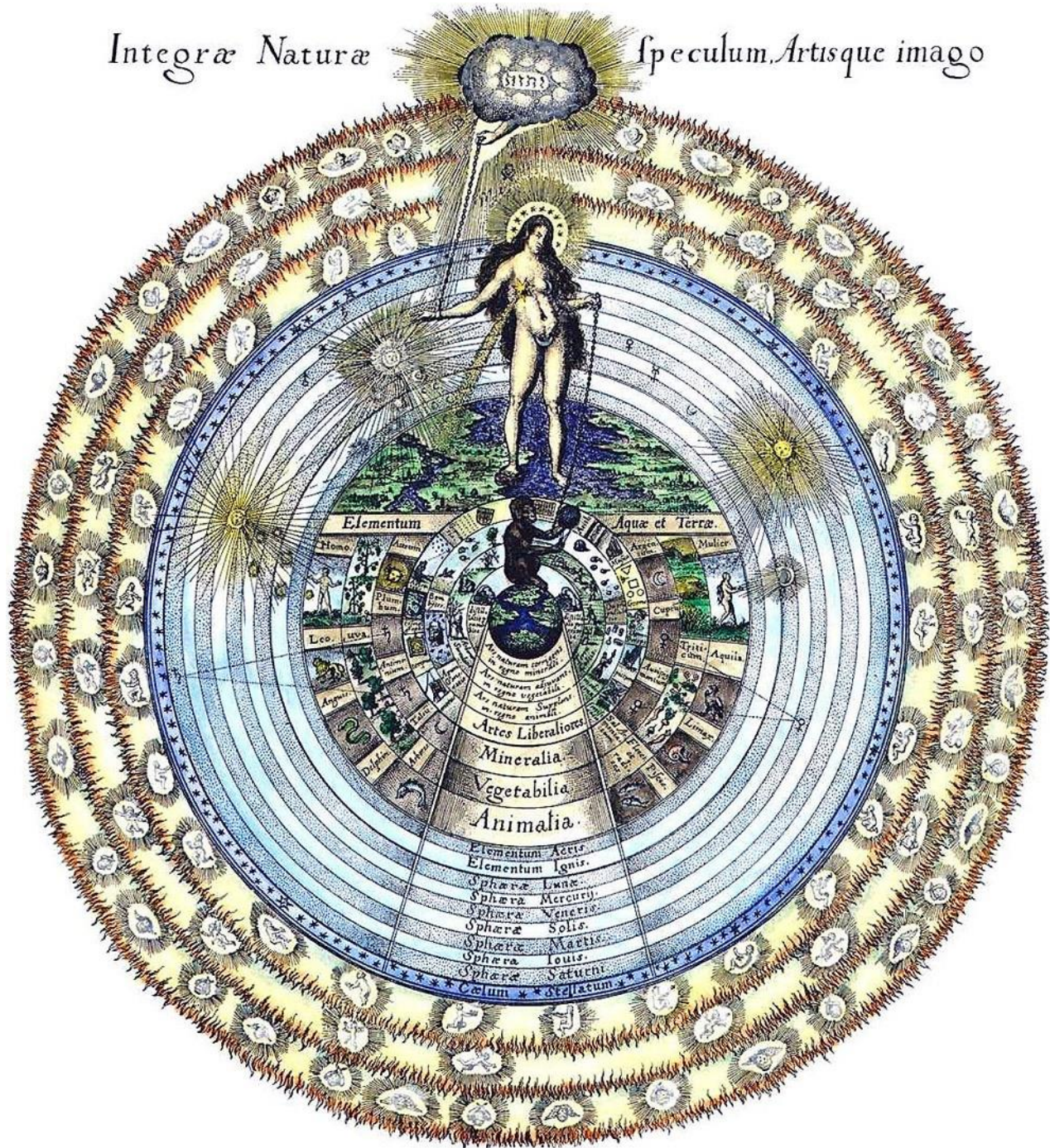
The so-called Weak Nuclear Force is responsible for the dissolution of matter in the decay of atomic particles. It is also responsible for the fluid fusion reactions that power everything from life on Earth to the heat of the Sun. Alchemists would associate this force with the Water Element.

While the final interactive force of Gravity pulls galaxies, stars, and planets together, it is the least powerful force on the atomic level. Alchemists would view it as an expression of the static Earth Element.

Recently, physicists have proposed a fifth interactive force, appropriately named the “Quintessence.” It has been variously described as a pervasive etheric force associated with ether anti-gravity or dark matter, and scientists around the world are trying to detect it. It carries many of the same characteristics as the fabled Quintessence (Fifth Element) of the alchemists.

If we return to the perspective of the Big Bang, in the next three minutes after the Four Forces separated, the violent explosion of heat and light continued to expand. (Remember, the Big Bang did not expand “through” anything because there was no space at the beginning of time.) The brilliant light from this explosion lasted 380,000 years and was so intense, it can still be detected in the cosmic microwave background radiation, and it comprises about 4% of the static on your antenna TV screen. This event corresponds to the “Prime Mover” in Hermetic cosmology.

Then, inexplicably, the universe went completely dark for almost 300 million years. After that period of blackness, the first stars began to appear. In the darkness, elementary particles have condensed into ions of hydrogen that fuse to form helium ions, and the first two elements are created. The atoms cluster in clouds of primal matter which collapse under the influence of gravity to form the first stars. Or, as the ancient philosophers would put it, the Three Forces of creation have begun to manifest as the Tetrads of Four Elements (what modern physicists call the Four Interactive Forces). In the Hermetic view, this phase is the rendering of the Four Elements in the Firmament of Stars in the Eighth Heaven (see engraving on next page).



In 1617, Robert Fludd captured Hermetic cosmology in this painting *Integra Naturæ Speculum Artisque Imago* ("Mirror of the Whole of Nature and Image of Art"). At the top, the One Mind emits the light of *logos*, which descends along a chain through the celestial spheres of the Empireum, Tenth Heaven (First Cause), and Ninth Heaven (Prime Mover). The chain is attached through the Firmament of Stars to the *Anima Mundi* ("World Soul"), which in turn is chained to a chimpanzee that represents humankind. At the very center is planet Earth, which is surrounded by seven rings representing the planetary archetypes and two more representing Fire and Air. The elements Water and Earth divide Nature from civilization. The whole circular painting is the Monad symbol with the Earth at its center.



In the nuclear furnace of the first stars, helium atoms are fused to form progressively heavier elements, such as carbon and the metals. Sometimes, when the fuel runs out, the star explodes into a supernova, which spews the new elements deep into space.

Finally, about 1 billion years after the Big Bang, stars have begun clumping together to form the first galaxies held together by gravitational attraction. The creation of stellar matter continues to expand space to its current size of more than 100 billion galaxies.

In the Hermetic viewpoint, as the evolution of the universe proceeds and life begins to appear, and the archetypal planetary spheres of the Seven Heavens come into play. In the Kabbalah, this phase is also depicted in the three Triads of *sephirot* on the Tree of Life that represent planes of consciousness (Superconsciousness, Self-consciousness, and Subconsciousness). All these archetypes were projected into the universe in the original light of the *logos*.

### **Seven Archetypes Shape the Stone**

To the basic concept of the creation of material objects through the projection of consciousness, alchemistic philosophers added preexisting patterns that further shape the characteristics of matter. They postulated that the emanations of the Four Elements were filtered through seven planetary archetypes culminating in a new embodiment of consciousness or state of being known as the Stone. A “stone” is what alchemists called any precipitated or crystallized matter. It could be a planet, a rock, a flower, an animal, a human, a new personality, or even a resurrected soul. In their geocentric cosmology, the first stone was the Earth itself. At the highest level was the perfection of consciousness known as the Philosopher’s Stone.

The precipitated Stone at the bottom of our chart is the manifestation of divine thought in our model. The multi-layered object represents the cosmological completion of the first thought that originated outside our universe. Matter in our universe still contains the original spark or point of consciousness that created it, but it is also shaped by the external forces around it.

The seven archetypal forces harnessed to create the Stone in our diagram represent the seven planetary influences of Hermetic philosophy. These are indicated by their corresponding alchemical cipher. The primal opposites of energy and matter are the Sun and Moon, while the Four Elements are expressed archetypally as Mars (Fire), Venus (Water), Jupiter (Air), and Saturn (Earth).

The seventh planetary archetype in the creation of the Stone is Mercury, which is the light of consciousness that originated in the One Mind above and is reflected in Mercury below in the personal reality each of us creates for ourselves. That original spark of light from the level of the Monad is projected through the *logos* and transmitted by the light of consciousness in all sentient beings. In other words, we create our personal realities in much the same way the universe was created.

In this chart, I've attempted to incorporate many ancient and modern traditions in a single view of reality. If you understand the symbols, the chart can be useful in various ways. It is a summary of ancient Pythagorean cosmology (that dominated Europe for nearly 2,000 years), as well as the wisdom of the Kabbalah and the proto-scientific view of the Hermetic teachings. At the same time, it provides a unique view of the Big Bang and its philosophical implications. As a map for grounding spiritual energy, it can also be used as a guide to alchemical transformation and personal growth.