Scientific Illuminism

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We place no reliance on virgin nor pigeon;
Our method is science, our aim is religion.
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Do what thou wilt shall be the whole of the Law.

The universe, as it turns out is a hologram generated in the mind of God that is Not, emanating as infinite points of light, each projecting the entire universe from it's own particular point of view as determined by it's vibrational wavelength. This point of view along with all others is projected onto the screen of infinite possibility as Brahm or Nuit so to speak.

It seems that this is a natural and unconscious occurrence in which one's perception is intimately entwined with the primordial matter, partially determining it's behavior as seen in the Heisenberg principle found in modern physics. Briefly and superficially: this principle states that observation determines the behavior of the subtle matter that we call sub atomic particles. The problem is that every other perceiving being also has an influence on how matter manifests, which makes the universe a collective creation of the Elohim, the infinite points of light, or stars that are US. (CF: refer to Crowley's Star Sponge vision)

The modification, or movements within the limitless ether as infinite space is according to Tesla, an electrical phenomenon identical to the cosmology described in both Yoga and Samkhya schools of Hindu philosophy. Both schools postulate a black ethereic egg called Akasha as the primal matter which interacts with the cosmic Prana as energy and force. This energy is equated with electrical force in Swami Vivikenanda's discussion of pranayama in his book: Raja Yoga.

This creation seems to be wholly spontaneous as the potential of infinite space has no limit in the forms it inspires from the heart of light which extends itself through this infinite web of mind, appearing both material and ephemeral, and at other times beyond any category of apprehension expressible in conventional language. The investigation of the material world as well as the mystical journey of the sage must ultimately lead into this heart which is the quintessence of our being. It is this level of apprehension which constitutes prophecy, which is needed in order to maintain balance and harmony between the various planes and worlds which are a condition of our existence.

True prophecy involves a mystical journey into the heart of the universal mind via the manipulation of the microcosmic mind as found in a fully conscious human being. Such processes allow the individual to penetrate the mysteries of the universe through the use of symbols and images that are communicated through the various levels of the psyche allowing the center of ontological being to be accessed through a concentrated and prolonged self introversion as found in most shamanic practices. The famous dictum: 'Tat vam asi' or 'Thou art That' taken from the Upanisads (and found in the Gnostic Mass) comes to mind in this regard. This also reminds one of the alchemical axiom: 'as a above, so below' and should remind most Thelemites of Crowley's qabalistic rendering of ABRAHADABRA in which the letter 'A' being a glyph for the pentagram and microcosm is shown to contain the whole of the ontological universe as the macrocosm. Readers of Liber 777 will recall that this occurs by the six letters of the hexagram as macrocosm being contained within the five letters of the pentagram as microcosm. This key is a motif which came up again and again in the Enlightenment philosophy that was the legacy of
our 'modern world'. Such concepts were put forward in a novel manner such as in the works of the early German philosopher Gottfried Wilhelm Liebniz with his concept of monadology, in which each person and thing is a perfect mirror of the entire universe limited to a particular perspective. Such a work paved the way for a whole German school of thought culminating in the will to power of Nietzsche, as well as the phenomenology of Husserl and Heidegger which would create a fertile ground in western culture upon which the gnosis of the crowned and conquering child could take root. This exploration is taken up further in my own upcoming and complimentary work: Thelemic Philosophy in Context.

This same view of the interconnection of the microcosm and the macrocosm is now being expressed again in physics with many other occult truths being revealed in the fields of Biology, Cosmology, and sexual studies as will be seen in this present work. The most relevant of these truths are the reality of ideas and archetypes as real and potent, yet abstract entities capable of transforming both the matter of the physical world in addition to the molecular structure of our DNA.

The connection between our biology and our mental and emotional makeup in relation to the use of language, stimulation of the senses, and physical actions not only validates the teachings of ceremonial and sexual Magick: the subtleties being discovered in each field of study are opening doors to endless new possibilities in Magick waiting for those who are willing to tread the unbeaten path of experimentation. The key factor here for us Scientific Illuminists is the vital importance of language and emotion (Hod and Netzach) as factors which influence action, and action as an expression of will as a vital means by which the tendencies of our being as physical DNA can be transformed. If the world truly is a mirror image of the soul as now suggested by physics, then we are now getting a grasp on the occult keys necessary for producing subtle, yet potentially radical transformations in the 'world' as we know it. Now, thanks to the developments of mundane science we are now able to grab onto these potent occult truths in a language that inspires certainty and confidence. It is through genuine confidence based on certainty that the energized enthusiasm of today's thaumaturge must rest in order to make a sustainable manifestation in this world of contending forces.

This practice of prophecy: exploiting our mirror image of the macrocosm for transformational insight has been the practice of shamans, prophets, and seers from time immemorial. However, it is also manifests in any exceptional expression of genius, whether it be artistic, philosophical, scientific, or the work of a revolutionary inventor. In all cases, true prophecy shakes up the culture, challenges it and leaves a wake of new social and/or technological patterns in the upcoming generations.

Today's discoveries in physics and the exceptional revolutionary insights of scientific visionaries such as Nicola Tesla have blurred the boundaries of science, prophecy, and Magick as they are usually understood, bringing the manifestation of all such phenomenon under the banner of 'individual genius': the mandate and goal of the A.'. A.'.

This is a goal that is all too often forgotten as many A.'. A.' Aspirants become more concerned with the outward appearance, of being in a 'magickal order' getting lost in petty games of power politics. Such folly is usually triggered by a vain 'Sorcerer and Stone' motif in which the tools of
ritual Magick and meditation become more of a personal fetish: a means of maintaining vain and seductive self-image. The production of new gnosis in the form creative and provocative personal work made available to the public is the true test of spiritual attainment which cannot be replaced with the 'lineal proofs and dodgy paper work' that are so often relied upon.

It is this manifestation of genius that moves the soul of the individual and the collective soul of society, shaking up the world and transforming it in various ways on all planes. This work: The Reunion of Science and Religion, demonstrates the unity behind the various disciplines as a common means to attain that one end which occurs when our human endeavors are pushed to their uttermost limits via the application of a trained mind and a fortified will. “Strive ever to more!” we are told in AL:II.72.

It is through such endeavors and these endeavors alone that we can see that all paths lead to the summit of that sacred and holy mountain. This following work does just that: it presents us with the union of science and religion, a union which occurs when human abilities are pushed to the level of genius: the essence of all true prophecy.

To this effect I will conclude this preface with a quote from one of my favorite Holy Books:

10. Only they who know IT may be known.
11. For they have the genius of the mighty sword 418.
12. And they are not deceived by any of these things; for by their subtlety do they expand them all into the twelve rays of the Crown.
13. And these twelve rays are One.

Love is the law, love under will.
Introduction

Do what thou wilt shall be the whole of the Law.

The physics of consciousness has taken science full circle back to the antediluvian Gnosis; and with what may be a more sophisticated science and technology than even the ancients knew. The ancient and Universal religion was openly inculcated into the myths of the several Western sub-cultures throughout the antient world. It is with the rise of monotheism that not only have the various traditions and practices of this universal philosophy been eclipsed and until now, almost forgotten, but we find them also having been replaced with a superstitious structure without any rational science to confirm its apprehension of the world. At least what science they practiced suffered from the erroneous paradigm that even conceived of the world as being flat. This having been transformed with the advancing work of Copernicus & Galileo and the Renaissance freed European minds from the ignorant superstition of the Roman church.

From the time of Constantine forward, the new state religion of Rome had turned entirely from the Pagan tradition. The once living gods, the planets and stars of the Pagan era, came to be deemed as dead, inanimate objects and the one ineffable God that is NOT was distilled into an anthropomorphosized image of a super-natural human being with unlimited power. Contemporary psychology has already found these antient symbols to be at least quite useful in describing human drives and defense mechanisms, et al. With physicists speaking more and more like Hindu mystics, the first link in unification has been made, with scientists reaching out to the community psychologists once eschewed as being neurotic (in their recognition of spirituality).

With the demise of Paganism came and end to the intimate connection between spiritual or elemental forces and the material world. The spiritual world was ultimately denied as even being real by materialists; considering it to be little more than the fabric of superstition and the source of childhood fairy tales. The spiritualists formed their own camp by denying the material world as a Maya or illusion, and the fracture between the two became instilled into the psyche, here in the West. Yet the spiritualists themselves can be accused for the most part, of promoting a nilhilistic philosophy that lent credulity to the materialists. This has forged the ancient truths of the White School of Magick (cf. my article: Schools of Magick) into now, dead dogmas while science and technology have hastened its progress and development even faster than our moral doctrines can comprehend. What is vitally needed in our modern world is a new mythology that helps us to come to terms with ourselves, as the Roman myth no longer suffices (nor do its descendants).

We begin by returning to the source of the ancient wisdom as has been found and with certain antediluvian sources; well researched by Madame Helena Petrovna Blavatsky; in her Buddhist Gnosis. And as well, the origin of the Hindu Vedas also belongs to these pre-historic times; both relying on the same Egyptian/Mesopotamian Gnosis the would come to inform ancient Greece and as a back-drop to the Roman culture that would ultimately spawn Constantine. This field of investigation reaches deep our historical past to remember what we have now forgotten.
in our spirituality; though it will be some time yet, even in this rapidly advancing age before this reaches the collective consciousness of human society; belonging today to really but a few among us.

Modern physics has though, returned science to the door where the ancient, universal and pre-dogmatic knowledge once informed our myths and morals. With electron microscopes and sophisticated mathematics, its permeation of the microcosm has also inspired major breakthroughs in our understanding of macrocosmic systems as well. With the the Hubble telescope, we can look deeper and deeper into the workings of the macrocosm; even through time. Together, these tools are causing physicists to begin speaking the language of mysticism and they are now beginning to offer answers to some of the deeper questions about the nature and reason for life and consciousness. It being noted that physicists have come to learn the language of the mystics, it would behoove those of us that are mystics to reciprocate and learn the language of science. It was this that made the antient Mage. The great inventors and renaissance men of history are examples of the ideal mage. Even Crowly with his emphasis on poetry and literature was making a few inventions and producing alchemical elixers as per his Confessions.

What follows is a collection of essay fragments from various scientists and intellectuals, assembled with my commentary to show how religion and science are already becoming reunited. I cannot pretend to have the technical knowledge of the various disciplines presented here as I’ve not been educated in any of the several natural and biological sciences that directly observe the human condition. But the weave of these several ideas into one stream of thought works intrinsically and unifies various documents. This adds even greater credence to the documents I’ve written for the GCL and the A.’.A.’. My comments will be interspersed throughout, so that what I bring to you is my comprehension of Magick and mystical experience. This bibliography will show those sources from which this amateur scientific theorist has drawn in his attempt to bring science back to the Gnosis or the Gnosis back to the science.

For the first time in two thousand years, we’re actually moving towards wholeness in this regard; an ancient world fractured and burned to ashes with the Library at Alexandria looming iconically as a dark omen for what ultimately followed. Now, as a phoenix rising from the ashes, there is hope. Yet the forces of tyranny and superstition are not going to give up their ground without a fight. And the sword we must carry is our intellect; that our bodies be cups filled with the influx of that spiritual force that cries out for Light, Life, Love and Liberty. Even there are Thelemic groups that have sided with the forces of tyranny and superstition. So it seems that by the time the battle ultimately rages, brother will fight brother and it will be hard to tell who is on what side.

At least Liber AL vel Legis prepares us for this obscurant situation.

AL:II.59 "Beware therefore! Love all, lest perchance is a King concealed! Say you so? Fool! If he be a King, thou canst not hurt him.

AL:II.60 "Therefore strike hard & low, and to hell with them, master!"
We have found light seeping in through the cracks throughout the darkness of this Piscean Age: a Gnostic movement in France (though brutally crushed by the Inquisition); the Italian Renaissance and even the Deist movement inside the Anglican Church that would ultimately formulate the driving ideology behind the American Revolution and the reintroduction of natural law in what some call the forerunner of our holiest book, the Declaration of Independence. But the Yellow Press has struck hard in this ‘land of liberty’ and Crowley and Blavatsky have become demonized in the popular reckoning as Christianity has fought hard against the natural law of our American forefathers. Yet to answer them, we have built an American English Qabalah that we might put forth our own LOGOS and build upon the mythology that must be in place before the inauguration of the Aquarian Age. Indeed it is we who must sew it ourselves, into the world that is to become.

Love is the law, love under will.
Tracking the Night of Pan

Modern physicists tell us that there is no such thing as the ‘vacuum of space.’ And that in fact, there is actually a repulsive form of energy (anti-gravity) that fills this seeming vacuum and counteracts the force of gravity at every possible interaction. In fact, sixty-six percent of the Universe is comprised of this ‘Dark Energy’ with another thirty-three percent of the Universe being comprised of ‘Dark Matter’ and astounding, only one-half of one percent of the Universe being composed of visible matter. And in order to get definitions out of the way, visible matter is also called ‘Baryonic Matter.’ Baryons are groups of Quarks affected by the ‘Strong Nuclear Force.’

We are further told that when the Universe becomes twice its present age, Dark Energy will comprise ninety-seven percent of the energy in the Universe and that Dark Matter will become insignificant; assuming our knowledge of this doesn’t change. This anti-gravitational Dark Energy is pushing space apart in a process called ‘Cosmic Acceleration.’ The result will be that at some point, the speed of galaxies moving away from each other will eventually overtake the speed of light, as photons will lose their ability to keep up with the moving speed of the expanding space that they are traveling through. This will formulate an ‘Event Horizon’ that will ultimately limit what we can see of the Universe until we come eventually, to be able to see only a fraction of it.

As physicists continue to explore this new discovery, they may come to discover that this Dark Energy may also decay and cause the Universe to reverse this process and contract again. Theories such as ‘Quintessence,’ that are attempting to show that this matter can decay are being explored. This counterbalances the theory of the ‘Cosmological Constant,’ which itself is still not understood, though it is the integral explanation for the viability of Cosmic Acceleration.

Though we may be made of star stuff, the Universe is primarily not. Even half the gravity that holds the Earth in its orbit is from Dark Matter, which also holds our galaxy together. As Thelemites, knowing that the new understanding generated because of modern science and that leads us away from superstitions such as the Sun dying every night, we have to ask: Is Dark Energy the ‘Night of Pan?’ And perhaps, the Nightside of the Tree-of-Life is a much larger construct, if it were built on Dark Matter and contrasted with the star stuff of the ‘Dayside.’

Yet remember that these two sides are connected through Yesod and Da’ath. The examination of Dark Matter will make this scientifically apparent. Dark Matter is comprised of three particles; the Neutrino (actually known by physicists, to exist) along with the theoretical particles, the Neutralino (one hundred times heavier than a Proton) and Axion (one-trillionth the mass of an Electron); both referred to as ‘cold dark matter.’ The Neutrino’s mass is less than one-billionth that of a hydrogen atom and accounts for about one-fifth of the Dark Matter in the Universe. Neutrinos can oscillate between Muon and Electron varieties and may exist in other dimensions as shown to us in String Theory. Each particle may have a much larger ‘shadow particle,’ the super massive right-handed Neutrino, also called the ‘N-Particle.’ Or it may have a dark doppelganger that lives in a world outside our own.

Neutrinos are considered immune to Electromagnetic force as well as the sub-atomic Strong force and Gravity. It is the Weak nuclear force that affects Neutrinos and is described by Fermi’s Theory of ‘Beta Decay,’ which makes atomic nuclei unstable and results in the transformation of sub-atomic particles. Beta Decay emits an electron as a Neutrino transforms into a Proton with some of the energy in this process being carried off by a Neutrino. The ‘Electron Neutrino’ can morph into a Muon or Tav Neutrino as it becomes coupled with Muons and Tavs. For a better understanding of this, the following chart is presented:
Twelve fundamental particles called Fermions, compose all of matter with six being Quarks and six being Leptons. In our everyday world, we see only ‘Generation 1’ Fermions; these are Electrons along with Up and Down Quarks, which combine to form Neutrons and Protons. Fermions of Generation II and III tend to decay into lower generations. And when any heavy Lepton decays, one of the by-products is its correspondingly named Neutrino. Matter particles interact by exchanging force particles, Bosons, which carry the Strong, Weak and Electromagnetic forces—but can’t explain Gravity.

And this is a particularly fascinating note when considering the morphing capacity of Neutrinos. It seems almost as if an act of Will could get these Neutrinos to hook up with any level of Lepton. As a matter of fact, the fact that there are three generations of Leptons and an evolutionary path that moves towards the first generation is not unlike the three veils of the Tree-of-Life.

String Theory has been developed to reconcile Gravity with Quantum Theory. It suggests that there is a particle called the Graviton and obviously, not placed on the above chart. And it would be great to place this particle in the as yet undiscovered world of Dark Matter and construct another chart, of corresponding shall we say, Dark Fermions and Bosons. In Thelemic science, we already have this Nightside Tree and the concept of the Night of Pan or N.O.X. But we have one major problem before we can even hope to validate this Thelemic prediction. String Theory itself lacks empirical support as the things that it predicts are at a level beyond our ability to experiment upon and measure. And the Strings themselves are quantified as light, though light is said to be an electromagnetic construct and perhaps originates in another dimension.

In Liber Immortalitas vel Lucifuge, the comparison has already been made between the light of Strings and the Phosphylation of the cell. The fact that light may come from an invisible fifth dimension could indicate this dark realm of matter and energy...dark only because we have yet not the tools to see this. And the entire model of String Theory, though opening a door or Gate as Kenneth Grant might put it, may really miss a mark as much as it presents a new mark beyond a certain portal. Is this darkly splendid world prophesied by the Night of Pan and in its relation to the Tunnels of Set? It may be some time before we can even speculate on this with any greater insight. But as science has helped us to understand that the Sun burns unceasingly, rather than dying daily; lifting us out of a superstitious age and igniting the Thelemic paradigm, so we must be patient for our partners in the scientific community as we truly are living in that time when science and religion will again become one.

Moving beyond canonized Thelemic Doctrine, there are a few emerging considerations. The first that readily comes to mind is on the subject of dimensions. Chesed gives us a three-dimensional figure that finds movement in Geburah. Well if one can understand this without it being too abstract, then why would one have trouble with sentence in Tiphareth? Yet this is a major mystery. So we should draw our attention to the need to explore the Pythagorean geometry expressed earlier on...point, line, 2-dimensional
surface...leading up to three-dimensional cube...and consider what this might be in a relativistic rendering. String Theory seems to address this somewhat...though when scientists start talking like poets, they usually show that they lack the skills poets have. Still, the description when talking about 1-dimensional strings usually implies the idea of distance as if we backed away from a view of a stadium crowd...first, all we'd see is heads...but soon enough, just the top of heads.

So as we move closer, dimensions pile on up to the third...and then comes time, the fourth and I would have no trouble assigning that to Netzach as emotion is so often based in relative time. The pain of yesterday can even be laughed at today. And the fifth dimension suggested by Quantum Theory brings us spirituality, which I would have no trouble assigning to Hod. Hod is traditionally attributed to Mercury/Intellect, and we can infer from this, reason, which Plato would call the Pneuma (Spirit). Yesod then brings us to evolution as it draws from the Nightside of the Tree and hence as I suggest above, Dark Matter and Dark Energy. They formulate and Etheric Plane of electromagnetic energy that we can ultimately call Malkuth in light of Patrizia Norelli-Bachelet's brilliant insight on 'True Matter' as discussed in Liber Vox Viva Voce vel Video.

My principal speculation on this is that light is itself, the fifth dimension. If the fourth dimension is time that situationally pits us in a three dimensional construct, the fifth dimension illuminates that construct with sentience. For Physicists, trying to remain so secularly oriented and singularly disciplined, they seem to me to be missing the mark. They really need to become Interdisciplinarians and begin to contemplate both the qualities of sentient consciousness (fifth dimension) and the spiritual divinity that this overtly implies.

The physicist, John Cramer, theorizes that Dark Matter is composed of Axions that resemble an electromagnetic field that he sees as two separate fields working in parallel to each other. Axions would then be converted into Photons with their estimated mass-energy creating electro-magnetic microwaves. Boris Iskatov has devised a theory that uses equations to obtain a quantum hologram (bringing to mind the work of Richard and Iona Miller) and Anatoly Ohatim claims that he has confirmed the existence of a microlepton gas that requires the use of an ‘aurometer’ to detect and measure. This of course, parallels the work of Harold Aspden who claims to have proven that the Aethyr of both Eliphas Levi and Newtonian physics actually is real.

Father Jerome divides the Axion into four different characteristics: a positive particle with a positive spin; a negative half-integer particle with the negative half-integer spin; a positive particle with a positive integer spin and a negative particle with a negative integer spin. Moving back then to the ideas of the neo-Platonists, we have an interesting parallel to the idea of the four elements (Fire, Water Air and Earth). Father Jerome then model’s consciousness by pairing these off to connect with the corporeal, physical brain in one dimension and to an incorporeal ‘higher self’ in another dimension.

In the Enochian work of Runar, Dark Energy is identified as the ‘Black Fire’ (Fire having the traditional double-duty of acting as Spirit in Western Occultism) and his Enochian works are full of references to this. The QUAR of I-Ged is a pure call on this fire, but Runar notes that the NI are those that really utilize it and “brings the ecstasy in.” For him, “[I]t’s a concept belonging to the trinity or the Supernal [Triad].” He further notes that it could be found in the Aur as it is the medium that Hadit resides in. This of course, takes us further outside canonized Thelemic Doctrine, but further validates the work of the DOzmt Index. Runar further states:

I found the easiest way to produce Black Fire was to mix Active and Passive Fire, as its equilibrium produces this "static" Black Fire. It was regularly called the ‘Frozen Fire’ by the Enochian Entities, which is absurd, but calling it static is equally absurd as it doesn’t exist. But it feels that way. The passive fire or contractive fire is what in the calls of Dee and Kelly is called the ‘Fire of Gathering.’
If the black fire is caused to contract, it will split and manifest as some known kind of fire, because it have got the forces of contraction and expansion tied in equilibrium. I believe it’s this process which is called zim-zum in Jewish Qabalah. What you call dark matter I guess would be the root of Earth.

Considering that Dark Energy and Dark Matter have been linked with the Night of Pan, and Pan is about generation and incarnation (Cf. Setting Pan), there is a nice compliment in Runar’s essay on the root of Earth. And of course, the “primal attachment” is akin to the nature of the ‘Beast’ as the Bud-Will...the incarnating force inside vibrating matter, which is the Cup of Babalon...setting up of course, the central Thelemic symbol of Babalon astride the Beast.
Scientific Proof for Levi’s Aethyr

There is much that we can extrapolate from Thelemic doctrine, whether that be Liber AL vel Legis or even Liber CCCCXVIII or Liber CCCCCX (as Frater Achad and Kenneth Grant have shown), that can be applied to the emerging physics of the twentieth century ev. String Theory and Dark Matter and Energy are correlates along with the accompanying dimensional theories that are at least intrinsically implied by them¹. Specifically, we are talking about physics, but biology also has its play as correlates can be drawn between beta particles and free radicals that can especially apply to the Eucharistic paradigm of the Gnostic Mass². And we can even move into the realm of Geometry and Mathematics to find greater insight within the ideas unique to our developing Thelemic Qabalah³.

But there is no greater correlation to reunite religion, specifically that of the Aeon of Horus⁴, with science than the scientifically controversial theory in the discipline of physics, of an omnipresent Aethyr⁵ as particularly well researched by Dr. Harold Aspden. One can draw a perfect corollary with the theory of Eliphas Levi with both Dr. Asden and Levi relying on those aspects of Newtonian theory that remains un-addressed by both theories of Relativity (Relativity and Special Relativity) and Quantum Mechanics. Modern science simply states that on a certain shall we say, macrocosmic scale, Newtonian physics seems still to apply and that at a certain microcosmic scale, the post-Einsteinian model more accurately applies.

Dr. Aspden in developing his theory, points out that the word ‘aether’ or ‘ether’ has been used by science to mean ‘space devoid of matter’. He uses the Concise Oxford Dictionary (1934 edition), which describes the ‘ether’ as being the “subtle elastic fluid permeating space and filling interstices between particles or air and other matter.” Additionally, he then quotes a Chambers Technical Dictionary (1958 edition) that has the entry “ether or aether (Phys.): A hypothetical non-material entity supposed to fill all space whether ‘empty’ or occupied by matter, but it possesses no properties in common with matter.” From this, he concludes that it has been understood by scientists that “the ‘ether’ is ‘a medium, not matter, that has been assumed to fill all space and transmit electromagnetic waves’⁶. With such definition, the ‘ether’ remains valid terminology. The problem, which some scientists have in accepting the existence of the ether, arises from a further assumption that the ether cannot adapt to its environment and so must regulate the constancy of the speed of light in a universal frame of reference.”

Eliphas Levi describes the Aethyr as follows:

In the soul of the world, which is the Universal Agent, there is a current of love and a current of wrath. This ambient and all-penetrating fluid; this ray loosened from the sun's splendour and fixed by the weight of the atmosphere and the power of central attraction; this body of the Holy Spirit, which we term the Universal Agent, while it was typified by the ancients under the symbol of a serpent devouring its tail; this electromagnetic ether, this vital and luminous caloric, is depicted in archaic monuments by the girdle of Isis, twice-folded in a love-knot round two poles, as well as by the serpent devouring its own tail, emblematic of prudence and of Saturn. Motion and life consist in the extreme tension of two forces.

If one reads Levi’s quote carefully, Levi is as much addressing the issue of light as is Dr. Aspden and one can deduce from this, related theories of Prana and Chi energy. In the discipline of science, we will connect this with the photon, both the result of the uniting of positively and negatively charged neutrinos

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¹ Cf. Testing the Night of Pan
² Cf. Liber Immortalitas & Liber Vox Viva Voce vel Video
³ Cf. Achad’s Physics
⁴ It can be surmised here that the Aeon of Horus is but a period of time that will not only unite religion and science, but prepare the world for the incredible energies that will surround this Earth during Aeon of Aquarius, a sort of ‘in-between’ aeon between Pisces and Aquarius. Cf. Gnostic Cycles.
⁵ For the sake of clarifying the Aethyr as a Magickal concept, this spelling of the word ‘Aethyr’ will be set as a convention contrasted with the spellings, ‘aether’ and ‘ether,’ as specifically, the scientific concepts of Dr. Aspden.
and connected with Dr. Aspden’s ‘graviton.’ In order to give some background on this, let’s first follow Dr. Aspden’s line of thought that brings him to conclude that the aether as a scientific concept is quite valid. Let’s draw parallels to both Eliphas Levi’s ideas and those of Dion Fortune as we move through our condensation of Dr. Aspden’s theoretical model.

In 1929 Veronnet suggested that the aether was permeated with electrically charged particles having a magnetic moment equal to the Bohr Magneton. This conception can be applied to the understanding of the quantization problem of the Bohr atom and goes a step in advance of the premises of Quantum Mechanics because it affords a physical picture of a space filled with charged particles moving harmoniously in equal circular orbits. In addition to this orbital motion of each particle an extensive matrix of particles can itself rotate. Thus, the earth may well be regarded as having its own matrix of particles rotating with the earth about the earth’s axis of rotation. As this matrix would be the frame of reference for physical measurements on earth no motion of the earth can be detected without reference to something outside this matrix. Also, the earth’s aether particle matrix may evidently move freely through surrounding aether, which it can do if the forward boundaries of the aether matrices of the earth and its surroundings can break up and transmit the freed particles to the rearward boundaries where the matrix is being reformed.

Eliphas Levi clearly notes this ‘medium’ surrounding the Earth and connected with two poles, suggesting the Earth’s axis as does Dr. Aspden. And of course, Dion Fortune more intimately connects this to the human body with its polaric expression in terms of gender. From this, Ms. Fortune derives her electromagnetic ideas, so cleverly adopted by Kenneth Grant. But Dion Fortune finds a two-dimensional nature, both horizontal about the Earth and vertical, reaching into space. Whereas, though Levi also does in connecting this with the Sun, it is not so clearly presented by him. This correlates well with Dr. Aspden’s insistence that the motion of the Earth requires a frame of reference outside of its own matrix.

The explanation of these motions provides the greatest support for the General Theory of Relativity, but the aether just envisaged provides a simple alternative explanation. The motion of a planet in its orbit is accompanied by a reverse motion of the freed particles. If the orbit is elliptical and the orbital velocity of the planet accordingly varies, the number of free aether particles in the planet’s local aether will vary and will be balanced by a fluctuation of the number of bound aether particles forming the local aether matrix. Indirectly, as the aether has mass properties, this gives rise to a variable component of angular momentum which has an effect on the planet’s motion. Exact calculation of the effects is possible, and the results establish that the hypothetical aether picture involved is essentially valid.

But Dr. Aspden is not alone, though in reading through his arguments, he portends that he’s a maverick, standing alone against the scientific establishment. Isreal Regardie in his tome, The Tree of Life, has this to say about the overall situation:

The scientific conception of ether today is radically different from what the scientist of fifty years ago meant by the luminiferous ether. So much so, that judged by his standards and speaking his language, the modern idea of ether and its radiation waves are not realities at all. And yet, strangely enough, remarks Sir James Jeans in The Mysterious Universe, the ether is one of the most real things “of which we have any knowledge or experience, and so is as real as anything possibly can be for us.” The entity, which the experimental physicists today would define as ether, must be one, which would respond qualitatively and quantitatively to their instruments and mathematical equations. On the other hand, when the Theurgists refer to the magnetic and electric substance of the Astral Light, a metaphysical condition or state of substance is implied, one which at present cannot be measured or observed with physical instruments, although its existence is corroborated in identical terms by a succession of trained seers and magicians. It lies, as already stated, on an altogether different plane of existence and consciousness, and its particles vibrate in such a way and at such a high rate of motion as to be quite invisible and imperceptible to our ordinary exterior sense-apparatus.

Recent years have seen in the realm of scientific speculation the development of the electro-magnetic theory, which for practical purposes of physics discards as unnecessary the Victorian hypothesis of an all-pervading undulating luminiferous ether. In its stead, there has been set up as on a lofty throne, crowned and worshipped with devotion, and even more abstract mathematical conception—the Space-time manifold or continuum. One group of scientists are wholly in favour of retaining the ether hypothesis; while several others, no less well-known and no less authoritative, are equally certain that no such subtle structure an ether is existent or even possible. They admit it only as a theoretical frame of reference, in which case it assumes
the role of a working hypothesis, without any degree of objective actuality. Yet an examination of the
scientific definitions of both of these scientific groups reveals the fact that by the Ether and the Four-
dimensional Space-time Continuum one and the same concept is entertained. Sir Arthur Eddington, in one of
his recent works, when making reference to these two scientific concepts, expressed the belief that both
parties mean exactly the same thing and are divided only by words. Sir James Jeans, in his previously
mentioned work, observes cautiously with regard to this obscure question, that it seems appropriate to discard
the work “ether” in favour of the more modern term “manifold” or “continuum,” although the essential
principle of function is almost entirely unchanged. Elsewhere in the same learned book the statement is made
by the erudite scientist that all the phenomena of electro-magnetism may be thought of as occurring in a
continuum of four-dimensions—three of space welded to one of time—in which it is impossible to separate
the space from the time in any absolute manner.

Eliphas Levi would then go on to state that this Aethyr or ‘menstruum’ as Aleister Crowley referred to it,
was pliable and could be affected by a theurgic process so clearly argued in Isreal Regardie’s tome as
mentioned above. Scientifically speaking, we could then deduce a certain conservation of energy that
implies an innate regulation of shall we say, particle matrices. And Dr. Aspden validates this with his
own deductions. He then goes on to suggest that this takes a certain precedence as shall we say, the
horizontal matrix in contrast with the vertical, which we have already connected to light⁶:

Nature is actually able to regulate physical quantities universally and hold them stable to such accuracy,
notwithstanding environmental fluctuations, wherever we in the universe. This surely suggests a fundamental
mechanism and a reference or control medium, having a universal metric binding all matter together as part
of a common system. This seems to be the primary role of the so-called ether, with the light propagation
characteristic assuming secondary importance.

The fact that light assumes a characteristic of secondary importance could be correlated with the idea that
the Earth’s rotation gives us a more macrocosmic view akin to Newtonian physics. And the quanta that
we call Prana or Chi, that vertical energy requires a microcosmic perspective. Dr. Aspden then sees
“systems” in shall we say, a macrocosmic perspective that are certainly consistent with groundwork set up
in Newtonian physics. But then, Dr. Aspden starts to move into more microcosmic ideas when he starts
considering the force of gravity, though he is still in a certain Newtonian mode of thought.

As the aether has a physically-conceived structure we should be able to “see” what happens to it when a part
of it is caused to rotate, as with the earth, for example. Here, we find an advantage not shared with the Theory
of Relativity. We can immediately deduce that an electrical property of the aether manifests itself when the
aether is set in rotation. The ionosphere may be a phenomenon arising at the aether boundary. It should be
noted that it could be that the aether boundary is graded and occurs in stages, corresponding to the different
ionosphere levels.

The electromagnetic force of attraction between two electrical particles in motion has never been measured.
Such forces have been measured only between current systems of which one current flows in a completely
closed circuit and the formulation of a general law of force between two current elements has only been
required to conform with experimental observation. The simple law is well known but there is a complex law,
which, although it represents a correct and full interpretation of the experimental data available on the
subject, has not come into general or even specialized use because all practical applications involve closed
current circuits and the more simple law suffices. The complex law is required to understand the mechanism
of gravity.

Dark Energy theory asserts that there is a large source of energy not able to be seen directly by
scientists, though its effects are measured by such things as red-shift analysis. And it is even
asserted that force of gravity (a seemingly dark or un-seeable energy) is intimately connected with
this. Gravity then seems intimately connected with light as fifth-dimensional construct. This idea

⁶ Cf. Sexual Polarity in Magick & Qabalistic Magnetism
takes the four-dimensional paradigm and opens it up to include a fifth in much the same way that the West has adopted the five-elemental system of the Hindus in contrast with its traditional four-elemental, neo-Platonic tradition. Both Relativity and Quantum Mechanics get their ‘play’ here in harmony with the Newtonian model when Dr. Aspden asserts:

Geomagnetism arises from the rotation of the matrix of aether particles forming the earth’s local aether. The effect of this is to expand or contract the matrix to upset the normal aether balance. The electrical effects of this distortion of the aether matrix cannot be detected because the freed particles in the aether matrix which have the constrained counter motion in the earth’s orbit will position themselves to provide a compensating non-rotating charge effect. Nevertheless, the magnetic effect of the rotating electrical charge will manifest itself. This self-induction property of the aether by which a matrix of aether particles in rotation produces a magnetic field provides an excellent quantitative account for the source of the geomagnetic field.

The Aethyr is now shown to be composed of particles with an electrical charge and further on, Aspden will propose that one of those particles is what he calls, the ‘graviton,’ though he will equivocate this with the neutrino in more common acceptance by the work of empirical science. Yet it should be noted that only one generation of the neutrino family has actually been found by experimentation with two generational levels remaining theoretical. Outside of this, the photon, which is a part of the established family of energy particles (called Bosons) as per Dr. Aspden’s proposed graviton, re-involves the vertical perspective in the electro-magnetic paradigm, particularly espoused by Dion Fortune on a Magickal level.

Energy is then related to or intimately connected to motion, represented in the Qabalah by the fifth Sephira, Geburah (with Mars attributed to it). This of course, implies consciousness, represented in the Qabalah by Tiphareth (with the Sun attributed to it and denoted in science by the photon and denoted in spiritual theory by the Prana or Chi). And the Aethyr as an energy matrix, is intimately connected with the Earth’s spin and perhaps, the Earth herself. Connecting consciousness, especially in light of Thelemic doctrine where it is taught that no Magick is sanctified unless it be in correspondence with one’s Holy Guardian Angel, intimately connected with Tiphareth and in Qabalistic theory, denoting Consciousness; the fully ‘awake’ consciousness.

The photon is regarded as a traveling disturbance which involves, at least occasionally, a discrete group of aether particles which is caused to rotate about a group axis, the particles still retaining an orbital motion and being kept in step with surrounding aether particles by a synchronizing electrical action. This particle group forms a tiny matrix akin to the larger matrix of a planet’s aether. The axis of the particle group is fixed in the inertial frame, and the particles are supposed to retain their Bohr Magneton quantization; that is, their angular momenta are conserved. As a result the group rotation causes the orbital radii of the group particles to be modified. This involves energy. When this energy is evaluated it is found to be proportional to the photon frequency and, accordingly, the radiation law \( E=\hbar \nu \) is deduced.

The rotating particle group will in all probability be a symmetrical 3-dimensional particle array having a particle at its centre. Furthermore it will have such a size that when a certain frequency is reached the relationship between photon energy and the particle group angular momentum will suit some physical transformation, because it is known that high energy photons can transform into particles. Consider, for example, the condition of the photon when its energy reaches \( mc^2 \), the mass energy of an aether particle.

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7 Cf. Testing the Night of Pan

8 Ibid

9 Cf. Liber LXV and The Wake World
When the photon has this energy it may transform into a non-rotating matrix of particles by creating a particle of mass $m$. As an intermediate step the matrix may rotate as this involves very little energy, but the particle orbits may adopt their normal radii to transfer the main energy to the newly-created particle which will itself move to provide the balance of angular momentum. This has the following consequences:

1. The created particle will have no electrical charge; it may be a neutrino.
2. The particle will be created with a velocity $c$ if it has the same mass energy as an aether particle.

Also, the result indicates a theoretical mass for the neutrino. Experimental evidence indicates that the mass of the neutrino is of the order of one-thirtieth of the electron mass, a result in agreement with this theory. It seems that the neutrino concept amounts to little more than a form of aether momentum arising from energy exchanges between aether and matter.

The Aethyr is then not matter at all, at least as we know it. Rather, as Crowley asserts, it is a menstruum or energy source that he even produces inertia so that if one is acting in accord with one’s ‘True Will,’ one has the inertia of the Universe as an energetic support. And if energy is not matter, we can then demonstrate that the Ruach, which contains Geburah and Tiphareth, is not manifest, indeed, there is no manifestation until we reach Malkuth. This pre-manifest state it would seem, is somehow intimately connected with energy. And note that as energy is connected with light, we have Tiphareth, the Sun, in the Ruach.

Energy then, particularly Dark Energy is composed of those elementary particles that exist between the spaces occupied by matter. Interestingly enough, Nuit as the fabric of the many Hadits or stars; the star-stuff has been shown to occupy a relatively minor proportion of the Universe\(^{10}\), which is why we turn to the ‘Night of Pan’ and the pre-formative Universe from which we utilize the Signs of N.O.X. to make manifest form in Thelemic Magick. It is then to Pan we turn to make change occur in conformity with the Will.

The Magick is in learning to work that unknown and unseeable matter that Eliphas Levi terms the Aethyr. He notes that this Aethyr has plastic properties that make it pliable and hence, amenable to the Will of the Operator. From this of course, Aleister Crowley deduces the postulates that he presents in his tome, Magick in Theory and Practice. In getting back to this invisible or presently un-seeable space, Dr. Aspden theorizes from a scientific perspective:

Empty space is supposedly filled with neutrinos. They have mass and so empty space has a mass density. So how is it that space cannot attenuate the frequency of those light waves we see as having a red shift? Given that it must attenuate those waves, then surely the ‘missing mass’ theory is wrong and we had best think about a steady state universe, rather than one that is expanding. In that case, to say that neutrinos can explain missing matter, is illogical.

We need to know what there is in the vacuum that could cause light to travel at the fixed speed. If there is something in that vacuum we need to know why it is that light can involve undulating waves, which can travel through space without losing frequency. We also need to know if light could lose frequency at a rate linearly proportional to the frequency at each position along the transit path. There could be loss of frequency as a function of distance traveled and, provided the loss is proportionally the same for all component frequencies, there would be the property needed to account for the observed red shifts from those remote stars and their galaxies. There is then no need to imagine that the universe is expanding from a point in space at which it was suddenly born as a virtually infinite amount of energy compressed into a infinitesimal point. Any alternative explanation, if scientifically founded, has to have a prior claim on our common sense alongside the obvious error of the Big Bang hypothesis, built on the idea of Biblical creationism.

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\(^{10}\) Cf. Testing the Night of Pan
This correlates well also, with the Deist perspective that asserts that God is the entire Universe, both manifest and pre-manifest. Therefore as it is said that God has always existed, there is no point in even trying to justify a non-manifest state such as the Hindus do in the idea of the ‘Sleep of Brahma.’ Rather, we should state that light emerges from darkness, being composed of the same matter in a different arrangement. This lends greater insight into the Qabalistic idea that Kether is in Malkuth as Malkuth is in Kether, but after a different manner. And in Christian creationism it is also incorrect to state that all was without form and void, there is that again, pre-manifest, which could be equivocated with the ‘dark’ Universe, the Great N.O.X. which holds form in potential manifestation. Indeed, there is an interplay between light and dark as symbolized in the Yin-Yang sign of the Chinese.

The key is in movement. Relativity has shown that nothing is really still at all, though something may be viewed as being still in relation to something else, yet they are both moving. And movement implies more than consciousness. But on a physical level, it also introduces the idea of heat or thermal energy. Fire itself is but matter, moving very fast and its equivocation with Spirit in the Western Mystery Tradition hints that Spirit is but matter moving yet that much faster. But Dr. Aspden clarifies this on a physical level:

There are regions of space in which there is an excess of thermal energy. Thermal energy is associated with motion of matter and all such motion involves inducing electron-positron activity in space. Indeed, the kinetic energy of an electron can be shown to be attributable to the statistical creation of electron-positron pairs in the close proximity of that primary electron. Space has a way of allowing such activity, whilst conserving energy, charge parity and the volume of space occupied by electric charge, but that process concerns the equilibrium of the interplay between matter and the aether and we are here considering the interplay between aether and aether at a space domain boundary wall. Those virtual electrons involved in the quantum-electrodynamic underworld are really part of the aether. They can store energy temporarily but we want our domain wall transition to be between two stable modes, each locked in a state defined by that number N.

The thermal energy that escapes by being radiated well away from its matter source has to be absorbed by the aether and it must somehow over-populate space with those virtual electron-positron pairs which we see as affecting N at the seat of boundary transitions. Neutrinos pass unnoticed through the Earth, and through our bodies, all the time, which makes them very difficult to detect. Muon neutrinos disappear and reappear as they travel through the Earth. This in turn means they must have mass, since massless particles cannot change their form. The electron neutrino may be the ghostly presence of the carrier of the kinetic energy of the electron in electrically conductive matter. In that case I would be inclined to look more closely at the theory governing electrons.

Also one needs to examine the theory as to how protons move through space. What form does its kinetic energy assume? Can it be that of the neutrino, albeit some combination of muon and tau neutrinos, if not simply electron neutrinos? In other words, I am suggesting that the ‘neutrino’ might be simply an artifact of Nature occasioned by the transient presence of the electron-positron pair or its counterparts in the muon family or taon family. The neutrino may even be a more subtle transient activity related to the aether itself, meaning those quons or lattice particles.

Note that any dynamic system has to have inertial balance. One simply cannot have waves as electric charge suffering lateral displacement as oscillations propagate through space and not have something that oscillates in counterbalance. If the aether could distort electromagnetic waves that are being propagated through it then it must absorb energy and so retard the wave. On the other hand, there is a way in which what we see as empty space can obstruct an electromagnetic wave. This is by attempting to create matter in the form of protons. Matter, even if of transient existence, can affect the passage of a wave. Here, however, our dual wave response, which involves the aether lattice oscillations being kept in dynamic balance by a muon field, is affected because one wave is attenuated in amplitude more than the other. This means that there is a frequency distortion that corresponds with the loss of frequency with distance that is formulated as the Hubble constant.

Light remains the central mystery of it all, whether that be the Western Mystery Tradition or Western science. As stated previously, it may belong to that domain that we could term a fifth dimension and where gravity also seems to emanate from. As Dr. Asden relates below, light seems to be a by-product or
at least may utilize a vehicle that is a by-product of the interchange between matter and the Aethyr; between that which is manifest and that which is pre-manifest. This vehicle may be a photon, which is of course, a Boson or part of the energy family of particles.

Concerning photons I submit that we do not really know how they travel or even if they travel at all. A photon is an event, a transaction occurring at a point in space when a package of energy changes its state in the aether, especially where the transaction involves energy exchange between matter and aether. We know that electromagnetic waves travel at the speed of light but such a wave is a ripple of the sea of energy in the aether so where does the photon feature as motion?

The answer seems to be that it exhibits its presence as a transfer of momentum as if its energy exerts momentum at the speed of light. A photon is an 'event', the aether is real and that it can be involved in transactions involving momentum and, indeed, angular momentum, but that the deflection of light rays by a gravitational field depends upon the speed of light being affected by the presence of such a field. Einstein says that the speed of light is constant in the vacuum and Einstein then asks us to distort the vacuum so that straight paths of light bend to conform with the distortion of the space metric.

Considering the electromagnetic force that Dion Fortune utilizes in her Polarity experiments, Dr. Aspden provides a scientific theory that further develops the Newtonian theory upon which the Neo-platonists utilized to develop much of their magickal theories. Although Dr. Aspden introduces his theoretical particle, the graviton, the idea of an interchange between the Aethyr and matter by way of energy, has a parallel in what other scientists have called the N-particle, that mysterious particle that changes its charge and seemingly comes from nowhere, also called the fifth dimension.

Ms. Fortune intuitively was able to feel the attraction of oppositely charged forces, which we could say that when held in circuit, created the matrix that birthed light. In terms of Thelemic Magick, this light then becomes the Magickal Childe. And of course, that Magickal Childe is Tiphareth, the Sun, the very source of light in the material Universe. And remember, as the Sun is the source of life on the material plane, mystics have taught that the spirit of the Sun is the source of life on the spiritual plane.

Though electricity is everywhere in us and around us, just as is the aether, the question of what determines whether an electric charge is positive or negative and why like polarity charges repel and unlike polarity charges attract is a mystery. Note that I could say that the measure of energy density is the square of field strength, that the polarity of the charge is the direction of that field and that, since there are positive and negative square roots to a positive energy density expressed as the square of field strength, so there must be two polarities of opposite sign.

On the gravity theme, we shall soon see that the aether includes electric charges that share an organized synchronous motion on a universal scale and it also contains energy in the form of electric charges that migrate around at random. The organized system is in two parts, which are dynamically balanced. Any matter present shares the motion of one part and, in spite of that motion, is effectively at rest in the electromagnetic frame of reference, because that ‘part’ of the aether constitutes that frame of reference. The other ‘part’ comprises charges that I term ‘gravitons’ because they are the seat of the gravitational action. They move relative to the electromagnetic reference frame and always share motion that is mutually parallel as between all the gravitons. They are held in place by powerful electrostatic forces, which keep them in step with limited freedom of movement. They are not ‘free’ in the sense that their masses can affect electrodynamic interaction as opposed to dynamic balance in the permitted degree of freedom. In short, the first two terms in the general law of electrodynamics are ineffective and this leaves the force, which establishes the form of law we seek for correspondence with Newton’s law of gravitation.

The dominant forces in atomic systems are electrostatic in origin and the same applies to the aether, except for that one type of interaction as between the gravitons in that half of the vacuum medium which provides dynamic balance for matter and the aether's related electromagnetic reference frame. If those gravitons can
attract one another, that attraction is communicated to the matter they are balancing and we see that as gravitation. Gravitation is not an electrodynamic force acting directly on matter. Its effect is indirect and is communicated by the dynamic linkage with the graviton system.

Dr. Aspden then brings the fermions that form the essential character play in more generally accepted scientific circles into play. Though even here, he is more clearly utilizing the theoretical generations (generations II and III) that have not been experimentally proven by the scientific establishment. For us, it becomes an issue in that acceptance is based on preference. And perhaps even, experimentation may come more from the magickal application of consciousness, which itself has been quantized by theoretical physicists, though it remains outside the scope of this essay.

In the more generally accepted theories of Dark Matter and Dark Energy, gravity comes from this invisible portion of our Universe. And we would have to look to Newton’s theory of orbital motion to begin our knowledge lecture on gravity. Whether one wants to call this modern mystery by giving it a label such as ‘Dark’ (N.O.X.) or whether one would call it the Aethyr again, seems more a matter of preference. We could ask, is it the prescence of Universal Mind affects the plastic nature of the Aethyr? And are we human beings as the hierarchical height of consciousness and the very conduits of Universal Mind, the molders of form that we can draw from the Aethyr? And do we mold ourselves (Puella, Puer, Vir, Mulier, Mater Triumphans)?

I am going to introduce you now to some of the characters on the physical stage that play a role in the gravitational scene. The electron is one such actor and there are three other players but you will see none of them in the final act where we explain how the force of gravitation is set up between, for example, two protons. You will now soon see why we need to set our sights on a particle form that can mediate in setting up the force of gravity. Every speck of dust, every atom and every unit of energy that we see as gravitating matter has its own mass and I would not like to try to find any common unit of gravitating matter that can be used to define components of such an infinite mass spectrum. Yet to get to a ‘constant of gravitation’ we need a unique quantum condition, a building block that gives us a unit from which we can develop a universal force that relates to such a constant. So what we shall do is to say that matter as we know it has a jitter motion and, collectively, it is associated by dynamic balance with an unseen particle form that is quantized in some way.

I shall call such particles ‘gravitons’ and declare that the graviton family includes the ‘super heavy electron’, otherwise known as the tau or taon. I must introduce a particle form, which does not play a direct role in the gravitational action but does dominate the whole stage. This particle form provides the energy that keeps the action alive. It is hidden centre-stage. This is the ‘heavy electron’, a part of the ghost world of the aether, the ‘virtual muon’. Muons have a mass between 206 and 207 times the electron mass, whereas the taon has a mass some 3485 times that of the electron. Physicists will tell you that quantum electrodynamics as applied the field activity in the vacuum medium is made alive with electrons, muons and taons and their anti-particles appearing in pairs as if from nowhere and then disappearing again, but they will not tell you how all this accounts for gravity.

There are, therefore, muons and taons active in that underworld we call space, but which I call the aether. We will need to deduce the masses of these particle forms in terms of the mass of the electron and we will also need to look for even more massive and less massive particle forms that sit on either side of this taon-muon-electron mass spectrum. To complete the aether particle picture I will now declare that my research told me there are three other aether particle forms, which I will call the ‘supergraviton’, the ‘graviton’ and the ‘quon’, respectively. They all have the same unitary charge magnitude as the electron. That charge quantity is denoted energy. However, the quon has a mass much smaller than that of the electron, and the supergraviton has a mass much larger than that of the graviton or the taon.

So far as our derivation of G is concerned, I shall, in this initial stage of analysis concentrate my attention on the standard ‘graviton’ form. The reason is that I came to realize, as the theory developed, that gravitational forces are seated in particles of the graviton family that work together like wolves in a pack. There has to be at least one standard ‘graviton’ in a particle cluster that mediates in setting up the force of gravity. It acts as a buffer for minor energy fluctuations. Accordingly, the first step in deducing the link between G and $e/m_e$. 
the charge to mass ratio of the electron involves the assumption that there is a perturbation in which the standard 'graviton' sheds energy which becomes the matter mass form that corresponds to the forces attributable, as gravity, to the corresponding change of state of that graviton.

To proceed, you need to picture all elements of matter as sharing a common synchronized motion, all those elements moving in tiny circular orbits about an inertial frame. Then the gravitons must be pictured as moving in counterbalance in orbits of the same radius, so that, denoting the radius \( r \), the separation distance between the matter frame and the graviton frame becomes \( 2r \). Then, sitting in the inertial frame and defining that frame are the virtual muons and these have no orderly motion, being subject to a kind of random activity and contributing nothing to that orbital motion which is the basis on which we shall account for gravitation.

More than building on Newton’s theory of gravitation, Dr. Aspden notes the vibrational rate of particles, the “jitter” as he refers to it. And in noting the spiral formations of particles that this creates, we can see that Newton’s and Einstein’s theories do not have to clash with each other at all. Even more marvelous, is that these particles in their spiral arrays form into crystallized matrixes that seem to reflect a very ancient knowledge that though exploited by ‘New Age’ businesses, has more credible exponents.

Volodymyr Krasnoholovets\(^\text{11}\) explores the idea of how a quartz crystal could trap the Aethyr and become a transducer for light and electricity. He develops the idea of the Aethyr into an ‘inerton’ cloud that like Dr. Aspen’s aether, envelops the Earth as an energy source that can be tapped into. And he claims that the pyramids were such structures designed and built to do just that. If we but take a small deduction from this idea, we can suppose that as the ancient Egyptians saw the soul, connected with the body (and assuming they could contemplate it as an electromagnetic body), by entombing the Pharaoh inside the pyramid, this energy conduit would provide the proper environment for immortality.

The onward development of the theory of gravitation included the formal derivation of graviton mass by pure theory, but the presentation of that must await our analysis of the aether model and the derivation of the heavy electron mass, that of the muon. Thereafter, we will turn attention to the proton and then come back to show how the taon mass comes about. In this way, by a double-pronged attack on the graviton problem, we converge on its creation from two directions and it is a feature of the author's theory that if physical processes occur and, by coincidence, form similar energy quanta that are quasi-stable, then particles having such energy will appear in a dominant manner. The graviton is such a particle, albeit one belonging to that 'ghost' world providing dynamic balance for real matter, but it exists alongside the virtual taon in filling the gravitational role.

The presence of matter moving in an orbital jitter about the inertial frame must be balanced dynamically by the graviton system. However, in regions of the aether devoid of matter we still need to preserve the harmony of that jitter motion because it is sufficiently universal in its influence as to span the range of action of gravitational force. That range is at least adequate to cover distances between adjacent stars, as otherwise the galaxies could not hold together and form their spiral configurations. It follows that the 'empty' space between stars must comprise aether which, intrinsically, has its own gravitational properties and that suggests that its mass density must itself be in need of dynamic balance by a graviton population spreading throughout all space.

I regard this particle system as being the structured array, which accounts for the 'crystal' form of the aether in the analogy with its 'fluid crystal' attributes. I regard the particles of this structured array as being those quons, previously mentioned. Quons all have the same electrical polarity in any local region of space and so they repel one another to form into a simple cubic array. Unlike the situation in solid matter, where atoms bond together as if attracted to one another and so form compact structures, such as body-centered cubic or face-centered cubic lattice-like systems, the aether adopts the simple cubic structure.

So far as electrical actions are concerned these two charge ingredients are all we need consider in our initial energy analysis, because all other particle forms present come in charge pairs in which positive and negative

\(^{11}\) Cf. http://www.inerton.kiev.ua/HERA2.html
charges have a random presence and so cancel in their effects on other charge. There will be those taons and those gravitons present to provide the dynamic balance already mentioned, but now we need to make a major step forward in our analysis by explaining why there is need for such balance and why those quons are not at rest, each at the centre of its own space cell.

Well, to proceed, let us assume initially that the quon has a negative charge of magnitude energy and is attracted by that positive charge density that envelops it and fills the cubic cell of side d. We will calculate the electric potential of the quon as set up by its interaction with all other quons in the aether, but as offset by its interaction with the continuum charge in all of the other cells comprising the aether. The scenario suggested by Paul Dirac:

“It is found that an electron, which seems to us to be moving slowly, must actually have a very high frequency oscillatory motion of small amplitude superimposed on the regular motion which appears to us. As a result of this oscillatory motion, the velocity of the electron at any time equals the velocity of light. This is a prediction which cannot be directly verified by experiment, since the frequency is so high and the amplitude so small.”

Paul Dirac’s quote suggests to the spiritual mind that the spiritual world is beyond physical measure, though it has expression in the physical Universe. But this should not in any way be construed to justify the superstitious notion that we have the rudimentary idea for any anthropomorphized godhead to intervene in human affairs. Rather, it shows the infinite subtlety of the higher and even highest worlds mapped by the Qabalah.

With Dirac’s notion that even electrons move at the speed of light, Dr. Aspden then takes us back to the boson family, where the photon is the unit of energy that we call light…

Now, take note that a photon is regarded as an energy quantum, which has a characteristic frequency, and the two are related by Planck's constant of action. This tells you that a photon is essentially something that is characterized by the rest-mass energy of the electron. However, what do we mean when we use Planck's constant to express an energy quantum that we say is a 'photon'? Something in conventional physics does not make sense here in the declaration that a photon is a 'spin-1' particle.

As mentioned above, Dr. Aspden defies modern cosmology in denying the possibility of a ‘Big Bang’ as the origin of the Universe. The universe is in constant existence as it is God, that “is, was and ever shall be.” This deistic notion is a key point that needs to be understood by religionists if they are to get to that half-way point where they may meet with scientists. And of course, scientists need to find a way outside of their own box in order to take that half-way step towards the religionists. But deism is still colloquially equated with atheism, which is an erroneous assertion. And scientists are still beholden to the superstitions of their Judeo-Christian upbringing.

Dr. Aspden then goes on to tie the whole thing together in such a way that demonstrates how the whole Universe is held together. Indeed the force of gravity as emanating from the aethyr can be then equated with Universal Mind, which will forever preserve itself in the same way that we understand our own instinct for self-preservation as the unique unitary expression of the all-encompassing mind or collective consciousness. Even if we take to Freud’s theory that we also have an instinct for self-destruction, this would be consistent with the spiritual law of change, being equal to stability and is reflected in Dr. Aspden’s notions of negative and positive aether charges or that polarity that should be explored more carefully by the spiritual community.

The most fascinating question in physics is that of Creation, whether one has in mind the stars and planets and their offspring, including mankind or the fundamental particles from which we and the universe are formed. The primary challenge is to explain how protons with their attendant electrons are created. Then one
needs to explain gravity so as to provide the reason why the stars formed, but neither of these perplexing problems can be resolved without accepting that there is an aether, which is the active agent in these creation processes.

The universe can never die unless it expands to the point where it can find space for all of its energy in a state of rest in a dormant condition where it will have cooled to the point where all charge motion in the aether has stopped. However, that cannot happen because, as we have seen, that involves a negative energy potential in the aether charge interaction and the combination of aether plus universe can never have an overall energy that is negative. The universe can perhaps develop sporadic events in regions where temporary overheating carries the underlying structure of the aether charge through, as it were, its 'Curie temperature' and causes it to lose its gravitational action in those regions.

As we have seen, the force of gravity is an electromagnetic force but one that is tuned to develop interactions only at the resonant frequency of the aether itself, which happens to be the Compton electron frequency. So it comes as no surprise to find that the aether can create electrons. However, the aether is a sea of energy in the form of 'heavy electrons', those mu-mesons we call muons, which exist in opposite polarity charge pairs, and this provides a bombardment of all sectors of space at that aether frequency, as those muons move around, expanding, annihilating, and reappearing elsewhere in their initially contracted form.

When energy is dispersed in the normal way, as by radiation from a star, it is eventually absorbed by that rhythmic aether motion of the quons as they expand their orbits to bring that energy into their rhythmic dance at that Compton electron frequency. This alters the equilibrium of the aether machine and gives scope for the muons to create matter in the form of protons along with the attendant electrons, namely hydrogen atoms and so matter as we know it. The energy cycle is regenerative because energy is conserved. It has nowhere to go other that into the aether system, but the aether seeks to reestablish its equilibrium through energy dissipation. The muon activity provides that opportunity by bombarding the quons and so, from time to time, everywhere in space, protons are created along with the electrons and that is why the dimuon energy quantum of 412.6658 electron rest-mass energy units features in the proton creation process.

Our most immediate vantage point to the Universe is the Earth, which is the mother of us all, Our Lady Babalon. She corresponds with the sign of Mulier (Mother, the N.O.X. sign in Liber Reguli) and the inter-relation of matter and spirit reside in her domain. Dr. Aspden simply gives us the scientifically correlative basis for this idea. As we approach the end of this essay, it is hoped that the reader will see that there is great merit for consciously and intentionally exploring a line of investigation that will truly reunite science and religion. This will kindle the flowering of a new Renaissance with at least the same magnitude as that enkindled by the great Rosicrucian scholar, Sir Isaac Newton.

It may be asked: "Will the above explanation explain the dipole character of the geomagnetic field?" The probable answer is negative, but the theory is amenable in this respect because it is found that the actual magnitude of the effective particle displacement in the earth's aether matrix caused by the earth's rotation is very much less than the interparticle spacing. On this basis it is clear that the charge effect caused by the rotation may merely amount to the displacement of charge to the aether boundary. When this is interpreted in the terms of magnetic moment it is found that the magnetic moment of the boundary charge is exactly twice that of the distributed charge and acts in opposition. The result is a net magnetic moment equal in magnitude to that already estimated, but the magnetic field distribution becomes more nearly that of a dipole.

Although not related to gravitation the explanation of geomagnetism provided by this theory lends extremely strong support to the theory upon which the understanding of gravitation is founded, and its inclusion in this work is considered pertinent. It is the retarded energy transfer as between sun and planet that determines the anomalous component of the rate of perihelion advance of the planet, but that then in its turn constrains the aethereal constitution of the planet in such a way as to define the location of the spherical aether boundary enclosing the planet.

Even if this means that the aether boundary lies inside the body of the planet I see this as a possibility. Just as matter can move through aether, so aether can move through matter, and the two need not be rigidly coupled as one unit. The amount of energy associated with planetary motion is enormous and its action could be dominant in governing the aether-matter coupling involved.
Now, to move on, we need to come to the question of how protons get involved in the creation of taons. If charges group together in clusters and by an exchange process they contrive to share their energy in a reduced space then they can develop into hybrid forms. Such clusters are never alone. There are always numerous other such clusters not too far away, but things can happen where, local to a cluster, there is conservation of energy as space occupied by charge locally contracts by the local annihilation of charge pairs.

There is nothing more fundamental in science than the processes involved in the creation of the proton, simply because the proton accounts for virtually all of the matter that forms the universe. The residue comprises the electrons which provide the electrical neutralization and so allow gravity full freedom as the governing force.

In conclusion, the following quote of Eliphas Levi is presented. As suggested above, the physics of consciousness is outside the scope of this essay. But if we equate consciousness to the force of love and note that Love and Will are equivalents in Thelemic Magick, the reader should find more material upon which to build the new paradigm of our Scientific Illuminism. Thelema and exclusively its expression through the program of the A.’.A.’. is the only point in all of spirituality that has a pragmatic and realistic approach to science. Though we can certainly show how other systems, especially Hinduism and Taoism seem to reveal a certain scientific knowledge somehow lost to the memory of the modern expressions of these very ancient systems.

But for whatever reason, time has left but the vestiges of a cultural glamour that yields to obscurity even in the lands where they were bred and once flowered upon humanity. And it seems it was left to Europe to take the height of spiritual light and bring it to the depth of the material darkness; the Age of Kali that is all but ended. It is consciousness itself that is the key that unlocks the ALL, breaks the seals and rends the veils of their mysteries. Certainly consciousness can be expressed in its own dualistic nature; Love and Will.

“I would thou wert cold or hot,” said the Master. As a fact, a great sinner is more really alive than is a tepid, effeminate man, and the fullness of his return to virtue will be in proportion to the extent of his errors. She who is destined to crush the serpent's head is intelligence, which ever rises above the stream of blind forces. The Kabalists call her the virgin of the sea, whose dripping feet the infernal dragon crawls forward to lick with his fiery tongues, and they fall asleep in delight.

The Great Magical Agent manifests by four kinds of phenomena, and has been subjected to the experiments of profane science under four names – caloric, light, electricity, magnetism. It has received also the names of TETRAGRAM, INRI, AZOTH, ETHER, OD, Magnetic Fluid, Soul of the Earth, Lucifer, etc. The Great Magical Agent is the fourth emanation of the life-principle, of which the sun is the third form – see the initiates of the school of Alexandria and the dogma of Hermes Trismegistus. In this way the eye of the world, as the ancients called it, is the mirage of the reflection of God, and the soul of the earth is a permanent glance of the sun which the earth conceives and guards by impregnation. The moon concurs in this impregnation of the earth by reflecting a solar image during the night, so that Hermes was right when he said of the Great Agent: “The sun is its father, the moon its mother.” Then he adds: “The wind has borne it in the belly thereof,” because the atmosphere is the recipient and, as it were, the crucible of the solar rays, by means of which there forms that living image of the sun which penetrates the whole earth, fructifies it and determines all that is produced on its surface by its emanations and permanent currents, analogous to those of the sun itself. This solar agent subsists by two contrary forces – one of attraction and one of projection, whence Hermes says that it ascends and descends eternally. The force of attraction is always fixed at the centre of bodies, that of projection in their outlines or at their surface. By this dual force all is created and all preserved. Its motion is a rolling up and an enveloping which are successive and unlimited, or, rather, simultaneous and perpetual, by spirals of opposite movements which never meet. It is the same movement as that of the sun, at once attracting and repelling all the planets of its system. To be acquainted with the movement of this terrestrial sun in such a manner as to be able to apply its currents and direct them, is to have accomplished the Great Work and to be master of the world.

Love is one of the great instruments of magical power, but it is categorically forbidden to the Magus, at least as an intoxication or passion. Woe to the Samson of the Kabalah if he permit himself to be put asleep by Delilah! The Hercules of science, who exchanges his royal sceptre for the distaff of Omphale, will soon experience the vengeance of Dejanira, and nothing will be left for him but the pyre of Mount Oetna, in order to escape the devouring folds of the coat of Nessus. Sexual love is ever an illusion, for it is the result of an imaginary mirage. The Astral Light is the universal seducer, typified by the serpent of Genesis. This subtle agent, ever active, ever vigorous, ever fruitful in alluring dreams and sensuous images; this force, which of itself is blind and subordinated to every will, whether for good or evil; this ever-renewing cirulus of unbridled life, which produces vertigo in
the imprudent; this corporeal spirit; this fiery body; this impalpable omnipresent ether; this monstrous seduction of Nature – how
shall we define it comprehensively and how characterize its action? To some extent indifferent in itself, it lends itself to good as
to evil; it transmits light and propagates darkness; it may be called equally Lucifer and Lucifuge; it is a serpent but it is also an
aureole; it is a fire, but it may belong equally to the torments of infernus or the sacrifice of incense offered up to heaven. To
dispose of it, we must, like the predestined woman, set our foot upon its head.

The double triangle of Solomon is explained by St. John in a remarkable manner. He says, “There are three which give record in
heaven – the Father, the Word and the Holy Spirit”; and “there are three which give testimony on earth – the spirit, the water and
the blood.” Thus, St. John agrees with the masters of Hermetic philosophy, who attribute to their Sulphur the name of Ether, to
their Mercury that of Philosophical Water, and to their Salt the qualification of the Dragon's Blood or Menstruum of the Earth.
Blood or Salt corresponds by opposition with the Father, Azotic or Mercurial Water with the Word or LOGOS, and the Ether
with the Holy Spirit. But the things of transcendent symbolism can only be understood rightly by the true children of science.
The Physics of Consciousness

It is no matter that we were born into this world to a certain mystical consciousness that is then conditioned out of our immediate awareness. We are then conditioned into a certain common awareness or consensus reality that is our collective racial experience. It forms the fabric upon which human endeavor is woven. From there, some are led to the mystical or spiritual part of our psyche as others are moved to more materialistic areas. But in all human endeavor, philosophy is the impetus, the means and the end of the effort. Dr. Anil Mitra in Being, Mind and the Absolute writes:

The question arises as to the relations between esoteric/academic disciplines such as the fields of science, academic philosophy, revealed religion and common experience. What do I mean by common experience? Is it not related to the esoteric? Are the esoterica not extensions of common experience? Is it what remains if the esoteric disciplines are lost? Is it related to our evolutionary situation? These are some considerations. What is not accessible to common experience is not basic truth.

If esoterica is an extension of common experience, science is simply creating new experience by looking more deeply into the objects of experience. This becomes an entirely materialistic endeavor that in contrast with the various, established religions in human society, admits to nothing beyond that which it can measure and comprehend. Common religious experience becomes more a legal and moral or philosophical concern with no practical application in the world. Indeed, it negates this world with a philosophical nihilism that asserts another, more perfect world.

Seceding from this world, religion moved from its mythological/archetypal orientation in its quest to comprehend the human soul into the creation of a superstitious model of this other, more perfect world in order for various clerics to obtain social and political control over a group of people. This not only earned a strong distrust from the scientific community, but even its disdain as our society as a whole, struggles with the paradox of incorporating both disciplines into its academic circles.

Considering the existential crisis as a developmental mechanism in the maturity of the human psyche, this contemplation of death that occurs at several points in one’s life, seems to produce emotional responses that do not necessarily become entirely conscious for a lot of people. This certainly explains why very educated people, in their unconscious fear of death have built up a sense of immortality that connects with the better world promised by the authority of these socially accepted religions. And it gives us the origins of this dysfunctional paradox that is at the center of our society’s philosophy. Dr. Mitra goes on to say:

The [sentient] form of Being in which human being participates: Despite metaphysics, human beings - and this includes animal beings with and without “language” - is the form of being that most clearly exists. It exists by observation so direct that one may question whether it is observed to exist or whether its being specifies, defines, models, prototypes, or generates existence and the conditions of existence. Also as a matter of direct observation the quality of this form equals or exceeds that of both matter and idea - since matter and idea are part of the form. Since the form includes idea, matter, indeed the elements of any metaphysics or cosmology, it pervades all being and time. This form satisfies the criteria whereas the other candidates do not.

The Platonic model of forms, idealized in perfection and then materialized as an imperfection fits the Qabalistic model of involution and manifestation. As we find in Liber Trigrammaton: “Now cometh the glory of the Single One, as an imperfection and stain.” Further, the science of holography in contemporary physics shows us at least a mathematical realization of these idealized forms (cf. Liber Vox Viva Voce vel Video). Metaphysics at least on a psychological level orders these hierarchically into archetypes with as much a strong hold on the psyche as it is the source that helps us to realize ourselves. These are wholly contained in the universal myths of the ancient apocalyptic tradition that emerges from the mythological construct of the Starry Gnosis. But ultimately, everything and everyone is possessed of consciousness, though we might not recognize it in some forms, i.e. rocks.
Inherent in the comprehension of the Starry Gnosis is a formula of transformation; a resurrection theme that predates Christianity for tens of thousands of years. With the fracturing of our culture, in this age of specialization, we might simply view these symbols as a metaphor for an existential coping with the nature of life in our process of individuation. But it seems a more interdisciplinary approach is required. Adding in the scientific perspective, there are many tools that modern physics affords us to better corroborate and understand this process. Yet, it is death that preoccupies our experience of life; being the cause of great mystery and horrific fear.

This process of death is viewed in terms of major levels of complexity with the context of massive dissipative structures. We hypothesize that within a level of major complexity there are three regimes: chaotic, ordered, and the edge-of-chaos. The role of "death" is a form of information feedback from order to chaos via the edge-of-chaos between levels of major complexity. Death can release stored information that is key to the further evolution of complexity of a surrounding dissipative structure. It is further hypothesized that in the increasing complexity of our existence, there are successive levels of selection processes. The role of "death" as a type of process is essential in the creation of complexity. The "process of death" is a generic process that is inherent in massive dissipative structures. Thermodynamic death of complex structures will occur in dissipative structures. However, "death" is not as complete as it implies. Even in "death", there is something remaining of the original entity. Some of the parts of the entity still remain and those released parts will interact with the surrounding environment at a lower level of complexity. The potential diversity of the lower level of complexity is increased with the death. Thus, death is a form of information feedback between levels of complexity. The original entity loses weight upon death. It is this mass that returns to chaos. 12

Everything that has a beginning must also have an ending. So our mortality drives us instinctively to understand our origin. A thorough study of pre-Socratic philosophy is incorporated into the Alchemical theory of creation as found in the Golden Chain of Homer. It’s as if the physical sciences are returning to their origins, which shouldn’t be surprising as such analyses are validated by the way our psyche is constructed. And of course this ordered arrangement for comprehension is that which also gives us our consensus reality. Any differences that each of us individually has to our response to stimuli must include our experiences outside the consensus reality; those more surreal or apocalyptic. These then become appended ultimately, to our collective experience in our prophetic tradition.

Our psyche is intimately connected with if not indeed, directly born of our physical bodies. And certainly, we can recognize an informing source of intelligence that animates the material body. Integrating the knowledge gleaned from contemporary physics contributes a lot to our overall comprehension to the nature of life and human consciousness.

With the "parts" left over from death, they can be used in new functional ways that could not occurred in the original creating context. Without reproduction in the living sense, novel molecules created by novel chemical processes must survive many different environments after the chemical environment that created it had long ago died. Novelty must be stored in stable dynamic structures that can survive death. Eventually enough novel molecules will form the basis for the creation of a new level of complexity. This process is generic to other levels of complexity. For example, we, as human organisms, are made of atoms formed as nuclei in a red-giant star that has long been dead. We could not exist without the death of those types of stars. The red-giants and supernovae serve as far-from-equilibrium dissipative structures creating stable micro-entities within a galaxy (itself a dissipative structure) that are necessary for further evolution of complexity.

Massive death can provide a great deal of dynamic material for the further evolution. Human civilization depends on oil, which is the result of the massive accumulation complex organic molecules of the Carboniferous period, when plants dominated the land. Other examples of this process may include the

12 David M. Kiersey in Toward the Physics of Death
formation of galaxies by the death of antimatter, accumulation of organic molecules in soil for development of land plants, and the biogenesis origin of key metal deposits for the use by man.

The process and structure of the universe has evolved via multiple levels of dissipative structures and our very existence is built upon multiple levels of complexity arising from this situation. The prediction is that massive “deaths” in the evolution of complexity are necessary. However, we include in our notion of complexity a surrounding context, namely a dissipative structure. We define loosely a major level of complexity as demarcated by a massive, self-organized dissipative structure, hereby called a macrosystem.

The macrosystem consists of self-organized “parts” that are hereby called microsystems. Microsystems are the natural occurring building blocks that compose things. They are self-organized, dissipative structures at the microscale relative to its surrounding macrosystem. Leptons, baryons, atoms, molecules, prokaryotic cells, multi-cellular organisms, human families, and corporations are some of the primary examples of microsystems at different levels of complexity.

Since a microsystem is within a macrosystem, the death of the microsystem usually releases its components back to a lower level of complexity, so the information contained in the components will be reincorporated in the lower level. But in addition those components have a chance to be reincorporated into a different microsystem, possibly at the higher level again. What the structure of this process of reincorporation is the key question. We hypothesize this process of reincorporation is intimately related to the notions of chaos and order.

The route from order to chaos has been explored by chaos theory. Non-equilibrium chemical thermodynamics have shown the beginning of a route from chaos to order. In the area of artificial life, Langton has hypothesized that between chaos and order there is an “edge of chaos.” This edge-of-chaos is where physical systems can exhibit a high degree of physical computation. Langton has asserted that at the edge-of-chaos is where complexity arises and is akin to a phase transition.

In other words, there is no distinct boundary, in the conventional sense, encompassing or demarcating an edge-of-chaos. The death of a “complex” of physical systems must also play a part in transfer of information between the levels of complexity.

There is “chaos within order”. Because of this ultimate instability of it’s component microsystems, no order regime is completely ordered. In addition, an order regime is physically next to a chaotic regime, which subjects the order region to the energy fluctuations of the chaotic region. Between chaos and order, within an edge-of-chaos there can be multiple levels of complexity. Growth is the generic word for indicating the process of going from chaos to order. Whereas, death is the generic word for indicating the process of going from order to chaos. The feedback of the chaos and the order regions into the edge-of-chaos drive an edge-of-chaos to higher complexity. 13

The Universe itself is alive and has its own biological processes that ultimately results in an evolutionary transformation. This process includes that which we call death for the sentient being; that is identical to the process for non-sentient objects. Liber AL teaching us that “Every man and woman is a star” refers to the same Gnosis that Shakespeare speaks of when he writes: “We are the stuff that stars are made of.”

Moving to a higher level of complexity then does not really involve organisms developing or refining internal or external organs, but moving to a greater aggregate of consciousness. As Blavatsky points out in her own writings on evolution, the organ appears first before its use is exploited. Indeed, with consciousness or sentience apparent in both the macrocosm and the microcosm, we are moving in both involutionary and evolutionary directs; simultaneously. The process of becoming is engendered by the process of decay and reorganization. And we must go through these processes on all planes in both body and soul. David M. Kiersey continues:

When a macrosystem (e.g., the earth) contains higher-level complexity, not only will it exhibit the processes of lower complexity, most notably, thermodynamic dissipation, but the macrosystem also will exhibit higher forms of process order, such as non-equilibrium chemical thermodynamics.

… the standard use the concept of “evolution” has been overused and includes two significantly different processes. The first process is adaptation. Algæ are said to evolve or “adapt” as time progresses, even though they do not change in significant complexity.

It is generally accepted that some common ancestors of prokaryotes had evolved into multi-celled eukaryotes by the processes involving parasites, symbioses, and epigenetic programs of the genomes. 14

13 David M. Kiersey in Toward the Physics of Death
14 Ibid
God, as ‘one’ (per the Qabalah) then is a simplicity and we are not necessarily, simply “returning to godhead.” Rather a scientific picture is being shown where complexity moves to simplicity and vice-versa. This dualistic expression of that which we can call the life-force is consistent with everything both material science and the common zeitgeist of the human psyche can observe.

The word “involution” will be used to signify the “evolution of complexity,” and exclude the concept of evolution as adaptation within one level of major complexity. We assert the basic difference between evolution and involution is that involution requires multiple levels of major selection processes whereas evolution as adaptation does not.

… the Darwinian theory has centered on the study of eukaryotic multi-cellular evolution. On the other hand, the evolution of prokaryotes and the epigenetic inter-cellular mechanisms in the development of animals has been mostly shrouded in mystery.

Besides the evolution of bacteria and the transition to multi-cellular organisms, there is also the cultural evolution of the human race, which may involve a more complex selection process, such as the Baldwin effect.15

From Wikipedia, the free encyclopedia

The Baldwin effect, also known as Baldwinian evolution or ontogenic evolution, is an early evolutionary theory put forward in 1896 in a paper “A New Factor in Evolution” by American psychologist James Mark Baldwin which proposes a mechanism for specific selection for general learning ability. Selected offspring would tend to have an increased capacity for learning new skills rather than being confined to genetically coded, relatively fixed abilities. In effect, it places emphasis on the fact that the sustained behavior of a species or group can shape the evolution of that species. The “Baldwin effect” is better understood in evo-devo literature as a scenario in which a character or trait change occurring in an organism as a result of its interaction with its environment becomes gradually assimilated into its developmental genetic/epigenetic repertoire (Simpson, 1953; Newman, 2002).

As an example, suppose a species is threatened by a new predator and there is a behavior that makes it more difficult for the predator to kill individuals of the species. Individuals who learn the behavior more quickly will obviously be at an advantage. As time goes on the ability to learn the behavior will improve (by genetic selection), and at some point it will seem to be an instinct.

The appearance of lactose tolerance in human populations with a long tradition of raising domesticated animals for milk production has been suggested as another example. This argument holds that a feedback loop operates whereby a dairy culture increases the selective advantage from this genetic trait, while the average population genotype increases the collective rewards of a dairy culture.

The opposite of the Baldwin effect is ‘shielding’. Modern medicine for example could artificially control a pathogen preventing any genetic immunity against the pathogen from being selected for. Here learned behaviour that improves fitness prevents genetic adaptation.

The Baldwin effect theory has always been controversial, with scholars being split in “Baldwin boosters” and “Baldwin sceptics”. There have been a number of arguments against the effect. For example, it has been argued that the change from learning to instinct might not constitute an improvement, because only very stable environments where change is extremely slow would favour innate traits as opposed to the plasticity of learning (especially social learning, which doesn’t have such high costs as individual learning by trial-and-error). The very mechanism of the transition has also been questioned, as genetic variations which “tend to decouple […] behaviour from environmental signals” might be “distant from those genotypes that mediate plastic, learned response”.

15 David M. Kiersey in Toward the Physics of Death
Spiritual development as a combined process of intellect and emotions is overlooked here; as well as the fifth dimension (cf. *Testing the Night of Pan*), which may be said to be the source of that spiritual infusion that brings sentience to material objects. What follows is an interpretation of the above chart in terms of the individual and social awareness of humanity.

Level 1: Pure sentience  
Level 2: Existential circumstance  
Level 3: Hormonal attraction  
Level 4: Intelligence wins out over brute strength.  
Level 5: Intuition takes over  
Level 6: Aesthetics and observational condensation  
Level 7: Eugenics

If all of the macrosystems are thermodynamic entities, then even the most complex proposed macrosystem, MetaMan, should exhibit properties of this process. Indeed, it has been noted that mankind has dissipated the earth’s energy to a larger extent than simpler organisms. Moreover, modern civilized man has shown even more predilection for consuming energy than less technological humans. Given that MetaMan, Hypersea, Gaia, and Earth are first thermodynamic systems as they involute, then it should follow that the higher-level microsystems, such as organisms, which initially behave as simple dissipative elements in a thermodynamic process. Indeed, when studying the history of both physical systems and living systems the recurring themes of chaos, order, and the edge-of-chaos appear in broad patterns.  

At the heart of all this is consciousness itself; this we find self-evident in terms of natural law, which means it is based on our observational experience. Science has attempted to prove an objective quality that can be appended by the faculty of observation. But modern physics has entirely laid this issue to rest, as science has also lain to rest the incorrect spiritual idea that this world is illusory. But modern science has barely begun to comprehend and quantify consciousness.

Knowledge of consciousness starts by our experience of it and this leads to the common sense definition of consciousness as the state of mind in which one has subjective experience of the world since there is a qualitative or subjective feeling to such states, they have been labeled qualia.

We tend to assume that our form of consciousness – stark (Words relating to the stark aspect: central, multiple, recollection, reference, comparison, symbol, language, social, cultural) and reflexive - must define consciousness. There is no necessity to the requirement of starkness. But all consciousness must involve

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16David M. Kiersey in *Toward the Physics of Death*
consciousness of consciousness. This follows from consideration of what it must be like to have a single qualia in isolation. The having of qualia must involve memory and comparison. When my feet are cold as I write, I feel it; to know that I am cold I must hold the idea of coldness from memory in consciousness. Thus consciousness is necessarily reflexive. Our prejudice against the slug is due to equation of qualia with starkness. But there are also diffuse modes. And it is in these modes that the awareness of a lower creature is reflexive - involves conscious of consciousness. Thus consciousness of consciousness is intrinsic to consciousness (it is not necessary to say consciousness of consciousness for that is contained in consciousness) and there is no distinction between consciousness and awareness. Both consciousness and consciousness of consciousness or self-consciousness, though they have integral aspects, include the vague and diffuse (seen and not recognized) re-recognized by some other and or central agency of consciousness. It is in the same sense and with the same meaning that it can be said that consciousness necessarily includes knowledge of consciousness. The objections and arguments are the same including the generalization of the concept of knowledge. It is only in certain discrete, stark forms that this self-consciousness deserves to be mentioned. And it is only in these forms that there appears to be a distinction between consciousness and consciousness of consciousness.

There is a meaning of consciousness that is identical to awareness, and another in which consciousness is a kind of awareness. There is no awareness that is not consciousness in its general sense. What defines the special meaning of consciousness? Some considerations are given here: reflexive awareness, heightened awareness, awareness informed and cultivated by a sense of self, by social groups through language and culture, which are in turn nurtured through the sense of being that includes awareness. Consciousness is but our awareness of ourselves. And indeed, God is the penultimate self-conscious being. Self-consciousness being the nadir of the Godhead’s involution is simultaneously the nadir of evolutionary development at this time. It is this that makes us fully human; reaching the summit of our development as a microcosm. From such a point forward, the evolutionary development begins that will merge the microcosm with the macrocosmic process, which on the physical plane involves the thermodynamic transformation described above; being matter, motion and energy. Indeed, there should also be a corresponding process on the psychic level of the human soul.

Similarities between mind and quantum theory undoubtedly abound. The unity of consciousness is a favorite example. A conscious state is the whole of the conscious state and cannot be divided into components (I can't separate the feeling of red from the feeling of apple when I think of a red apple). Newton's Physics is less suitable than Quantum Theory for dealing with such a system, especially since Bell's Theorem proved that everything is always interacting. Indeterminate behavior (for example, free will) is another favorite, since Heisenberg's principle allows for some unpredictability in nature that Newton's Physics ruled out. And, of course, the mind/body duality reminds Physicists of the wave/particle duality.

Dr. Harold Aspen’s theoretical work on the Aethyr would support the idea that Newton’s theory is also important. (Cf. Scientific Proof of Levi’s Aethyr) From this, I can see mind interacting on a sub-atomic level with the Aethyr; the chaotic field of sub-atomic particles from which all that exists, organizes into various arrangements that become the form of incarnation. This then quantifies consciousness as actually existing in the physical dimension. The aethyric particles that Dr. Aspen clearly demonstrates to compose this meta-physical entity are identical with the particles released by the processes of the human brain. Together they make the human soul as a physical, thermodynamic system; subject to all the transformational conditions outlined above.

But the ideal state that is the Platonic model of the subtle realms seems to falter as any sort of completion to model of reality as a false conception of perfection. The Qabalist may note that this depends on the plane that is taken as one’s reference point. From Assiah the forms are in matter, from Atziluth the matter is in the forms, from Yetzirah, the forms may appear to be in yet another dimension. Indeed, the Aristotelian plausibly argues against its efficacy in terms of material existentialism by insisting that the ideal form must be inherent in the material object. In Aristotle’s Metaphysics (Book I, Cap. 9), he argues that:

\[\text{References:}\]

17 Dr. Anil Mitra in Being, Mind and the Absolute
18 Piero Scaruffi in The Physics of Consciousness
"[T]he Forms ...are not the causes of motion or of any other change ...And they do not in any way help either towards the knowledge of the other things...or towards their existence ...Moreover, all other things do not come to be from the Forms in any of the usual senses of 'from.' And to say that the Forms are patterns and that the other things participate in them is to use empty words and poetic metaphors."

In other words both form and substance create each other as each is inherent in the other and one does not necessarily descend from the other. We can then parse from both philosophers that the dualistic nature of involution and evolution in one whole thermodynamic system is a reasonable model upon which to build our theoretical model of consciousness.

But idealism, even with reconceptualization, universalization and gradation of the idea says nothing - it is almost tautological - the concept of the idea is merely redefined to include matter. Materialism at least shows something - that, for example, ideas are manifestations or aspects of matter.

Response: Materialism - scientific or other- does not show that ideas “reduce” to matter although that demonstration may be part of a materialist program. I have discussed the issues of idealism and materialism at length elsewhere. The simplest refutation of strict materialism is that it does not and cannot explain experience. The form of idealism considered here is not an exclusive idealism; it does not exclude matter; it does not claim that matter is an illusion or a fiction; it does not require or force a choice. It asserts that matter is a form of idea

Idealism is most definitely saying something. One thing it is saying is that a materialist system - based, for example, in physics and biology - will not and cannot explain experience i.e., it will not explain the subjective aspect of awareness and consciousness. The system of idealism that I am considering shows why such materialist explanations cannot be given but it may also show that the explanatory gap, though it is infinite in one sense, is transparent and easily bridged in another. As more and more is known about matter - physics and biology - more and more mental phenomena will be explained and understood and consciousness - the fact but not the subjectivity of it - may well be explained. That will be impressive and scientifically significant with further implications and consequences in general and for physics and biology in particular - but the materialist mode of description will not and need not explain the subjective side of consciousness: the explanation will be in an 'as if' mode.

The gap between the “as if” and the subjective modes of awareness or consciousness - sometimes called the third and first person modes - may be paper thin. I expect, however, that this will require reworking and broadening of the concept of consciousness and the idea so that in the subjective limit the concepts will reduce to the normal stark and very present form of consciousness that we know well - and in the objective limit the concepts will reduce to matter. In this view, then, the scientific explanation of consciousness itself - the subjective part, “the hard problem” may well be a non-problem - an artifact of our cultural paradigms and institutions. Thus idealism is not without content. The idea is not redefined - rather it is re-conceptualized.

Materialist explanation does indeed have power but this is neither a refutation of idealism nor a proof of materialism. Idealism does not refute the existence of material being. There should not be any need or desire to do this from an idealist perspective. Idealism gives meaning to matter. Idealism conflates subject and object but also gives special meaning to the object. Materialism denies the subject as a category but may seek to explain it as an aspect of matter. There is a framework within which, practically, there is no reason to choose between idealism and materialism because in a specific practical sense there are no consequences to that choice. Even though idealism is simpler, more inclusive and more direct it is only when broader frameworks are considered that the choice is significant.19

Idealism as a solipsistic paradigm must be tautological when considered separate from matter. Henry P. Strapp observes more that there is an intimate relation between the two; stating that idealism and materialism work together to explain the universe and our experience of the universe in one grand unifying theory. The materialism is obvious and the idealism is rendered through myth and thaumaturgy.

The exclusion of consciousness from the material universe was a hallmark of science for over two centuries. However, the shift, in the 1920's, from classical mechanics to quantum mechanics marked a break with that long tradition: it appeared that the only coherent way to incorporate quantum phenomena into the existing science was to admit also the human observer (Stapp, 1972). Although the orthodox approach of Bohr and the Copenhagen school was epistemological rather than ontological, focusing upon "our knowledge" rather

19 Dr. Anil Mitra in Being, Mind and the Absolute
By introducing consciousness directly into the dynamics of the particle/wave phenomena in observational physics, we essentially solve the riddle of the paradox. It then follows that volition or intent; Will is the connecting or Magickal Link.

I have also related Einstein's principle to Wigner's action-reaction principle. What do I actually mean by this? Wigner wrote the following definition of what I call "post-quantum back-action" = "Wigner self-reaction of matter on mind"

"The physico-chemical conditions and properties of the substrate not only create the consciousness, they also influence its sensations most profoundly." – Wigner

What Wigner did not know when he wrote those lines in about 1960 is that, in terms of Bohm's theory, with the mind in the implicate order, there is no quantum non-mechanism for the substrate to create the consciousness without violating the normal statistical predictions of orthodox quantum theory. Wigner then completes the "loop" by adding what I call the "Wigner action of mind on matter".

"Does, conversely, the consciousness influence the physico-chemical conditions?" - Wigner

So here we have the basic "Wigner action - reaction principle". What is its relation, if any beyond superficial metaphor, to Newton's third law of mechanics of equal and opposite reaction to an action? Wigner also did not know that later on Bohm would come up with a natural quantum non-mechanical organic way for the consciousness to influence the physico-chemical conditions as the gradient flow of those conditions on the quantum information landscape in the configuration space of those physico-chemical conditions that form the material "system point" or "Level 1 "beable".

"The traditional answer to this question is, "No": the body influences the mind but the mind does not influence the body." – Wigner

So here, we have the "one-way" property of Aristotle's "unmoved mover" characteristic of Einstein's notion of the "absolute ether" that violates his principle of relativity. Thus, Einstein wrote:

"If Newton called the space of physics 'absolute', he was thinking of yet another property of that which we call 'ether'. Each physical object influences and in general is influenced in turn by others. The latter, however is not true of the ether of Newtonian mechanics. The inertia-producing property of this ether, in accordance with classical mechanics, is precisely not to be influenced, either by the configuration of matter, or by anything else. For this reason, one may call it 'absolute'." - Einstein

So here Einstein defines "absolute" as the one-way influence i.e., as an action without a reaction (AKA "back-action"). Einstein continues that his theory of gravitation is a "back-action" theory in exactly the sense that I mean it for explaining experiential qualities in the mind. That is, post-quantum theory "removes a defect" of quantum theory found by David Bohm. This "defect" is that the quantum information field guiding the motion of matter in its higher dimensional non-metrical configuration space beyond ordinary metrical space is another "absolute ether". It is this "defect" that is the deep cause of uncontrollable random quantum chance in actual individual events. Therefore, I argue that this quantum randomness is not fundamental, but is an approximation to a deeper self-organizing spontaneously-sentient intelligent order. In accord with Einstein's Vision, God does not play dice with the universe. The Lord is subtle, but not malicious.

"The ether of the general theory of relativity therefore differs from that of classical mechanics or the special theory of relativity respectively, in so far as it is not 'absolute', but is determined in its locally variable properties by ponderable matter." – Einstein

Using the adjective ‘ponderable’ to describe a quality in matter essentially posits an intimate connection between matter and consciousness. But then what of the materiality of the brain and the mind that is consciousness and its link to it?

…certain logical deficiencies in classical mechanics, as a foundation for a coherent theory of the mind/brain, are overcome in a natural and satisfactory way by replacing the classical conception of matter by a quantum conception.

It seems enough to replace classical (folk) mechanics, which is known to be unable to account for the basic physical and chemical process that underlie brain processes, by quantum mechanics, which does adequately describe these processes.

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20 Henry P. Stapp in *Why Classical Mechanics Cannot Naturally Accommodate Consciousness but Quantum Mechanics Can*

21 Jack Sarfatti in *The End of Quantum Theory*
What stands out for us is that matter and consciousness then fulfill the dictum that every action has an equal and opposite reaction. Matter creates the field of vision that the mind then interprets, which has its counter-affect on the alteration and organization of matter.

Wigner thinks that orthodox quantum theory's "weakness" is in not having a clear way for thought to influence matter. Wigner accepts that matter influences consciousness although he never shows how quantum theory explains that. In fact, the reality is reversed from the way Wigner understood it when we look at this problem in Bohm's ontology where matter is in the explicate order and mind is in the implicate orders beyond space-time. It is easy, within orthodox quantum theory to see how the implicate influences the explicate, i.e. how mind influences matter. However, this influence is "one-way". Thus, Bohm and Hiley show that the quantum field is an absolute ether in Einstein's sense:

"unlike what happens with Maxwell's equations, the Schrodinger equation for the quantum field does not have sources, nor does it have any other way by which the field could be directly affected by the conditions of the particles. This of course constitutes an important difference between quantum fields and other fields, the quantum theory can be understood completely in terms of the assumption that the quantum field has no sources, or other forms of dependence on the particles."

How do we modulate an electromagnetic field to send a signal? Clearly, we do it by controlling the electrons that are sources of the field. Well we cannot do that ordinarily in inanimate quantum matter with quantum waves in configuration space. When it does happen in animate post-quantum matter, the fifth phase of matter, it generates experiential qualities.

We can posit light itself, coming from the fifth dimension as I’ve related in previous writings on physics (cf. Testing the Night of Pan). Consciousness is that dark energy/matter complex; dark only in that we are only beginning to recognize and validate consciousness as having an empirical connection with matter (a scientific rendering of the Thelemic formula of N.O.X.).

"One of the pillars of physics is Newton's third law. A common way to state it is that for every action there is an equal and opposite reaction. Another way to say it is that forces come in balanced pairs. In its modern, general form, Newton's third law applies to all interactions of one thing to another. It tells us that anything that affects something else must, in turn, be affected by that something else. Paul Hewitt has expressed the idea in engaging human terms: 'You can't touch without being touched.' p.p.234-5

All that remains to be done is to recognize that in Bohm's ontology there is an explicate order and a whole sequence of implicate orders. Newton and Einstein were only working in the explicate order, but their principle is universal and applies also to the implicate orders of quantum information and beyond. What you do not get from Henry Stapp's "pragmatism" based on Bohr's Copenhagen Interpretation is that the field of quantum information is a bona-fide physical object in its own right. This is quite divorced from statistical consequences based on "ensembles". It applies to unique complex objects like living mind-brain systems that span both the implicate and the explicate orders. Returning to Wigner

"The second argument to support the existence of an influence of consciousness on the physical world is based on the observation that we do not know of any phenomenon in which one subject is influenced by another without exerting an influence thereupon."24"

This is fully supported by the concept of duality taught in the White School of Magick (cf. Schools of Magick). Antagonistic forces such as Good and Evil cannot enter into a state where one ‘wins’ over the other. So also do reality and illusion complement each other; each on a par with the other without any representation absolute ends in disjunction.

One possibility is that the intrinsic-level components of a thought are bound together by some integrative process in the mind of a spirit being, i.e., in the mind of a "ghost behind the machine", of an homunculus. This approach shifts the question to an entirely new realm: in place of the physical brain, about which we know a great deal, and our thoughts, about which we have some direct information, one has a new "spirit realm" about which science has little to say. This approach takes us immediately outside the realm of science, as we know it today.25

22 Henry P. Stapp in Why Classical Mechanics Cannot Naturally Accommodate Consciousness but Quantum Mechanics Can
23 Jack Sarfatti in The End of Quantum Theory
24 Ibid
25 Henry P. Stapp in Why Classical Mechanics Cannot Naturally Accommodate Consciousness but Quantum Mechanics Can
If ever there’s a theoretical approach to the practice of evocation, we have it here in the “ghost” or daemon being a form of consciousness ‘behind the curtain’ or veil of matter. Israel Regardie writes a brilliant tome on the realistic efficacy of evocation in his book: The Tree-of-Life.

This problem with ‘beliefs’, and other thoughts, arises from the attempt to understand the connection of thoughts to brains within the framework of classical physics. This problem becomes radically transformed, however, once one accepts that the brain is a physical system. For then, according to the precepts of modern physics, the brain must in principle be treated as a quantum system. The classical concepts are known to be grossly inadequate at the fundamental level, and this fundamental inadequacy of the classical concepts is not confined to the molecular level: it certainly extends to large (e.g., brain-sized) systems. Moreover, quantum theory cannot be coherently understood without dealing in some detail with the problem of the relationship between thoughtlike things and brainlike things: some sort of non-trivial considerations involving our thoughts seems essential to a coherent understanding of quantum theory.

In this respect quantum theory is wholly unlike classical physics, in which a human consciousness is necessarily idealized as a non-participatory observer --- as an entity that can know aspects of the brain without influencing it in any way. This restriction arises because classical physics is dynamically complete in itself: it has no capacity to accommodate any efficacious entities not already completely fixed and specified within its own structure. In quantum theory the situation is more subtle because our perceptions of physical systems are described in a classical language that is unable to express, even in a gross or approximate way, the structural complexity of physical systems, as they are represented within the theory: there is a fundamental structural mismatch between the quantum mechanical description of a physical system and our description of our perceptions of that system. The existence of this structural mismatch is a basic feature of quantum theory, and it opens up the interesting possibility of representing the mind/brain, within contemporary physical theory, as a combination of the thoughtlike and matterlike aspects of a neutral reality. One could imagine modifying classical mechanics by appending to it the concept of another kind of reality; a reality that would be thought like, in the sense of being an eventlike grasping of functional entities as wholes. In order to preserve the laws of classical mechanics this added reality could have no effect on the evolution of any physical system, and hence would not be (publicly) observable. Because this new kind of reality could have no physical consequences it could confer no evolutionary advantage, and hence would have, within the scientific framework, no reason to exist. This sort of addition to classical mechanics would convert it from a mechanics with a monistic ontology to a mechanics with a dualistic ontology. Yet this profound shift would have no roots at all in the classical mechanics onto which it is grafted: it would be a completely ad hoc move from a monistic mechanics to a dualistic one.26

The dualistic argument then feeds the idea for the efficacy of proposing a biune god; one that involves itself into matter and in another aspect evolves from matter; each representing the extreme points between two poles; positively and negatively charged, respectively.

In view of this apparent logical need to move from monistic classical mechanics to a dualistic generalization, in order to accommodate mind, it is a striking fact that physicists have already established that classical mechanics cannot adequately describe the physical and chemical processes that underlie brain action: quantum mechanics is needed, and this newer theory, interpreted realistically, in line with the ideas of Heisenberg, already is dualistic. Moreover, the two aspects of this quantum mechanical reality accord in a perfectly natural way with the matterlike and thoughtlike aspects of the mind/brain. This realistic interpretation of quantum mechanics was introduced by Heisenberg not to accommodate mind, but rather to to keep mind out of physics; i.e., to provide a thoroughly objective account of what is happening in nature, outside human beings, without referring to human observers and their thoughts. Yet when this dualistic mechanics is applied to a human brain it can account naturally for the thoughtlike and matterlike aspects of the mind/brain system. The quantum mechanical description of the state of the brain is automatically an extrinsic-level description, which is the appropriate level for describing brain correlates of thoughts. Moreover, thoughts can be identified with events that constitute efficacious choices. They are integral parts of the quantum mechanical process, rather than appendages introduced ad hoc to accommodate the empirical fact that thoughts exist.

The essential point, here, is that the quantum description is automatically holistic, in the sense that its individual registers refer to states of the entire brain, whereas the individual registers in the classically conceived computer/brain represent only local entities. Moreover, the quantum jump associated with the thought is also a holistic entity: it actualizes as a unit the state of the entire brain that is associated with the thought.27

26 Henry P. Stapp in Why Classical Mechanics Cannot Naturally Accommodate Consciousness but Quantum Mechanics Can
27 Ibid
Dualism as represented by the White School of Magick is entirely ‘holistic’ and a uniquely Western approach to a qualitative understanding of the Universe; reflected both philosophically and scientifically in our empirical paradigm. This is the observational interplay between mind and matter.

The first detailed quantum model of consciousness was probably the American physicist Evan Walker's synaptic tunneling model (1970), in which electrons can "tunnel" between adjacent neurons, thereby creating a virtual neural network overlapping the real one. It is this virtual nervous system that produces consciousness and that can direct the behavior of the real nervous system. The real nervous system operates by means of synaptic messages. The virtual one operates by means of the quantum effect of tunneling (particles passing through an energy barrier that classically they should not be able to climb). The real one is driven by classical laws, the virtual one by quantum laws. Consciousness is therefore driven by quantum laws, even if the brain's behavior can be described by classical laws.28

Mind being a product of the Aethyr connecting to the brain, it is then also the electro-magnetic matrix that connects directly with the Fifth Dimension; the aethyr being the fifth state of matter, discussed above.

In 1986 John Eccles, the British neurophysiologist who discovered neurotransmitters, has speculated that synapses in the cortex respond in a probabilistic manner to neural excitation, a probability that could well be governed by quantum uncertainty given the extremely small size of the synapse “microsite” that emits the neurotransmitter. If this is true, Eccles speculates that an immaterial mind (in the form of “psychons”) controls the quantum “jumps” and turns them into voluntary excitations of the neurons that account for body motion.29

Therein was this virtue, that the One became the all.—LXV:II.6

Or as discussed later in this work, rather than responding in a probabilistic manner, synapses respond by way of an algorithmic code. It seems then that these ‘psychons’ would be considered ‘bosons’; a force particle that carries an electromagnetic force, as explained in Testing the Night of Pan.

Possibly the most popular candidate to yield quantum consciousness has been Bose-Einstein condensation (theoretically predicted in 1925 and first achieved in a gas in 1995). The most popular example of Bose-Einstein condensation is superconductivity. The fascination with Bose-Einstein condensates is that they are the most highly ordered structures in nature (before their discovery by Albert Einstein and Satyendranath Bose, that record was owned by crystals). The order is such that each of their constituents appears to occupy all their space and all their time: for all purposes the constituents of a Bose-Einstein condensate share the same identity. In other words, the constituents behave just like one constituent (the photons of a laser beam behave just like one photon) and the Bose-Einstein condensate behaves like one single particle. Another odd feature of Bose-Einstein condensates is that they seem to possess a primitive form of free will.

A Bose-Einstein condensate is the equivalent of a laser, except that it is the atoms, rather than the photons, that behave identically, as if they were a single atom. Technically speaking, as temperature drops each atom's wave grows, until the waves of all the atoms begin to overlap and eventually merge. After they merged, the atoms are located within the same region in space, they travel at the same speed, they vibrate at the same frequency, etc.: they become indistinguishable. The atoms have reached the lowest possible energy, but Heisenberg's principle makes it impossible for this to be zero energy: it is called “zero-point” energy, the minimum energy an atom can have.30

The above is literally a scientific rendering that shows the ALL becoming ONE in Qabalistic terms. We might then infer that the ONE becomes the ALL by volition of the Will. That there is the added force of will; the “primitive form of free will” being an essential component of the condensate shows the bestial nature of the Will in Thelemic terms, as will is intrinsically derived as much from matter and in the most subtle particle-waves; an undulation of life. Crowley’s commentary to the above-captioned verse from Liber LXV is also quite poignant here:

28 Piero Scaruffi in The Physics of Consciousness
29 Ibid
30 Piero Scaruffi in The Physics of Consciousness
The object of this act is to realize the possibilities of one's unity by representing its wholeness as an infinite number of particular cases, just as one might try to get an idea of the meaning of "poetry" by studying all available poems. None of these can be more than one imperfect illustration of the abstract idea; yet only through these concrete images can one get any understanding of what it means.

Additionally, the merging of waves shows how the brain merges with the Aethyr; a bioholography. That this supercedes the ancient knowledge of crystals shows a real evolution in our understanding of the Universe. Further, that this condensate possesses a “primitive form of free will,” which means sentence is connected with these holograms; especially as discussed in *Liber Vox Viva Voce vel Video*. As the mind itself emits wave/particle events in the process of thought, these must necessarily be also the same sub-atomic particles the comprise the Aethyr.

The intriguing feature of a Bose-Einstein condensate is that the many parts of a system not only behave as a whole, they become whole. Their identities merge in such a way that they lose their individuality. Precisely, electrical charged molecules of living tissues behave like electric dipoles. When digestion of food generates enough energy, all molecular dipoles line up and oscillate in a perfectly coordinate manner, which results in a Bose-Einstein condensate. Biological oscillators of this kind are pervasive in nature: living matter is made of water and other biomolecules equipped with electrical dipoles, which react to external stimuli with a spontaneous breakdown of their rotational symmetry. The biological usefulness of such biological oscillators is that, like laser light, they can amplify signals and encode information (e.g., they can "remember" an external stimulus). Most importantly, coherent oscillations are crucial to many processes of integration of information in the brain.  

This can support the theory of the Eucharist in that food can be manipulated to absorb this condensate; and then when digested, the energy may be released into the body. The consumption of the sexual fluids, especially semen, but also ova, becomes yet that much more certain to be the true eucharist as we have an electrically charged, living organism.

Zohar [Ed. Note: a scientist…interesting synchronicity!] is fascinated by the behavior of bosons. Particles divide into fermions (such as electrons, protons, neutrons) and bosons (photons, gravitons, gluons). Bosons are particles of "relationship", as they are used to interact. When two systems interact (electricity, gravitation or whatever), they exchange bosons. Fermions are well-defined individual entities, just like large-scale matter is. But bosons can completely merge and become one entity, more like conscious states do. Zohar claims that bosons are the basis for the conscious life, and fermions for the material life.

The photon is a boson of light; Fifth Dimension. Bosons may then be the particles of the Aethyr. But certainly both work together is a dualistic relationship; materiality/spirituality. This is presented symbolically in the Qabalah as the marriage between God (Kether) and his Shekinah the manifested human being).

"Biophoton emission is a general phenomenon of living systems. It concerns low luminescence from a few up to some hundred photons per second, per square centimeter surface area, at least within the spectral region from 200 to 800nm. The experimental results indicate that biophotons originate from a coherent (or/squeezed) photon field within the living organism, its function being intra and intercellular regulation and communication." ~ Popp, 1999

All living cells from plants to human beings emit biophotons, ultraweak photon emission of electromagnetic wave in the optical range of the spectrum. Biophotons can’t be seen with the naked eye, but can be detected. In 1974, German physicist Fritz Albert-Popp proved the existence of biophotons, their origin from DNA and later their coherence (laser-like nature). Russian biophysicist Peter Garinov has confirmed and built on this foundation with his own DNA hologram research. The decay character of a biophoton signal is non-exponential and the nature of its photons is coherent. It is suspected that many properties of the living systems, hitherto considered bizarre, emanate from non-locality. A coherent photon signal provides an efficient and fast channel of communication. The quantum detection has a potential to generate the arrow of time and the identity of biological time with cosmological time. Similarly, we demonstrated the ability of the living organisms to distinguish (detect) quanta flows according to their coherency degree (Budagovsky, 1994). In these experiments, a cell’s diameter fits the discrimination threshold.
One may suggest that the chromophore-membrane ensemble of a cell plays a role of a phase detector. Unexpectedly, this has been confirmed by a comparison with Hertwig's nuclei-cytoplasmic ratio (Budagovsky, 1990). Therefore, the correspondence between a coherent radiation and a living organism is perfect enough for providing a field regulation of biosynthetic processes. Physicists use a simple geometric picture of the flat spacetime of special relativity called a "Minkowski diagram." Relativity unites space and time into a unified "four dimensional space-time continuum" in which time appears in the distance formula with a sign different from the sign of space. Events are conceived of as points on the Minkowski diagram. The history of a sequence of events is described by a curve or path on the Minkowski diagram called a world line. Each event is the origin of a future light cone and a past light cone. World lines that are everywhere inside the light cones are called time-like and describe the history of particles moving at velocities less than the velocity of light. World lines that are everywhere on the light cones are called light-like and describe the histories of real photons, neutrinos and gravitons that move at exactly the velocity of light. World lines that are everywhere outside the light cones are called space-like and would correspond to tachyonic processes happening faster than the velocity of light.

Space-like processes, if they exist, could be in two or more widely separated places at the same time. Furthermore, these space-like processes allow the effect to precede the cause for some observers and not for others. They are not allowed in classical physics but are acceptable in quantum physics according to some interpretations. Quantum transitions or "quantum jumps" may be thought of as space-like processes.  

Beyond the speed of light, we might at least contemplate a 5th Dimension where light resides. And it might be that mechanical control in our four-dimensional Universe might somehow emanate from this plane of being. That light reaches out from this plane to ours; and that it carries consciousness that are then even felt by the cell walls of our bodies, provides a strong parallel with the mystical axiom: As above, so below.

These light forms that are holograms shows us how inherent human life is in our planetary makeup as we can’t really separate the formation of our planet and its consciousness from human consciousness. However, the planet is not sentient, which then seems to have some essentially lower level of intelligence that moves in the dualistic teleology of invocation and evocation. Overall, the connection with this idea of consciousness with Liber Vox Viva Voce vel Video, shows consciousness to be the intimate connection between all levels and planes of being. It’s effective purpose is to constantly ‘become.’ And at each manifestation; whether of the planetary level or that of a human, human cell, star, even all and any beings, an intelligence consistent with its physical point in the evolutionary/evolutionary matrix is exhibited.

33 Iona Miller in Biophotons: We Are Temples of Living Light
One of the mostly vivid manifestations of a coherent field is a holographic induction of morphogenesis. A projection of a hologram of a differentiated tissue upon non-organized proliferated callus cells initiates the growth of the normal organs (Budagovsky, Yevseyeva, 1995).

Given this background we understand that two completely opposite interpretations of this phenomenon come up, i.e. the biochemical theory (BCT) and the coherence theory (CT). It is amazing that both the BCT and the opposite "biophysical theory" CT take the rather low intensity as an essential point in their arguments. According to the BCT, biophoton emission is some kind of "waste" of the metabolic events taking place permanently within the cells. The BCT indicates some imperfections in chemical reactions which by returning to thermal equilibrium emit overshoot energy of chemically induced optical transitions, mainly linked to radical reactivity of oxidation processes. The CT, on the other hand, points to the low intensity as an indication of nonclassical light which may display even sub-Poissonian photocount statistics and may provide thus an optimized optical communication channel in biological systems within living matter of "optimized" high optical density.34

We can infer that holograms are of “high optical density” and are themselves possessed of the characteristics of consciousness that can then communicate with “biological systems.” Light or Spirit and Matter are shown intimately entwined from another theoretical scientific model. At the core of this are the biological systems that begin for the human being, with Eukaryotes and Prokaryotes.

It is now widely agreed that Archaea are more closely related to Eukaryota than to Eubacteria (Iwabe et al., 1989). Thus, the endosymbiotic event that gave rise to the primordial mitochondrion cell was an engulfment of a eubacterium by something like an archaebacterium. It is often overlooked, however, that the endosymbiotic event was not the moment at which cells of archaebacterial origin acquired the ability to transduce energy by chemiosmotic mechanisms. As has been reviewed in detail recently (Schäfer et al., 1999), archaebacteria possess a proton-pumping electron transport chain whose richness compares with that of eubacteria (which is to say, exceeds that of mitochondria). They also possess an ATP synthase with close structural and sequence similarity to that of mitochondria. Thus, chemiosmosis arose before the divergence of the two bacterial domains of life.

Accordingly, it is less heterodox than one might initially suppose to suggest that vestiges of chemiosmotic machinery may be present in mammalian plasma membranes. Indeed, it has been known for over 25 years that the plasma membrane possesses an electron transport chain, whereby oxidation of cytosolic NADH is coupled to reduction of extracellular electron acceptors such as ferricyanide (Crane and Löw, 1976).

Remarkably little attention has been paid by the majority of biologists to this system, which is present in all eukaryotic cell types yet examined so must presumably play a critical role in cell biology; as a result, the question of just what that role is remains unanswered.

The NAD+/NADH ratios of the cytosol and the mitochondrial matrix are linked, principally by the activity of the malate/aspartate shuttle. The major role of this shuttle is to transfer electrons from cytosolic NADH (generated mainly by glycolysis) to matrix NAD+, which is recycled at Complex I. However, the shuttle is sufficiently close to thermodynamic equilibrium (cf., Liber Immortalitas vel Luciform) that a rather small change in the redox states of the two compartments (or alternatively in the mitochondrial membrane potential, since the glutamate/aspartate carrier is electrogenic), could reverse the flow of electrons and oxidise matrix NADH at the expense of cytosolic NAD+ (Burat et al., 1984).

A feature that the proposed cytosolic NADH-oxidation system must have, in order to reconcile the findings of Desai et al. (1996) with those of McCarter et al. (1985) regarding oxygen utilisation, is that the terminal acceptor for the electrons liberated from cytosolic NADH must be oxygen.

This is that the cell must somehow compensate for the reduced rate of ATP synthesis at the mitochondrion which, perforce, accompanies reduced proton pumping there. Any alternative (i.e. non-plasma membrane) candidate for NADH recycling would involve reduction within the cytosol (or within an organelle other than the mitochondrion) of a substrate that can diffuse into the cell in its oxidised form and out again in its reduced form. That substrate could be oxygen, satisfying the metabolic rate requirement, but it is hard to see how such a system could conserve ATP to the required extent.

The essence of chemiosmotic mechanisms of energy transduction is that the free energy of a chemical reaction is coupled to electrochemical potential energy across a membrane. In oxidative phosphorylation, two chemiosmotic processes occur in tandem: the oxidation of NADH and FADH2 drives the creation of a proton gradient, and that gradient in turn drives the synthesis of ATP.

The free energy released by NADH oxidation is coupled to proton export into the extracellular space, causing a rise in the trans-plasma membrane potential (positive outside). This results in a reduced concentration gradient of Na+ across the membrane; conversely, there is an increased gradient of K+ (which is in

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34 Iona Miller in Biophotons: We Are Temples of Living Light
approximate electrochemical equilibrium across the plasma membrane, due to the presence of K+ leak channels). Additionally, if no other transport processes changed, there would be acidification of the extracellular space and alkalinisation of the cytosol.35

The process of phosphorylation is the direct induction of light (L.V.X.) into matter (N.O.X.). It is this central strand of the DNA that then interacts with the extra-nuclear DNA; the Mitochondria (regulator or metabolic activities), as discussed again, in Liber Immortalitas vel Luciform.

The unsolved problem of biophoton emission forces us to look for experimental evidence of either the coherent or the chaotic nature of the biophoton field. If is possible to show evidence of an extraordinary high degree of coherence of biophotons then the conclusion follows that this universal phenomenon of biological systems is responsible for the information transfer within and between cells, answering then the crucial question of intra- and extracellular biocommunication, including the regulation of the metabolic activities of cells as well as of growth and differentiation and even of evolutionary development.

Some steps in revealing important properties of biophotons are (1) careful measurements of the spectrum, (2) the analysis of the photocount statistics, (3) connecting the spontaneous and delayed “luminescence”, (4) investigations of the temperature dependence of biophotons and (5) correlating physical properties of biophoton emission and biological parameters such as growth, differentiation, DNA-content, and anomalies.

- It is evident that at least a significant part of biophoton emission originates from DNA.
- There are manifold non-linear dependencies of biophoton emission on cell densities.36

The biophoton emission again, originates in the core of the DNA; its central strand, with its “non-linear dependencies” possibly being connected to the other two strands as well as the mitochondria.

First he noted that Special Relativity implies that mental states must be physical states (mental states must be in space given that they are in time). The substance of the brain and the substance of consciousness are the same. Brain processes and thoughts arise from different properties of the same matter, just like a piece of matter exhibits both gravitational and electric features. The feature that gives rise to consciousness is therefore present in every particle of the universe, just like the features that give rise to electricity and gravity.37

Themes running hand-in-hand are consistent with the ancient proposition of Universal Mind and the more modern notion of the Supramental Mind in the Yoga of Sri Aurobindo and Mother (where even the cells of our bodies come to consciousness). The science is compelling and removes even the possibility for considering any nihilistic doctrine. Further, any real or authentic religion must be in abeyance with this understanding.

With the walls of superstition torn down, God is not dead at all; but is the teleological force that is apparent in our observation of the Universe and its evolutionary and involutionary, thermo-dynamic functioning. The deeper we probe, the further we validate the ancient scientific model that Madame Blavatsky reveals in her Secret Doctrine. (Cf. Theosophical Discussion).

According to [Sri Aurobindo], all reality resides in and issues from the Absolute. By a process of Self-conception, the Absolute manifests Being/Existence (Sat) and all that issues from it. The principle of time emerges when Being extends itself objectively to become an object to its own Self-Conscious experience. Space and time are different expressions of the same reality. All Space and Time are the product of Chit, of a relationship between the Self-Consciousness that perceives (subjectively) and the Force that formulates itself as forms and movements of those forms (objectively). “Subjectivity and objectivity are only two sides of one consciousnessany given time or Space or any given Time-Space as a whole is a status of being in which there is a movement of the consciousness and force of the being, a movement that creates or manifests events and happenings; it is the relation of the consciousness that sees and the force that formulates the happening, a relation inherent in the status, which determines the sense of Time.” Life Divine, p.362

35 Aubrey D.N.J. de Grey from a variety of papers (cf. Bibliography)
36 Iona Miller in Biophotons: We Are Temples of Living Light
37 Piero Scaruffi in The Physics of Consciousness
Space is the self-extension of Being in the form of constant or persistent movements that give the appearance of stable forms in contrast to Time, which is the same self-extension of Being in the form of changing movements. The same Being moves in two ways, as stable pattern of movement (space) and changing pattern of movement (time). The stable pattern appears as the backdrop for that which is changing. The two would be then a dual aspect of one and the same self-extension of the cosmic Eternal-Time could be a dimension of Space necessary for the complete action of the Energy, but not understood by us as such.” *Life Divine*, p.360

“Substance is inherent in Existence (Sat). Consciousness-Force (Chit) is an extension of Existence. Energy is an expression of Consciousness-Force. Therefore, Substance is inherent in Energy.” *Life Divine*, p.304

On the material plane, this means that matter, material substance, is an inherent property of material energy. The appearance of material energy and form presupposes an act of conscious Self-conception which goes hand in hand with the manifestation of space-time.

In the chapter on Conscious Force in *Life Divine*, he described the condition of Chit prior to manifestation in form as a sea of energy or force at rest, ether. (It was interesting to read that Einstein did not reject or disprove the existence of ether, he only concluded that it was unnecessary to explain his theory.) The creation of vibrations (waves) in the sea by the self-conception (will) of Sat, which the Sankaya represent as the principle of ether, sets in motion the process by which forms are created in the universe. These primordial vibrations have something in common with the strings of Superstring theory.

Kaku says that the ‘magic numbers’ 8 and 24 appear over and over again miraculously in superstring theory as well as in Ramana’s work. From these are derived the 8 + 2 and 24 +2 dimensions. Interestingly, the Mother says that in all ancient occult traditions, 8 is the number signifying the Infinite and 10 is the number of manifestation (something established in manifestation). 38

Eight also represents the Veil of Qesheth, which may be thought of as the infinite expanse of the manifested Universe, as much as it might also be said to represent the animal Soul. Sri Aurobindo and Mother also refer to the subtle physical as a plane which can be directly experienced. It is a subliminal plane which is closely related to the physical plane. All physical events occur first there. All physical beings and objects exist there.

*Energy seems to create substance, but, in reality, as existence is inherent in Consciousness-Force, so also substance would be inherent in Energy; the Energy a manifestation of the Force, substance a manifestation of the secret Existence. But as it is a spiritual substance, it would not be apprehended by the material sense until it is given by Energy the forms of Matter seizable by that sense. One begins to understand also how arrangement of design, quantity and number can be a base for the manifestation of quality and property; for design, quantity and number are powers of existence-substance, quality and property are powers of the consciousness and its force that reside in the existence; they can then be made manifest and operative by a rhythm and process of substance. 39

All substance (physical as well as spiritual) is derived from Existence (Sat). Substance, including material substance, is form given to Existence. Existence extends itself as Consciousness Force (Chit). All energy is an expression of Consciousness Force. Therefore, Substance is a latent property of Energy and is inherent in it (E=MC2).

The nonlocal nature of the state vector collapse, […] suggests that particles of matter are not accurately describable as separate, localized entities. Rather seemingly isolated or separate particles may be intimately connected with one another and must be seen as parts of a higher unity. 40

The interconnectedness of all things (all things possessing consciousness) clearly isolates between localization (HADIT) and universalization (NUIT).

*It is certain forms of consciousness that are localized. This analogy [is] to the form of matter. Matter is localized in particles. But particles are not points. And the fields of interaction among “particles” also partake of the form of matter. Some of the confusion in modern quantum mechanics - though certainly not all - is due to applying old distinctions and models. 41

38 Garry Jacobs in *Sri Aurobindo & Hyperspace*
39 Sri Aurobindo in *Life Divine*
40 William James in *Consciousness and the New Physics*
41 Dr. Anil Mitra in *Being, Mind and the Absolute*
So then the atom remains the smallest unit of matter. It’s parts, not being “points” have no locality. Therefore these parts don’t directly participate in matter. This helps validate the Fifth Dimension. As much as there is no straight line in the universe; the line being a theoretical and/or philosophical construct, so the points that comprise the line are more theoretical than actual. Particles become their actuality in oscillation; merely having a point of view, which is the nature of experience.

If I say “everything, each particle, is awareness” that immediately raises the question “What is a particle?” This is considered in the essay Being and the Absolute.  

If particles are consciousness, matter is a condensation of consciousness. Then the slower the particles of consciousness move, the heavier, more crystallized or fixed the matter becomes; a very Alchemical supposition.

Physicist David Bohm has referred to the universe as a "holomovement," invoking an analogy to a hologram (a three-dimensional photograph in which the entire picture is contained in each part). Bohm has termed the world of manifest appearances the "explicate order" and the hidden (nonlocal) reality underlying it the "implicate order." He also proposes a new mode of speaking, which he calls the rheomode, in which "thing" expressions would be replaced by "event" expressions. In constrast with theories such as Evan Harris Walker's and Saul-Paul Sirag's, the implicate order theory lacks a specific mathematical formulation from which testable predictions may be derived. On the other hand, the implicate order theory is consistent with and provides a good philosophical underpinning for the testable observational theories, such as those of Mattuck and Walker.

The idea of “event expressions” becoming predominant in our epistemological paradigm shows each moment as an expression of consciousness; and hence for US, the formula of love under will. The objects of consciousness loses its predominance and hence, their objectification as all “things” are then considered living and vital. That doesn’t mean to imply that Platonic forms are dismissed; these forms still maintain their objective value; it is simply their functionality that is observed.

In order for Substance to become perceptible to us as Matter, the Energy must give that substance Forms which can be apprehended by our senses. That is the role of Mind (the universal principle of mind). Consciousness Force uses the instrumentation of Mind to divide the indivisible existence into individual Forms. Consciousness Force or Energy manifests forms out of the formless One by a process of division (Consciousness Force is divided and parceled into small pieces, not Existence).

Sir Arthur Eddington advanced a solution to the problem of the long sought after Unified Field Theory based on a four element group, akin to the four worlds of the Qabalah. These are specifically, identify, negation, collaterality and reciprocity. He reduced it to a simple statement: “Insofar as the mind can know matter, it has a group structure isomorphic to that of matter.”

Eddington used purely epistemological principles in his search for unifying gravity with electromagnetism. This led him to account for the pure numbers in physics by the same epistemological reasoning. The Qabalist and especially one who practices Gematria is also concerned with pure number.

Kaku describes the on-going war in physics between those who want to focus on the cosmology of the big picture and those who search for truth in the smallest indivisible parts. In the current search for a unified theory, the Relativists are the holistic cosmologists and the quantum theorists are the reductionists. Neither by itself is able to unify all four forces of Nature. Superstring Theory combines and integrates Relativity and Quantum theory within a larger framework that encompasses all four forces.

The Qabalah maps the dimensions of consciousness, suggesting a possible relationship with Superstring Theory.

42 Ibid
43 William James writes in Consciousness and the New Physics
44 Garry Jacobs in Sri Aurobindo & Hyperspace
...[Saul-Paul] Sirag showed that the physical constants determine the large-scale structure of the universe in such a way that the present-day scale factor -- the "radius" can be calculated, as well as the age and the density, and various other cosmological properties. Sirag hypothesized the age of the universe to be 32 billion years.  

This is intriguing. If mind and matter are one, the 32 paths of the Qabalah reflect this. And every billion years a new path would be added as the mind and universe take on greater complexity. This suggests the Platonic Year as discussed in Gnostic Cycles. There is always a constant in the relationship between number (conceived in interior consciousness) and exterior or objective reality.

Sirag's model of consciousness could be called a Pythagorean approach to consciousness, since Sirag's strategy is to look to mathematics for an appropriate structure to describe the relationship between consciousness and the physical world. He finds that unified field theories of the physical forces depend fundamentally on mathematical structures called reflection spaces, which are hierarchically organized in such a way that an infinite spectrum of realities is naturally suggested. This situation is natural because mathematicians have discovered that the hierarchical organization of reflection spaces also corresponds to the organization of many other mathematical objects -- e.g. catastrophes, singularities, wave fronts, and contact structures, error correcting codes, sphere packing lattices, and, perhaps most surprisingly, certain regular geometric figures including the Platonic solids. It is generally believed by physicists working on unified field theory that space-time is hyper-dimensional, with all but four of the dimensions being invisible. The reason for this invisibility is a major subject of research. Beside space-time dimensions, there are also other internal (or invisible) dimensions called gauge dimensions. The reality of these gauge dimensions is also a topic of controversy and research. In Sirag's view both the extra space-time dimensions and the gauge dimensions are real. This provides scope for considering ordinary reality a substructure within a hyper-dimensional reality. This idea has, of course, been suggested before -- e.g. it is implicit in the Cave Parable of Plato. The difference in Sirag's approach is that the structure of the hyperspace is defined directly by the properties of physical forces.

A further innovation in Sirag's approach is that his version of unified field theory embeds both space-time and gauge space in an algebra whose basis is a finite group. This group, which directly models certain symmetries of particle physics, is a symmetry group of one of the Platonic solids -- the octahedron. Thus it is a mathematical entity contained in the reflection space hierarchy. In fact the reflection space corresponding to the octahedron is seven-dimensional and is also a superstring-type reflection space, so that a link with the most popular version of unified field theory is provided. The central postulate of Sirag's paper is that this seven-dimensional reflection space is a universal consciousness, and that individual consciousnesses tap into this universal consciousness. This implies that the high level of consciousness enjoyed by humans is due to the complex network of connections to the underlying reflection space afforded by a highly evolved brain. 

The octahedron is then a recurrence of the number eight; discussed above. The seven dimensions correlate with the seven macrocosmic intelligences or Dhyan Cohans generated by the Fohat; being planetary gods, as Blavatsky would have called them, and attributed to the seven sacred planets and the seven parts of the Ruach (Soul) in the Qabalah.

Moreover, the hierarchy of reflection spaces suggests a hierarchy of realms (or states) of consciousness. Each realm would correspond to a different unified field theory with different sets of forces. In fact, the seven-dimensional reflection space is contained in an eight-dimensional reflection space, and contains a six-dimensional reflection space, so that there would be a realm of consciousness directly "above" ordinary reality, and a realm of consciousness directly "below" ordinary reality. In principle the relationship between the different forces in these different realms could be worked out in detail, so that precise predictions could be made.

With the eight being infinite space and holding the seven planetary intelligences, so the six represents the involutionary and evolutionary forces meeting at a central point before continuing forward. This is the HADIT point in Thelemic philosophy; Tiphareth and the Holy Guardian Angel that has the larger

46 William James in Consciousness and the New Physics
47 Ibid.
48 Ibid
Universal viewpoint (in his uniting with NUIT). It is this then from which the Holy Guardian Angel emanates. And yet, there is also the idea of that which is “above reality” (the L.V.X.), spiritual reality, and that which is “below reality” (the N.O.X.); primordial reality.

Sirag believes that this hierarchy of realms of consciousness is analogous to the spectrum of light discovered in 1864 by James Clerk Maxwell in his electromagnetic theory of light, which unified the forces of electricity and magnetism. Maxwell had no way of directly testing his theory, which proposed the reality of frequencies of light both higher and lower than that of ordinary light. He boldly proposed the existence of invisible light, simply because his equations contained the higher and lower frequencies. Similarly, in the unification of all the forces, we can expect something new to be described, which could be the analog of light. Sirag proposes that this new thing be consciousness, and that since the mathematics of the unification gives reflection space a central role, the hierarchy of reflection spaces suggests a hierarchy of realms of consciousness.

Nature herself is a hierarchy structured by the complexity of organisms and the sophistication of consciousness. There is that which is sub-conscious; the constituent parts of a more complex organism, and that which is hyper-conscious; the amalgamated consciousness.

How does Sri Aurobindo define the appropriate relationship between holism and reductionism? Does he provide a methodology for their integration? According to Sri Aurobindo, the whole is the indivisible One (Self-Conscious Being, Sat), the parts are the Many. Both are partial truths. The Absolute is the infinite potential which is greater than either the whole or the parts but contains and exceeds both, since it also includes that which is beyond manifestation.

Also reason is a lie; for there is a factor infinite & unknown; & all their words are skew-wise.—AL:II.32

Events, though, cannot be pre-determined, but function spontaneously in what we have called acts of love under will. Interaction creates experience with each interaction becoming an “event expression.” These create the pastimes of the ONE through the subjectivity of each, the ALL (or the ‘many’).

Physicist Evan Harris Walker has put forth an observational theory that equates the conscious mind with the “hidden variables” of quantum theory. Walker notes that, due to the necessarily nonlocal nature of such hidden variables, quantum state collapse by the observer should be independent of space and time; hence, psi phenomena such as telepathy should be independent of space-time separation. Noting that the conventional view in physics is to deny that the paradoxes of quantum mechanics have implications beyond the mathematical formalisms, Walker defines his theory:

The measurement problem in Quantum Mechanics has existed virtually from the inception of quantum theory. It has engendered a thousand scientific papers in fruitless efforts to resolve the problem. One of the central features of the controversy has been the argument that characteristics of QM imply that an observer's thoughts can affect an objective apparatus directly, which in turn implies the reality not only of consciousness but of psi phenomena. I have written several papers saying that such a feature of QM is not a fault, but rather represents a solution to problems that go beyond the usual perview of physics. Thus, I have developed a theory of consciousness and psi phenomena that arises directly from these bizarre findings in QM, findings now supported by specific tests of the principles of objective reality and/or Einstein locality. Walker specifies channel capacities for various "regions" of mental activity. He calculates the rate for "dataprocessing of the brain as a whole at a subconscious level" (S) to be equal to 2.4 x 1012 bits/sec. The data rate for conscious activity (C) is equal to 7.5 x 108 bits/sec, and the channel capacity of the "will" (W) is equal to 6 x 104 bits/sec. Walker's derivation of the above rates is based on the assumption that electron tunneling across synapses is the basis for the transmission of impulses across synapses and that the large-scale integration of brain activity is also mediated by electron tunneling.
Of the “hidden variables,” Motta comments on the above verse from Liber AL:

The “factor infinite & unknown” is the subconscious Will, in a sense; but in another sense, it is a factor in any equation in Nature. Modern Physics no longer postulates absolute laws for phenomena; it enunciates its judgments under the form of high probabilities. For instance, there is a very high probability that the sun will rise in the east tomorrow. But there is no a priori denial of the possibility that it may rise in the west, except that in all recorded history it has never been known to do so. This argument is obviously not sufficient to overrule the possibility, and we must keep an open mind on the subject. If we do, we will be prepared for the possibility of the sun rising in the west tomorrow, and will be quicker to adapt ourselves to the phenomenon than many so-called scientists. Men whose minds are fixed have been known to go insane when facts run contrary to their ideas.

Both the perspectives of the ALL (or the ‘many’) and the ONE are mutually exclusive as the observation of particles and waves. We cannot view an ‘event expression’ in particle physics that presents both the particle and the wave simultaneously.

Mind can know the One or the Many, but not both simultaneously or in relationship to each other. It can know by division or by aggregation, but neither of these generates integral knowledge. That is why the materialist and the spiritualist have mutually exclusive perspectives. One knows the physical world (the manifest infinite), the other spiritual truth (the unmanifest infinite), but neither can reconcile the one with the other and see the process of the One becoming the Many and evolving back to Oneness. Supermind can know the Absolute and therefore it can simultaneously know the One and the Many in relation to each other. That knowledge which integrates the whole and the parts has the character of supermind.

In other words, we cannot simultaneously experience the internal and the external; but only one at a time. And that timespan may be the duration on one’s life, with the direction of consciousness being one of the attributes of an individual star in a company of stars.

The yogi can feel the consciousness of the organs and the saint can feel the consciousness of the other. Objection: consciousness is either on or off. Response: consciousness is either present or not present. On off means there is a threshold below which there is awareness but not consciousness. If consciousness is present at all levels of intensity of awareness-then it is not on off but merely present or not present. The many consciousnesses in the world constitute a single consciousness.

Crowley’s Star Sponge vision orchestrates in far more human language, the relationship of the ONE to the ALL and what follows presents that much that is the fabric of NUİT.

How can we show that the distribution is one? First, they are one in the same way but to different degree that the many of the individual though in fact many are effectively one. Just as the distribution in the individual partake of the individual but are only occasionally in communication or in unity, similarly the agents of consciousness the individuals of the universe are also often in qualitative isolation but may also on occasion and in phases partake of the unity - of the one. Second, through the mutation of being[s] over the history of the universe. This is the integration over being and process which is the absolute that is nothing. Nothing? The combination of indeterminism [required by the process of creation] and determinism [the stable phase of indeterminism required or implied by being in the world that is not mere virtual being] show that the universe and the absolute have a phase of and are equivalent to non-being We now see the unity of consciousness.

We have then, the oscillation between the AIN (or more fully, the AIN SOPH AUR-Limitless Light) or nothingness (nothingness with twinkles!) and manifestation of the ALL; a rendering of the formula 2=0. And from that non-locality (nothingness) any ‘one’ of the ALL may project to create an ‘event expression’ in any locality, suggesting a state of consciousness that works outside the laws of motion.

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52 Garry Jacobs in Sri Aurobindo & Hyperspace
53 Dr. Anil Mitra in Being, Mind and the Absolute
54 Dr. Anil Mitra in Being, Mind and the Absolute
Some psi researchers have attempted to use the concept of curved spacetime to eliminate some of the apparent paradoxes involved in psi phenomena. Psychologist Gertrude Schmeidler has suggested that the universe may contain an extra dimension that permits “topological folding” to occur so that two regions which are widely separated in an Einsteinian universe might be in immediate contact, much as two points on a towel which are normally quite a distance apart may be adjacent when the towel is folded. Thus, apparent instances of ESP across great distances might be explained by postulating that the persons involved are somehow in close proximity in the “folded” space.  

The 5th Dimension does hold at least one other quality in addition to light, as discussed above, consciousness itself seems to move from this dimension to ours. Both consciousness and light are attributed to Tiphereth in the Qabalah and may even be co-equivalent states of being. In other words, light may be the essence of life itself, with consciousness being but one of its forms for expression.

Physicist John Archibald Wheeler (a man with pronounced antipathy toward psi research) has theorized that, at a microscopic level, quantum effects might tear the fabric of spacetime, producing a structure involving wormholes. He speculated that such wormholes could connect pairs of oppositely charged particles such as electrons and positrons. Wheeler’s hypothetical structure is sometimes called the “quantum foam.” Such wormholes may exist on a macroscopic scale and, in some cases, rotating black holes may give rise to a “tunnel” or shortcut to another region of spacetime. Physicist Fred Alan Wolf has implicitly suggested (in a cartooned text called Space, Time and Beyond) that such wormholes may provide the connections needed to explain psi phenomena over long distances or temporal intervals.

Such wormholes don’t demonstrate that matter is illusory as the Yellow and Black Schools of Magick would like to promote. But they do point out to us that there are physical laws in matter that we haven’t yet comprehended and/or discovered.

It is usual to think, in the standard material paradigm of the modern world, of consciousness as consciousness of an object. The content of consciousness is the idea. On this view, the world has matter and ideas. This is not necessarily a dualism for the idea may be a manifestation or reduction of matter without having been explained or even being explainable in material terms. However if everything is a form or manifestation of idea - if ideas are real and the original substance - then we have a clear and simple monism. This is the form of idealism. It is simpler than materialism in that since, by our existence, we have ideas and thus idealism does not require any further substance or hypothesis with ontological content, and even if the having of ideas is said to be delusion or illusion then what are delusions or illusions if not ideas? It is an error to think that idealism is in opposition or in contrast to materialism. It materialism is symbolized by the mountain, the wind, the clouds and mist that surround the peak, and the valleys below, and the ground of the mountain: the earth. Idealism requires no hypothesis. It need not be a philosophy or a metaphysic or an ontology. It is or can be seen as the name for experience; or one really wants it to be something more than the intrinsic state of our existence then we could call idealism the acknowledgement of our existence.

NUIT would be this same monistic consciousness; representative of light itself, which is the all-pervading fabric of the Universe. The ‘milky’ stars in Crowley’s Star-Sponge vision point out to us the fabric of light that is the Universal Mind. This then is the macrocosmic singularity, a hologram, upon which all microcosmic singularities intimately relate.

Instead of starting with either the parts or the whole, scientists would start with the theory of creation that is valid at all levels in the universe. That theory shows the Whole and the Parts in proper relationship to each other and describes the process by which the formless One becomes the Many forms of energy and matter in the universe. It would trace the origin of space, time, substance and energy from Self-Conscious Being as Sri Aurobindo does in the chapter in Life Divine on Cosmic Determinants. It would consider what physicist Ivo Slaus called “a third hypothesis of conscious Volition” (Self-Conception) that reconciles the Chance of quantum theory and the Necessity of Relativity within a wider framework. It would seek for the source of energy not in its smallest manifest quanta but in the formless sea from which all manifest energy emerges and it would seek to understand the process by which that energy at rest gives rise to forms as [I’ve] described.

55 William James writes in Consciousness and the New Physics
56 Ibid
57 Dr. Anil Mitra in Being, Mind and the Absolute
Physics is considered the first of the sciences because it is the foundation of physical matter and energy. Thus, physics has become the model which all other sciences seek to emulate because matter is assumed to be the origin of all in the universe. But if Sri Aurobindo’s view is accepted that Consciousness is the origin of all in the universe, perhaps physics should be considered the last science and the least suitable model for others to follow, because it deals with the most deeply involved processes of the inconscient, where the action of consciousness is the most difficult to detect. Since the process of creation is the same at all levels of manifestation, the more conscious sciences and arts of mind (psychology, artistic creation, business creation, social development) may be models from which physics can benefit enormously. For in these cases the process of creation is at least partially conscious. We can see mental intention generate and release energy and energy manifest as forms.

A physics modeled after the more conscious sciences (not as they exist today but as they would develop based on Sri Aurobindo’s process of creation) would focus on the interactions between matter and energy and consciousness, rather than trying to remove consciousness from the equation. It would seek to understand the nature of matter and energy in terms of consciousness force, rather than consciousness as a by-product of matter and energy.58

Again, this points to the dispelling of objectivation and the perceptual paradigm being changed to recognize ‘event expression’ that recognizes the integration of objects into the matrix of consciousness; the idealization of objects.

Objects “have very much an ideal existence” that is fundamental, existential and experiential. Their existence also as material objects requires an additional hypothesis or position beyond that of the reality of experience: that of the external world. The external world is thought - whether practically and in effect or analytically and in fact - to be necessitated by the equation of idealism and solipsism. The equation of solipsism and idealism follows from the isolation of consciousness as discrete, monadic and isolated entities. Solipsism is in contradiction to the existence of a real world with distinct individuals and distinct ideas. However, a world of distributed and unitized - by occasional rather than continual communication - consciousness, idealism does not imply or equate to solipsism. The ideal world is one of individuals that are also a unity. Idealism is thus consistent with the existence of matter and the need to satisfy the requirements of practical or everyday materialism, and scientific and philosophical materialism; but is also simpler and requires fewer hypotheses.59

Solipsism treats the world as non-existent; a maya where reality is perceived as being an entirely subjective experience. Ultimately, it denies consciousness the objectivity it intuitively feels and that is the summit of its experience. The NYU philosopher, Thomas Nagel, in his book, The View from Nowhere, argues ostensibly and convincingly that there is a path where an object may be directly perceived. Solipsism as recognized by most philosophers, is an error that I think we can show is simply a poor didaction that confusedly separates mind from its object; whereas modern physics shows the intimate relationship between our subjective experience and its corresponding expression on the material and objective plane.

There are too many posited categories that are and should be grades or shades in the continuum of a single category. This means that the world is actually simpler, but in no way loses its variety of forms and phenomena, in no way reduces the variety and richness of [human] experience; and further, to be explained below, eliminates or gives meaning to alienation—connects humankind and world. This latter result is similar to the action principle of the Gita. Alienation is the result of the stark aspect of reflexivity. A positive aspect is freedom and agency in transformation of self, culture and world.60

Mind and matter have an intimate connection, though they are also differentiated in a dualism that lends subjectivity to the mind and objectivity to the various objects it experiences in the world that is apparently exterior to the mind. Though I daresay, this paradox can be resolved when we consider the connection of the mind to the material brain, with its intimate connection to our fleshly bodies.

58 Garry Jacobs in Sri Aurobindo & Hyperspace
59 Dr. Anil Mitra in Being, Mind and the Absolute
60 Ibid
The Biology of Consciousness

Human liberty establishes the conditions that make *Transformation* possible; alienation corrupting and distorting the field of action. Action is implicit in movement as is consciousness. The fifth Sefirah represents the concept of movement in the involutionary scheme of the Tree-of-Life. It is followed by the sixth, which is consciousness itself in its incorporeal form.

The experiments of Clauser and Aspect contradict the rate of photon coincidences predicted on the basis of an objective and locally causal reality. The measured rate agrees with the prediction of ordinary quantum theory. This means that physical reality either is not subject to the principle of local causation or does not objectively exist independent of the observers who participate in its creation. Bell’s Theorem and the related experiments may have importance for the understanding of personal human experience. The human brain stores and processes its information at the level of single organic molecules and is a single macroscopic quantum system. Acts of consciousness may be viewed as incorporating quantum events.

The illusion of the classical scientific paradigm that is shattered by the quantum principle is the assumption that there is an immutable objective reality “out there” that is totally independent of what happens in consciousness “in here.” Quantum theory forces a new kind of logic in science that is still mathematical and disciplined. The Nobel prize physicist Eugene Wigner of Princeton has repeatedly written that consciousness is at the root of the quantum measurement problem.61

Our consciousness, individually and collectively shapes reality. The qualities of tendencies of consciousness being uniquely human attributes manifest the paradigm by which we comprehend. As religion has moved away from qualifying direct experience to adopting a philosophically nihilist perspective that alienates us from experience, we have moved away from an intimate connection with our bodies and the world around us.

Since Superstring theory cannot be verified, some scientists ask whether Beauty is a physical principle that can be substituted for experimental verification of a theory. If so, what could be more beautiful than universe as a self-conception and manifestation of Satchidananda? In practice, physics and all science today starts with an in-built bias, an unstated assumption that the nature of reality is physical and it must be verifiable by physical experimentation. There is no evidence or logical reason for presuming this to be true. It is only a prejudice derived from the historical emergence of science as a reaction to religion and superstition in Europe.62

In approaching the riddles in Liber AL vel Legis, Aleister Crowley noted that the solutions would be both beautiful and simple; a subliminity. The physical nature of the Universe is an evolving riddle that with every question we answer, new questions are presented. And like the riddles in AL, being mathematical in nature (on a Qabalistic level), physics uses its own unique math. The reaction by science to the superstition of religion has indeed, produced its own sophistry. As far as religion is concerned, modern fundamentalist religion has for its part, developed its own reactionary stance. Creationism not only refutes science, it seems to me that it has found itself threatened by it; especially as today’s scientists sound more like Hindu mystics than as Christians, which is being met with an ‘equal and opposite reaction.’

Putting this aside, it should then become clear to see that the Schumann’s Resonance, as discussed in *Liber Vox Viva Voce vel Video*, that holograms are extensions of consciousness. The key to a more precise recognition of the ‘Intelligent Design’ of the Universe is to alter the paradigm of creation from the linear idea of something that has a beginning and an end. And to replace this with a circular or cyclic

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61 William James in *Consciousness and the New Physics*
62 Garry Jacobs in *Sri Aurobindo & Hyperspace*
parable that ultimately moves in what I have described above as a dualistic, thermodynamic equilibrium. Therefore, there is no chicken before the egg and no egg before the chicken, but that both exist in consciousness and are objects in their own time and with their own coordinates in the Universe.

Superstrings represent one example of a class of attempts, generically classified as superunification theory, to explain the four known forces of nature—gravitational, electromagnetic, weak, and strong—on a single unifying basis. Common to all such schemes are the postulates that quantum principles and special relativity underlie the theoretical framework. Another common feature is supersymmetry, the notion that particles with half-integer values of the spin angular momentum (fermions) can be transformed into particles with integer spins (bosons).63

Mind and brain are not the same thing; though the mind (consciousness) induces the brain to thought and hence, the generation of particles and waves. But it seems that each exists because of the other. In other words, the greatness and potency of the Soul is intimately connected to the functional well-being of the brain. And a part of that well-being has to do with our ability to comprehend abstract thoughts in order to exercise the mind and bring it to a greater vitality. The more sophisticated these abstract thoughts; whether they be of science, the arts or even human intimacy, the more we find subliminity that in itself is a sublime form of beauty.

The main objection to the thesis that mind is matter --- as contrasted to the view that mind and matter are different aspects of a single neutral reality --- is based on the fact that each mind is known to only one brain, whereas each brain is knowable to many minds. These two aspects of the mind/brain are different in kind: a mind consists of a sequence of private happenings, whereas a brain consists of a persisting public structure. A mind/brain has both a private inner aspect, mind, and a public outer aspect, brain, and these two aspects have distinctive characteristics.

In the quantum description of nature proposed by Heisenberg reality has, similarly, two different aspects. The first consists of a set of 'actual events': these events form a sequence of 'happenings', each of which actualizes one of the possibilities offered by the quantum dynamics. The second consists of a set of 'objective tendencies' for these events to occur: these tendencies are represented as persisting structures in space and time. If we correlate thoughts with high-level quantum events in brains, as suggested by von Neumann, Wigner, and others, then we can construct a theory that is a dual-aspect theory of the mind/brain, in the sense that it correlates the inner, or mental, aspects of the mind/brain system with 'actual events' in Heisenberg's picture of nature, and it identifies the outer, or material, aspects of the mind/brain with the 'objective tendencies' of Heisenberg's picture of nature.

For quantum mechanics at the small scale simply does not lead to classical mechanics at the large scale. That is exactly the problem that has perplexed quantum physicists from the very beginning. One can introduce, by hand, some arbitrary dividing line between small scale and large scale, and decree that, in our preferred theory, the quantum laws will hold for small things and the classical laws will hold for large things. But this partition is completely ad hoc: there is no natural way to make this division between small and large in the brain, which is a tight-knit physical system of interacting levels, and there is no empirical evidence that supports the notion that any such separation exists at any level below that at which consciousness appears: all phenomena so far investigated can be understood by assuming that quantum theory (and in particular the Schrödinger equation) holds universally below the level where consciousness enters.

Bohr resolved this problem of reconciling the quantum and classical aspects of nature by exploiting the fact that the only thing that is known to be classical is our description of our perceptions of physical objects. Von Neumann and Wigner cast this key insight into dynamical form by proposing that the quantum/classical divide be made not on the basis of size, but rather on the basis of the qualitative differences in those aspects of nature that we call mind and matter. The main thrust of Stapp (1993) is to show, in greater detail, how this idea can lead, on the basis of a completely quantum mechanical treatment of our brains, to a satisfactory understanding of why our perceptions of brains, and of all other physical objects, can be described in classical terms, even though the brains with which these perceptions are associated are described in completely quantum mechanical terms. Any alternative theoretical description of the mind/brain system that is consistent and coherent must likewise provide a resolution to the basic theoretical problem of reconciling the underlying quantum-mechanical character of our brains with the classical character of our perceptions of them.

According to classical mechanics, the world is to be conceived of as a simple aggregate of logically independent local entities, each of which interacts only with its very close neighbors.

63 Garry Jacobs in Sri Aurobindo & Hyperspace
No extra quality of beingness is appended to them by virtue of the fact that they have some special functional quality in some context, or by virtue of the fact that they define a spacetime region in which certain quantities such as 'energy density' are greater than in surrounding regions. All such 'functional entities' are, according to the principles of classical physics, to be regarded as simply consequences of particular configurations of the local entities: their functional properties are just 'consequences' of the local dynamics; functional properties do not generate, or cause to come into existence, any extra quality or kind of beingness not inherent in the concept of a simple aggregate of logically independent local entities. There is no extra quality of 'beingness as a whole', or 'coming into beingness as a whole' within the framework of classical physics.\textsuperscript{64}

Though it is interesting to note that classical Alchemy, a practice of classical physicists, such as Isaac Newton, intuited a consciousness in all that we yet consider inanimate. The Alchemist and his lab were and are still considered to be one single entity. In other words, consciousness affects the results in the experimentation that goes on in lab work. Even minerals are shown to have an evolutionary destiny.

Yet an experienced thought is experienced as a whole thing. From the point of view of classical physics this requires either some 'knower' that is not part of what is described within classical physics, but that can 'know' as one thing that which is represented within classical physics as a simple aggregation of simple local entities; or it requires some addition to the theory that would confer upon certain functional entities some new quality not specified or represented within classical mechanics. This new quality would be a quality whereby an aggregate of simple independent local entities that acts as a whole (functional) entity, by virtue of the various local interactions described in the theory, becomes a whole (experiential) entity. Yet this is exactly what is provided by quantum mechanics, which thereby provides a logical framework that is perfectly suited to describe the two intertwined aspects of the mind/brain system.

What we call "mind" is actually two things, which must be carefully kept separate: "cognition" (i.e., the faculties of remembering, learning, reasoning, etc.) and consciousness. Cognitive faculties do not require consciousness. Cognition and consciousness are related only because we have not explained them yet. Cognition is a feature of all matter, whether living or not: degrees of remembering, learning, etc. are ubiquitous in all natural systems. They can be explained without revolutionizing Science. The "emotions" associated with them belong instead to consciousness, just like the emotions of tasting or pleasure. The explanation of consciousness does require a conceptual revolution in Science, specifically the introduction of a new feature of matter, which must be present even in the most fundamental building blocks of the universe.\textsuperscript{65}

Emotions are the primary cognition, directly connected to our physical bodies and its perception of the environment about us. These are often translated into symbolic imagery in the mind, that then is reflected upon in our dreaming. Carl Jung could even make medical diagnoses by simply examining the contents of his patients dreams; quite like the ancient Shaman. The intellect is a secondary cognition that is more the result of our consciousness quantifying the emotional stimuli and thereby providing an indirect clue to its noncorporeal manifestation.

If consciousness is ubiquitous in nature, then it is not difficult to accept the idea that it was there, in some primitive form, since the very beginnings of life, and that it evolved with life. It became more and more complex as organisms became more and more complex. Early hominids were conscious and their consciousness, while much more sophisticated than the consciousness of bacteria, was still rather basic, probably limited to fear, pain, pleasure, etc. In mammals and birds consciousness was related to sounds (i.e., fear to screaming). Early hominids had a way to express through sounds their emotions of fear and pain and pleasure.

Greek thought evolved an intriguing division of mental life into two souls, the Thymos (pron: “theemos”) and the Psyche. The Thymos pertains to the active soul, what we today refer to thought, consciousness, awareness, etc. It was associated with breath, heart and liver. Breath was identified with soul, as in most ancient systems of philosophy (the Hindu "atman" comes from the word for "breathing") and with language (breath is what you need to utter sounds). Liver was reputed to be the origin of emotions (there must have been painful liver diseases at the time :-)). The heart was considered the seat of desires and intentions. The Psyche is the immanent soul, independent from the body, a precursor of the eternal soul of Christianity that survives the body in the other world. In ancient Greece the Thymos became the active, rational and mortal part of the person (the part that has control over the body), while the Psyche became the quiescent and immortal part of the person.

\textsuperscript{64} Henry P. Stapp in \textit{Why Classical Mechanics Cannot Naturally Accommodate Consciousness but Quantum Mechanics Can}

\textsuperscript{65} Ibid
The Thymos became a core concept of Socrates' philosophy. In Socrates' theology the doctrine of Thymos is a meditation on the history of philosophy from Homer to Socrates himself, by which Socrates hails the passage from unconscious philosophizing to rational self-consciousness. Interestingly, Socrates warned against the dangers of self-awareness. He warned that consciousness would cost us greatly, both in terms of desire to live and in terms of our harmony with nature. In Plato's late dialogues this contradiction has a happy ending, as Socrates finds in conscious thought the meaning of life itself.

Platonic philosophy elevated the Thymos above the Psyche. The Psyche is viewed as a sort of lower mind that can connect with either a higher mind (nous), that a Christian may perhaps interpret as God, or with the Thymos, that a Christian cannot interpret because it has no correspondent. Thymos is the cause of anger and passion. In a sense, it is opposite of meditation.

The Darwinian Mind

"Thought" is an entirely different game. "Mind" defined as the totality of thoughts is a far more elusive mystery. But it is my belief that this mind, just like the brain, obeys laws that are Darwinian in nature. Both the mind (the system of thoughts) and the brain (the system of neural connections) obey the same laws of selection and evolution that apply to species and to antibodies. Both neural structures and thoughts are selected by the environment and vary in a fundamentally random way. The same process that accounts for the origin of species is probably responsible for the origin of thoughts. Just like species spawn more species and generate a branch of the tree of life, so thoughts generate threads of thoughts. Threads of thoughts may get weaker and weaker until they disappear, or they may get stronger and stronger. It all depends on experience. But at any time, the mind is full of competing threads.

In this respect, "personality" may just be the result of natural selection of thought threads. Whatever threads are reinforced by the experience of an individual constitute the personality of the individual.

At the turn of the century, the influential American philosopher and psychologist William James had a number of powerful intuitions: that the brain is built to ensure survival in the world; that cognitive faculties cannot be abstracted from the environment that they deal with; that the brain is organized as an associative network; that associations are governed by a rule of reinforcement. The latter two laid the foundations for Connectionism; the former two laid the foundations for a cognition grounded in a Darwinian scenario of survival of the fittest, and, in a sense, provided a justification for the preeminence of Connectionism.

Other psychologists contributed, directly or indirectly, to the connectionist model of the brain. The scientists that subscribed to the school of Behaviorism, such as the Russian physiologist Ivan Pavlov and the American psychologist Burrhus Skinner, were influential in emphasizing the simple but pervasive law of learning through conditioning: if an unconditioned stimulus (e.g., a bowl of meat) that normally causes an unconditioned response (e.g., the dog salivates) is repeatedly associated with a conditioned stimulus (e.g., a bell), the conditioned stimulus (the bell) will eventually cause the unconditioned response (the dog salivates) without any need for the unconditioned stimulus (the bowl of meat). Behaviorists came to believe that all forms of learning could be reduced to conditioning phenomena.

To Skinner, all learned behavior is the result of selective reinforcement of random responses. Mental states (what goes on in our minds) have no effect on our actions. Skinner did not deny the existence of mental states, he simply denied that they explain behavior. A person does what she does because she has been "reinforced" for doing that, not because her mind decided so. Skinner noticed a similarity between reinforcement and natural selection: random mutations are "selected" by the environment, random behavior is also selected by the environment. A random action can bring reward (from the environment) that will cause a reinforcement and therefore will increase the chances that the action is repeated in the future. An action that does not bring reward will not be repeated. The environment determines which behavior is learned, just like the environment determines which species are evolved.

Another behaviorist, the American psychologist Edward Thorndike, a student of William James, is the man credited with outlining the essence of the connectionist model of the mind. In a sense, he explained how Skinner's reinforcement occurs. Thorndike had been the first psychologist to propose that animals learn based on the outcome of their actions (the "law of effect") and Skinner had simply generalized his ideas.

Connectionism can be viewed at various levels of the organization of the mind. At the lowest level, it deals with the neural structure of the brain. The brain is reduced to a network of interacting neurons. Each neuron is a fairly simple structure, whose main function is simply to transmit impulses to other neurons. When anything happens to a neuron, it is likely to affect thousands of other neurons because its effects can propagate very quickly from one neuron to the other.

As a matter of fact, the functioning of the brain can be summarized as a continuous refining of the connections between neurons. Each connection can be strengthened or weakened by the messages that travel through it. In 1949 the Canadian physiologist Donald Hebb had a very simple, but very powerful, intuition: that strengthening and weakening of connections depend on how often they are used. If a connection is never used, it is likely to decay, just like any muscle that is not exercised. If it is used very often, it is likely to get reinforced. One more time, a Darwinian concept came to play a key role: competitive behavior. Connections "compete" to survive.
At a higher level, a connectionist organization can be found in the way our mind organizes concepts. Concepts are not independent of each other: a concept is very much defined by the other concepts it relates to. The best definition of a concept is probably in terms of other concepts and the way it relates to them. Concepts also rely on an associative network. Therefore, the four maxims by James also apply to concepts.

Most of the human brain is made of two hemispheres, linked by the "corpus callosum," and covered by the cortex. Under the corpus callosum is located one of the main areas of control of behavior, containing the "thalamus," the "hypothalamus" and the "amygdala." The thalamus is a mini-mirror of the cortex: it seems to replicate the same information, but on a smaller scale. The two amygdalas are widely believed to be in charge of emotions: affection, fear and attention originate or are amplified here. The function of the two thalami seems to be to convey signals from the senses to the cortex and from the cortex to the muscles. The amygdala has the power to take over this strategic highway.\(^66\)

The inclusion of certain emotions, such as would be utilized in a dramatic invocation is then implicit in The Formula of ON, including the functional use of certain associated glands, particularly the hypothalamus and pituitary systems that connect to all the other glands of the body, as directly outlined in Liber Laiad vel in Ocultus; documents related to the Gnostic Mass of the GCL. The main formula for this is the formula of ‘Love under Will,’ which is inculcated and cultivated very carefully in the Aspirant to the A.’A.’. The cerebellum is the dreaming mind, which in its connection to the body and its regulation of the metabolic function provides a profound confirmation to Carl Jung’s dream interpretations.\(^67\)

The hypothalamus, located below the thalamus, is involved in many functions, but in particular seems to be responsible for controlling body temperature (pretty much like a thermostat). Behind the hemispheres is the 'cerebellum', one of the main areas of integration of stimuli and coordination of action. The cerebellum contains areas like the "pons" that communicate with the rest of the body. The cerebellum is a bit like a miniature brain: it is divided into hemispheres and has a cortex that surrounds these hemispheres. Consciousness is like another dimension. One can be engaged in this or that cognitive task (first dimension) and then it can be aware of it with different levels of intensity (second dimension). It is, therefore, likely that cognitive faculties and consciousness are independent processes.\(^68\)

Consciousness is then, direct experience, which has an intimate connection with pathos; the emotional awareness. The cognitive faculties draw conclusions that are made ‘rational’ by the intellect. The cerebellum specifically is the dreaming center that creates the astral vision for the mind and our pre-intellectualized awareness. It is the most ancient part of humanity’s evolving consciousness; appearing to the intellect as images that are then symbolized.\(^69\) In order to better understand the significance of this, it is well worth a study of the anthropologist, Julian Jaynes’ The Origins of Consciousness in the Breakdown of the BiCamerual Mind. And to better understand the developmental, evolutionary nature of consciousness, it is well worth a study of the Transcendalist writer, Dr. Maurice Bucke’s Cosmic Consciousness.

This consciousness is as an aethyric cloud of quantum potential that then must be transformed into direct experience as potential becomes actualized.

Physicists agree that the macroscopic or classical world (which seems to have a single, 'objective' state) emerges from the quantum world of many possible states through a phenomenon called decoherence, according to which interactions between the quantum states of the system of interest and its environment serve to 'collapse' those states into a single outcome. But this process of decoherence still isn't fully understood.

"Decoherence selects out of the quantum 'mush' states that are stable, that can withstand the scrutiny of the environment without getting perturbed," says Zurek. These special states are called 'pointer states', and

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66 Piero Scaruffi in The Physics of Consciousness
67 Cf. Psyche & Symbol by Carl Jung
68 Piero Scaruffi in The Physics of Consciousness
69 PJR Note: This results in the written texts called ‘apocalypses’ in the Merkabah Tradition.
although they are still quantum states, they turn out to look like classical ones. For example, objects in pointer states seem to occupy a well-defined position, rather than being smeared out in space. Now, Zurek and colleagues have proved a mathematical theorem that shows the pointer states do actually coincide with the states probed by indirect measurements of a system’s environment. “The environment is modified so that it contains an imprint of the pointer state,” he says.70

The process of actualizing potential is as if moving from the quantum, microcosmic state to the mechanical, macrocosmic state.

John Searle (1992) has described his views on the mind-brain problem in a recent book “The Rediscovery of the Mind”. He does not endorse there the thesis that classical mechanics must be replaced by quantum mechanics in order to reconcile mind and matter, but his arguments lend strong support to that conclusion. F.2 Searle’s theme can be divided into three parts. The first is encapsulated in a sentence appearing in the first paragraph of chapter one: “Mental phenomena are caused by neurological processes in the brain and are themselves features of the brain.” The same point is repeated many times: “... the mental state of consciousness is just an ordinary biological, that is, physical, feature of the brain.”(p. 13); “The brain causes certain 'mental' phenomena, such as conscious mental states, and these are simply higher-level features of the brain.”(p.14); “Consciousness is a mental, and therefore physical, property of the brain in the sense in which liquidity is a property of a system of molecules”(p.14); “...these [mental] properties are ordinary higher-level biological properties of neurophysiological systems such as human brains.”(p.28); “… consciousness is just an ordinary biological feature of the world.” (p.85); “…consciousness is a causally emergent property of systems. It is an emergent feature of certain systems of neurons in the same way that solidity and liquidity are emergent features of systems of molecules.”(p. 112) F.3 The second sub-theme is this: “Conscious mental states and processes have a special feature not possessed by other natural phenomena, namely, subjectivity.”(p.93); “the phenomena itself, the actual pain itself, has a subjective mode of existence, and it is in that sense which I am saying that consciousness is subjective.”(p.94); “What more can we say about this subjective mode of existence? Well, first it is essential to see that in consequence of its subjectivity, the pain is not equally accessible to any observer. Its existence, we might say, is a first-person existence.” (p.94);”…the ontology of the mental is an irreducibly first-person ontology. ”(p.95); “No description of third-person, objective, physiological facts would convey the subjective, first-person character of the pain simply because the first-person features are different from the third-person features.” (p. 116) F.4 The third sub-theme is that the first two sub-themes are not contradictory: “The facts are that biological processes produce conscious mental phenomena, and these are irreducibly subjective.” (p. 98); “What I want to insist upon, ceaselessly, is that one can accept the obvious facts of physics---for example that the world is made up entirely of physical particles in fields of force---without at the same time denying the obvious facts about our own existence---for example that we are all conscious and that our conscious states have quite specific irreducible phenomenological properties.”(p.28); “According to atomic theory, the world is made up of particles. These particles are organized into systems. Some of these systems are living, and these types of living systems have evolved over long periods of time. Among these, some have evolved brains that are capable of causing and sustaining consciousness. Consciousness is, thus, a biological feature of certain organisms in exactly the same sense of ‘biological’ in which photosynthesis, mitosis, digestion, and reproduction are biological features of organisms.”(p.93) F.5 Searle’s main and central point is precisely that there are in nature two modes of existence: two ontological types of beingness. Although he rejects labels, he is an "ontological dualist". He chides the various kinds of "materialists" for not accepting the obvious idea that consciousness is essentially what it seems to be: a physical feature of brains that is not ontologically reducible to third-person features.71

Per a surface reading, one with a philosophical bend may find in the above quote, an argument for solipsism. However, this is not necessarily the case. It may be postulated in terms of the holographic science, that we are each Monads; our omnipresence being centered in one coordinate in the Universal Mind, so that each of us is the center of a Universe with no circumference.

Craik’s ideas predated the theory of knowledge-based systems, which were born after the economist and Nobel-prize winner Herbert Simon and the psychologist Alan Newell developed their theory of physical symbol systems. Both the computer and the mind belong to the category of physical symbol systems, systems that process symbols to achieve a goal. A physical symbol system is quite simple: the complexity of its

70 Philip Ball in *Natural Selection Acts upon the quantum World*
71 Henry P. Stapp in *Why Classical Mechanics Cannot Naturally Accommodate Consciousness but Quantum Mechanics Can*
behavior is due to the complexity of the environment it has to cope with. It was Simon's belief that no complex system can survive unless it is organized as a hierarchy of subsystems. The entire universe must be hierarchical, otherwise it would not exist.\footnote{Piero Scaruffi in \textit{The Physics of Consciousness}}

The physical symbol system of the computers helped scientists solve the DNA sequencing equation. Thus, a computer system developed by the human mind/brain complex is formed in the holographic image of human mentation. This machine then is most readily disposed to apprehend and comprehend the nature of human DNA.

Later editions of the architecture organize knowledge in three levels: a knowledge level (information acquired from the environment plus innate principles of inference), an algorithmic level (internal deductions, inductions and compilations) and an implementation level (setting parameters for the encoding of specific pieces of information).\footnote{Ibid.}

This is as much a description of DNA sequencing, which directly mirrors this organizational paradigm. Indeed it may be surmised that the DNA, including and especially the mitochondrial DNA, of which the consciousness of the eukaryotes and prokaryotes are subliminally inclusive as an essential element of human consciousness.

It is well worth the effort to read the work of the Mother devotee, Sat Prem, particularly is book \textit{Life of the Cells}. Indeed, the Supramental Yoga is the striving to bring the cells to full consciousness in and of themselves; and then to integrate that more fully into the mind/brain complex.

Overall, it is the retention of form that provides for us our sense of identity. Though each cell in the body may or may not be brought to complete consciousness, all cells develop to speciality and retain this form, as informed by the DNA. This is reflected in the nature and structure of the mind, which is itself an aggregate consciousness of all the cells of the body.

The mind contains this powerful algorithm that operates on cognitive structures. That algorithm has been refined by natural selection to be capable of responding in optimal time. This can be partly because that algorithm operates on structures that already reflect the nature of our experience. Our experience occurs in situations, each situation being a complex aggregate of factors. The actions we performed in a given situation are rather stereotyped. The main processing of the algorithm goes into recognizing the situation. Once the situation is recognized, somehow it is reduced to past experience and that helps figure out quite rapidly the appropriate action.

Logic is based on deduction, a method of exact inference. Its main advantage is that its conclusions are exact. That is the reason why we use it to build bridges or plane wings. But deduction is not the only type of inference we know. We are very familiar with "induction", which infers generalizations from a set of events, and with "abduction", which infers plausible causes of an effect. Induction has been used by any scientist who has developed a scientific theory from her experiments. Abduction is used by any doctor when she examines a patient. They are both far from being exact, so much so that many scientific theories have been proved wrong over the centuries and so much so that doctors make frequent and sometimes fatal mistakes. The power of deduction is that no mistake is possible (if you follow the rules correctly). The power of induction and abduction is that they are useful: no scientific theory can be deducted, and no disease can be deducted. If we only employed deduction, we would have no scientific disciplines and no cures.

Alas, deduction works only in very favorable situations: when all relevant information is available, when there are no contradictions and no ambiguities. Information must be complete, precise and consistent. In practice, this is seldom the case. The information a doctor can count on, for example, is mostly incomplete and vague. The reason we can survive in a world that is mostly made of incomplete, inexact and inconsistent information is that our brain does not employ deduction. Computational models of neural activity now abound. Besides proving computationally that a neural network can learn, one has to build a plausible model of how the brain as a whole represents the world. In Teuvo Kohonen's "adaptive maps", nearby units responding similarly, thereby explaining how the brain represents the topography of a situation. His unsupervised architecture, inspired by Carl von der Malsburg's studies on self-organization of cells in the cerebral cortex, is
capable of self-organizing in regions. Kohonen assumes that the overall synaptic resources of a cell are approximately constant (instead of changing in accordance with Hebb’s law) and what changes is the relative efficacies of the synapses.

Formally: a neural net is a nonlinear directed graph in which each element of processing (each node) receives signals from other nodes and emits a signal towards other nodes, and each connection between nodes has a weight that can vary in time.

Computational models of neural networks have greatly helped in understanding how a structure like the brain can perform. Computational models of cognition have improved our understanding of how cognitive faculties work.

The task of a perceptual system can be viewed as the completion of the partial description of static states of an environment. Knowledge is encoded as constraints among a set of perceptual features. The constraints and features evolve gradually with experience. Schemata are collections of knowledge atoms that become active in order to maximize what he calls "harmony". The cognitive system is, de facto, an engine for activating coherent assemblies of atoms and drawing inferences that are consistent with the knowledge represented by the activated atoms.

The matter of our bodies changes all the time. The only thing that is preserved is the pattern of matter. As goes the mind, so goes the body and indeed, the aethyric form of the body. It may possibly be then that these “knowledge atoms” or particles form the Bose Condensate into the basic hologram of the human being. On an even larger scale, this is what formulates and egregore by which hierarchical beings are placed in the racial, collective consciousness and that then are invoked into the circle of the practicing Mage.

What remains, perhaps, is to examine the connection between mind and brain. The stream of thoughts that endlessly tarry through our minds suggest a source that they spring from. If we can end these thoughts in meditation, then they must have a beginning point. But what point might this be? Piero Scaruffi admits that for him this is a problem. But that hasn’t kept other scientists from taking their own ‘magickal mystery tour.’ The online World Science magazine published the following on September 2, 2005ev:

One new study has found that although people show increased activity in several brain regions while taking IQ tests, gifted people show even greater activity in these regions. This difference was especially pronounced in a zone called the posterior parietal cortex, at the top-back of the head, the researchers found, suggesting further study of this area might give insights into how intelligence works.

The researchers—Kun Ho Lee at Seoul National University in Korea, and others at Yale University in New Haven, Conn., and other institutions—published the findings in the Aug. 22 early online edition of the research journal Neuroimage.

The posterior parietal cortex is considered important for “working memory”—the ability to hold items actively in mind, as when remembering a phone number for a few seconds, according to the researchers.

Thus, high intelligence might partly be a fairly straightforward matter of more working memory capacity, they said.

This article points to activity in the top-back of the head, suggesting where thoughts are held and from where they emanate. My experience in working Liber Turris led me to find this point. The first instruction in this working is as follows: “The student should first discover for himself the apparent position of the point in his brain where thoughts arise, if there be such a point. If not, he should seek the position of the point where thoughts are judged.” And I do see that this task was made easy by the visualization practices in the SSS portion of Liber HHH. It seems at least to some degree, that the mind can really see itself, though the same may not necessarily be said of the brain.

It was the psychologist Karl Lashley who first warned that… the mind is never conscious. The mind can never perceive the processing that goes on in the brain when the mind is thinking something. When I think about myself, I am not conscious of what my brain is doing. Whatever it is that I am feeling, it is not what the brain is doing. I am not aware of the billion of electrochemical processes switching neurons on and off.

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74 Piero Scaruffi in *The Physics of Consciousness*
One can even suspect that it is plain impossible for a conscious being to understand what consciousness is. The American philosopher Thomas Nagel pointed out that one can only conceive of things as they appear to her and never as they are in themselves. We can only experience how it feels to be ourselves. We can never experience how it feels to be something else, for the simple reason that we are not something else. As Nagel wrote in a famous paper, we can learn all about the brain mechanisms of a bat's sonar system but we will never have the slightest idea of what it is like to have the sonar experiences of a bat. Understanding how the brain works may not be enough to understand consciousness.

[William] James is responsible for articulating the "classical" theory of consciousness, the analog of Newton's classical Physics. To James, consciousness is a sequence of conscious mental states, each state being the experience of some content. Just like Newton saw a unitary and continuous space, James saw a unitary and continuous consciousness.

James thought that the mind had an evolutionary purpose, just like Darwin thought that all features of the body had an evolutionary purpose. Thinking is useful for our survival, just like eating and mating. James treated consciousness like a function, not an entity. James was, in part, reacting to the theory of perception that dated from Helmholtz, that sense data from the senses are turned by the mind into percepts which are conscious experiences of the environment. James thought, instead, that the output of the brain process is guidance of action in the environment, not a conscious experience of the environment.

Furthermore, a sensory act specifies not only the environment but also the self. Self (the "subjective") and environment (the "objective") are only two poles of attention. Each act of perception actually specifies both the self and the environment. For example, seeing something carries information about the layout of the environment, but also about our point of perspective, all perception is "perspectival" in character. This view, of course, must be complemented with the rest of mental life, which is not all conscious.

Damasio breaks the problem of consciousness into two parts: the "movie in the brain" kind of experience (how a number of sensory inputs are transformed into the continuous flow of sensations of the mind) and the self (how the sense of "owning" that movie comes to be). The "core" consciousness of the movie in the brain is essentially unchanged throughout a lifetime, and humans share it with other many species. The "extended" consciousness of the self is refined over a lifetime: an "owner" and "observer" of the movie is created within the core consciousness, in such a way that it seems to be located outside the brain, while it is part of the brain's neural processes and part of the movie itself which those neural processes generate. The more developed the sense of the self, the stronger the impression that the movie in the mind is "my" experience of the world.

There is overwhelming evidence that distinct parts of the brain work in concert to represent sensory input. Brain cells represent events occurring somewhere else in the body. Brain cells are "intentional", if you will. They are not only "maps" of the body: besides the topography, they also represent what is taking place in that topography.

Indirectly, the brain also represents whatever the organism is interacting with, since that interaction is affecting one or more organs (e.g., retina, tips of the fingers, ears), whose events are represented in brain cells.

The "movie in the mind" is a purely non-verbal process: language is not a prerequisite for this first level of consciousness. The "I" is a verbal process that arises from a second-order narrative capacity. The brain stem and hypothalamus are the organs that regulate "life", that control the balance of chemical activity required for living, the body's homeostasis. Consequently, they also represent the continuity of the same organism. Damasio believes that the self originates from these biological processes: the brain has a representation of the body and has a representation of the objects the body is interacting with, and therefore can discriminate self and non-self and then generate a "second order narrative" in which the self is interacting with the non-self (the external world). This second-order representation occurs mainly in the thalamus. More precisely, the neural basis for the self resides with the continuous reactivation of 1. the individual's past experience (which provides the individual's sense of identity) and 2. a representation of the individual's body (which provides the individual's sense of a whole). An important corollary is that the self is continuously reconstructed.

From an evolutionary perspective, we can presume that the sense of the self is useful to induce purposeful action based from the "movie in the mind". The self provides a survival advantage because the "movie in the mind" acquires a first-person character, i.e. it acquires a meaning for that first person, i.e. it highlights what is good and bad for that first person, a first person which happens to be the body of the organism, disguised as a self.

This second-order narrative derives from the first-order narrative constructed from the sensory mappings. In other words, all of this is happening while the "movie" is playing. The sense of the self is created while the movie is playing by the movie itself. The thinker is created by the thought. The spectator of the movie is part of the movie.

Consciousness is an internal narrative, due to those mappings. The "I" is not telling the story: the "I" is created by stories told in the mind ("You are the music while the music lasts").
In other words, the brain is always working independently of what is happening outside: during sleep, i.e. in the absence of sensorial data, that work is called " dreaming"; during the day, in the presence of sensorial data, it is called thought. The difference is that the brain's automatic dreaming is conditioned by the senses: when the senses are bombarded by external stimuli, the brain can generate only some types of thought, just like the body can generate only some types of movement. At every instant, the brain is dealing with both reality and phantasy. "A person's waking life is a dream modulated by the senses".75

Both dreaming and astral travel are manifestations of this movie in the mind. It's connection to the cellular construction of our bodies and the connection of our bodies to the Earth and the Universe it dwells in is indeed profound. This must indeed tell us something of the nature of prophecy and what it truly reveals. The fact that prophecy is mistaken for divination is costly error as prophecy really has very little to do with predicting the future. The Merkaba Tradition preserves a shamanistic connection the true nature of prophecy and explains why medicine is the first Magick.

[Cl]onsciousness is a product of socialization among biological organisms. Language simply provides the medium for its emergence. The mind is socially constructed, society constitutes an individual as much as the individual constitutes society.76

Of course we've ordered our world as a mirror of the body/mind/soul complex. The paradigm itself is created by our minds as a natural projection. A hint to a deeper understanding of this is found in the Giza pyramid; with its reflection of the sky, perfectly laid out upon the ground. And even more significantly, we find the Supramental Yoga deals directly with this aggregate consciousness that we are shown in the Egyptian mystery play, requires a conglomeration in order to ensure a certain ‘immortal’ state. (Cf. Congealing the Soul).

The mind emerges through a process of internalization of the social process of communication, for example by reflecting to oneself the reaction of other individuals to one's gestures. The minded organism is capable of being an object of communication to itself. Gestures, which signal the existence of a symbol (and a meaning) that is being communicated (i.e., recalled in the other individual), constitute the building blocks of language. "A symbol is the stimulus whose response is given in advance". Meaning is defined by the relation between the gesture and the subsequent behavior of an organism as indicated to another organism by that gesture. The mechanism of meaning is therefore present in the social act before the consciousness of it emerges. Consciousness is not in the brain, but in the world. It refers to both the organism and the environment, and cannot be located simply in either. What is in the brain is the process by which the self gains and loses consciousness (analogous to pulling down and raising a window shade).77

In Liber AL vel Legis, NUIT (the fabric of existence) says: “…And the sign shall be my ecstasy, the consciousness of the continuity of existence, the omnipresence of my body.” Per the Brahman philosophy, pure consciousness has no locality; seemingly in the same way a particle has no locality, but a tendency to manifest in certain places at certain times. Individual consciousness then does manifest and like certain fermions, may even disappear as if having departed to another dimension. (Cf. Testing the Night of Pan)

The philosopher Daniel Dennett offers an even more detailed route to consciousness: consciousness evolved from non-consciousness to reasoning and then to deal with memes. Again, memes represent culture.78

The evolutionary direction of manifestation comes from the grossest density of matter that in Thelema is referred to as the N.O.X., suggesting clearly that it is a pre-form matter that is beyond our ability to apprehend in the same way that modern physicists are now becoming aware of what they call Dark Matter and Dark Energy. From this, form arises as represented in Thelemic Magick by the Signs of N.O.X.; being Puella, Puer, Vir, Mulier & Mater Triumphans—a perfect delineation of human forms.

75 Piero Scaruffi in The Physics of Consciousness
76 Ibid.
77 Ibid
78 Piero Scaruffi in The Physics of Consciousness
The psychologist Nicholas Humphrey agrees that the function of consciousness is that of social interaction with other consciousnesses. Consciousness gives every human a privileged picture of her own self as a model for what it is like to be another human. Consciousness provides humans with an explanatory model of their own behavior, and this skill is useful for survival: in a sense, the best psychologists are the best survivors. Humphrey speculates that, by exploring their own selves, humans gained the ability to understand other humans; by understanding their own minds, they understood the minds of the individuals they shared their life with.

Consciousness is unlikely to arise from classical properties of matter (the more we understand the structure and the fabric of the brain, the less we understand how consciousness can occur at all), which are well known and well testable. But Quantum Theory allows for a new concept of matter altogether, which may well leave cracks for consciousness, for something that is not purely material or purely extra-material. Of course, the danger in this way of thinking is to relate consciousness and Quantum only because they are both poorly understood: what they certainly have in common is a degree of "magic" that makes them both mysterious and unattainable.

On the other hand, it is certainly true that all current neurobiological descriptions of the brain are based on Newton's Physics, even if it is well known that Newton's Physics has its limitations. First of all, Newton's Physics is an offshoot of Descartes division of the universe in matter and spirit, and it deals only with matter. Secondly, neurobiologists assume that the brain and its parts behave like classical objects, and that quantum effects are negligible, even while the "objects" they are studying get smaller and smaller. What neurobiologists are doing when they study the microstructure of the brain from a Newtonian perspective is equivalent to organizing a trip to the Moon on the basis of Aristotle's Physics, neglecting Newton's theory of gravitation.

No wonder most neurobiologists reach the conclusion that Physics cannot explain consciousness, since they are using a Physics that 1. was designed to study matter and leave out consciousness and that 2. does not work in the microworld. Not surprisingly, it has been claimed that all current neurobiological models are computationally equivalent to a Turing machine.

The first detailed quantum model of consciousness was probably the American physicist Evan Walker's synaptic tunneling model (1970), in which electrons can "tunnel" between adjacent neurons, thereby creating a virtual neural network overlapping the real one. It is this virtual nervous system that produces consciousness and that can direct the behavior of the real nervous system. The real nervous system operates by means of synaptic messages. The virtual one operates by means of the quantum effect of tunneling (particles passing through an energy barrier that classically they should not be able to climb). The real one is driven by classical laws, the virtual one by quantum laws. Consciousness is therefore driven by quantum laws, even if the brain's behavior can be described by classical laws.

Later theories will share the view that the brain "instantiates" not one but two systems: a classical one and a quantum one. The second one could be responsible for the properties of mental life (such as consciousness) that are not easily reduced to the properties of the classical brain. The beauty of Quantum Theory is that it allows for "nonlocal" properties and provides a framework to explain how entities get "entangled", precisely the phenomena that brain processes are not enough to explain.

In 1986 John Eccles, the British neurophysiologist who discovered neurotransmitters, has speculated that synapses in the cortex respond in a probabilistic manner to neural excitation, a probability that could well be governed by quantum uncertainty given the extremely small size of the synapses."microsite" that emits the neurotransmitter. If this is true, Eccles speculates that an immaterial mind (in the form of "psychons") controls the quantum "jumps" and turns them into voluntary excitations of the neurons that account for body motion.

There is also a physical model of consciousness that invokes other dimensions. The unification theories that attempt at unifying General Relativity (i.e. gravitation) and Quantum Theory (i.e., the weak, electrical and strong forces) typically add new dimensions to the four ones we experience. These dimensions differ from space in that they are bound (actually, rolled up in tiny tubes) and in that they only exist for changes to occur in particle properties. Saul-Paul Sirag's hyperspace, for example, contains many physical dimensions and many mental dimensions (time is one of the dimensions they have in common).

The intriguing feature of a Bose-Einstein condensate is that the many parts of a system not only behave as a whole, they become whole. Their identities merge in such a way that they lose their individuality.

Bose-Einstein condensation can normally be achieved only at very low temperatures. In the late 1960s, the British physicist Herbert Froehlich proved the feasibility and even the likelihood of Bose-Einstein condensation at body temperatures in living matter (precisely, in cell membranes). This opened the doors to the possibility that all living systems contain Bose-Einstein condensates.

Precisely, electrical charged molecules of living tissues behave like electric dipoles. When digestion of food generates enough energy, all molecular dipoles line up and oscillate in a perfectly coordinate manner, which results in a Bose-Einstein condensate.
Biological oscillators of this kind are pervasive in nature: living matter is made of water and other biomolecules equipped with electrical dipoles, which react to external stimuli with a spontaneous breakdown of their rotational symmetry. The biological usefulness of such biological oscillators is that, like laser light, they can amplify signals and encode information (e.g., they can "remember" an external stimulus). Most importantly, coherent oscillations are crucial to many processes of integration of information in the brain.

In 1989 the British psychiatrist Ian Marshall showed similarities between the holistic properties of condensates and those of consciousness, and suggested that consciousness may arise from the "excitation" of such a Bose-Einstein condensate. In Marshall's hypothesis, the brain contains a Froehlich-style condensate, and, whenever the condensate is excited by an electrical field, conscious experience occurs. The brain would maintain dynamical coherence (i.e., be able to organize millions of neuronal processes into the coherent whole of thought) thanks to an underlying quantum coherent state (the Bose-Einstein condensate).

Furthermore, Marshall thinks that the collapse of a wave function is not completely random, as predicted by Quantum Theory, but exhibits a preference for "phase difference". Such "phase differences" are the sharpest in Bose-Einstein condensates. This implies that the wave function tends to collapse towards Bose-Einstein condensates, i.e. that there is a universal tendency towards creating the living and thinking structures that populate our planet. Marshall views this as an evolutionary principle built in our universe.

In other words, the universe has an innate tendency towards life and consciousness. They are ultimately due to the mathematical properties (to the behavior) of the quantum wave function, which favors the evolution of life and consciousness. Marshall can then solve the paradox of "adaptive evolution", discovered in 1988 by John Cairns: some bacteria can mutate very quickly, way too quickly for Darwin's theory to be true. If all genes mutated at that pace, they would mostly produce mutations that cannot survive. What drives evolution is natural selection, which prunes each generation of mutations. But natural selection does not have the time to operate on the very rapid mutations of these bacteria. There must be another force at work that "selects" only the mutations that are useful for survival.

Marshall thinks that the other force is the wave function's tendency towards choosing states of life and consciousness. Each mutation is inherently biased towards success.

His wife, the American philosopher Danah Zohar, has expanded on this idea. Zohar views the theory of Bose-Einstein condensation as a means to reduce mind/body duality to wave/particle duality. The wave aspect of nature yields the mental, the particle aspect of nature yields the material.

Zohar is fascinated by the behavior of bosons. Particles divide into fermions (such as electrons, protons, neutrons) and bosons (photons, gravitons, gluons). Bosons are particles of "relationship", as they are used to interact. When two systems interact (electricity, gravitation or whatever), they exchange bosons. Fermions are well-defined individual entities, just like large-scale matter is. But bosons can completely merge and become one entity, more like conscious states do. Zohar claims that bosons are the basis for the conscious life, and fermions for the material life.

The properties of matter would arise from the properties of fermions. Matter is solid because fermions cannot merge. On the other hand, the properties of mind would arise from the properties of bosons: they can share the same state and they are about relationships.

This would also explain how there can be a "self". The brain changes all the time and therefore the "self" is never the same. I am never myself again. How can there be a "self"? Zohar thinks that the self does change all the time, but quantum interference makes each new self sprout from the old selves. Wave functions of past selves overlap with the wave function of the current self. Through this "quantum memory" each new "quantum self" reincarnates past selves.

The self is not even a simple concept. The biologist Ulric Neisser, one of the founder fathers of Ecological Realism, identified five kinds of self-knowledge: the ecological self (situated in the environment), the interpersonal self (situated in the society of selves), both based on perception, the private self, the conceptual self and the narrative (or "remembered") self.

The American philosopher Thomas Nagel noted that consciousness cannot be "counted": schizophrenic patients have neither one nor two consciousnesses. It appears that brain hemispheres cannot compete, even when they have been separated: they have been programmed to work in tandem. Daniel Dennett also has difficulties with the self. In his "multiple draft" theory, consciousness is simply the feeling of the overall brain activity. Whichever draft, whichever "narrative" dominates is my current "I". But the dominant draft could be changing every second. Dennett is opposed to the idea that there is an enduring mind because it would imply that there is a place in the brain where that mind resides. He thinks that such "cartesian theater" is absurd and that the mind is implemented by multiple parallel drafts.  

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79 Piero Scaruffi in The Physics of Consciousness
Liber Turris as well as contemporary science is strongly suggesting that there is a place in the mind where thoughts arise, as discussed above. This may become so as the Soul begins to congeal with perhaps these parallel thoughts becoming integrated by perhaps a certain alchemical process into a singularity, as suggested by Carl Jung; himself a student of Alchemy.

The bottom line is that cognition is embodied and situated: it is always about our body and/or our environment. Symbols and the mental processes that operate on them are grounded in sensory-motor activity.80

The solipsistic argument, when it is about mind alone is built on a false paradigm as the mind itself is connected to the aethyr, which means it is connected to the environment outside the brain. By including environment, we include objective reality, per Thomas Nagel as he writes in *The View from Nowhere*.

There is continuity between symbolic awareness and perceptual-enactive awareness because symbolic representation is performatory: it is useful precisely because it is about action; because symbols are grounded in action. Contrary to Dennett and Gazzaniga, Carlson reaches the conclusion that the continuity of consciousness is not only real, it is an ecological necessity, because the self is cospesified by perception, and perception is driven by changes in the world, and those changes are continuous. Cognition is grounded in one's point of view, and that point of view is grounded in an environment, and this two-fold grounding process is continuous.81

The continuous quality is Nuit!...in her relationship with Hadit. The environment is the entirety of the Universe that we each contain within ourselves. This must be symbolically presented in order for us to become aware of its dynamic. And as Occultists have known for aeons, symbols make a deep impression on the mind and are superior to normal, intellectual modes of knowledge acquisition.

Symbols appear to us in dreams; being the primal mode of the human thought process. These represent how our consciousness reflects itself into our awareness. Its machinations are so subtle that we need to remove the awareness of activity outside our bodies in order to have the ability to apprehend them.

Jouvet was also a pioneer of the theory that dreams have a function: to derive crucial action patterns from the genetic program of the individual. REM sleep provides a means to combine genetic instructions with experience. Sleep and dreaming are a survival strategy. In particular, Jouvet showed that psychological differences across individuals are maintained by a sort of continuous reprogramming that takes place during REM sleep. This process wipes out "certain aspects of what we have learned", while reinforcing the "unconscious reactions that are the basis of personality". (Research seems to indicate that different individuals each have a different sleep pattern, but patterns of eye movements in identical twins are similar).82

Might we then be able to say that by influencing dreams, the genetic make-up can be altered? This has certainly been considered a serious possibility as suggested in the teaching of some Occult systems on the techniques for waking up in one’s dreaming in; giving one the ability to direct the dream as one sees fit.

More than Freud's pathological theory of dreaming, this resembles the theory of the Swiss psychologist Carl Jung, that dreams reflect the "collective unconscious", a shared repertory of archaic experience represented by 'archetypes' which spontaneously emerge in all minds. One only has to adapt Jung's thought to genetics. The universal archetypes envisioned by Jung could be predispositions by all human brains to create some myths rather than others, just like, according to Chomsky, all human brains inherit a predisposition towards acquiring language.

80 Ibid
81 Piero Scaruffi in *The Physics of Consciousness*
82 Ibid.
The neocortex processes sensory input and sends it to the hippocampus, that acts as a gateway to the limbic system. The limbic system mediates between sensory input and motor output. Initially, the hippocampus is needed to retrieve information stored in long-term memory, but, after about three years, the brain somehow learns how to access directly such information.\(^{83}\)

The process of mediation between sensory input and motor output is an appropriate description of the Automatic Consciousness that is the work of the Zelator to develop. It is also what Carlos Castenada refers to as acting *impeccably*. All actions resulting from brain activity, happen because of neurotransmitters. That these transmitters, that act on the surface of the cells then induce messenger molecules to transfer information to the nucleus. This means that ultimately, the DNA may be affected. This means the memories of our life’s experiences may be the key to our evolution.

Dreams may explain how this happens. During REM sleep, the time when we dream, the neocortex is working normally, except that movement in the body is inhibited. Most mammals, except for primates, exhibit a theta rhythm in the hippocampus (about 6 times per second) only on two occasions: whenever they perform survival-critical behavior, and during REM sleep.

From this evidence, Winson deduced that REM sleep must be involved in survival-critical behavior. Early mammals had to perform all their “reasoning” on the spot (“on-line”). In particular they had to integrate new information (sensory data) with old information (memories) immediately to work out their strategies. Winson speculates that at some point in evolution brains invented a way to “postpone” processing sensory information by taking advantage of the hippocampus: REM sleep. Theta rhythm is the pace at which that (“off-line”) processing is carried out. Instead of taking input from the sensory system, the brain takes input from memory. Instead of directing behavior, the brain inhibits movement. But the kind of processing during REM sleep is the same as during the waking state. Winson speculates that this off-line processing is merging new information with old memories to produce strategies for future behavior.

Theta rhythm disappeared in primates, but REM sleep remained as a fundamental process of brains. In humans, therefore, REM sleep, i.e., dreams corresponds to an off-line process of integration of old information with new information.

What is still missing is the physical link between dreams and genome. Neurotransmitters (such as aminenes and cholines) act on the surface (the membrane) of the cell, whereas genes lie in the center (the nucleus) of the cell. But the messenger molecules transfer information from the membrane to the nucleus and viceversa. Allan Hobson has hypothesized that neurotransmitters may interact with messenger molecules and therefore affect the work of genes.

What differs between wake and sleep is very little, but enough to alter dramatically the outcome: during sleep the brain is bombarded by erratic pulses from the brain stem and flooded with nervous system chemicals of a different sort.

Neurotransmitters make brain circuits more or less sensitive. Aminergic neurotransmitters originate in the brain stem and terminate in the amygdala. Cholinergic neurotransmitters originate in the forebrain and terminate in the cortex. During waking states, the brain is controlled by the aminergic neurotransmitters, made of molecules called “amines”. During sleep, the brain is controlled by the cholinergic neurotransmitters, made of a molecule called “acetylcholine”. Cholinergic chemicals free the system used for cognition and behavior. They paralyze the body by sending pulses to the spinal chord, even if motor neurons are always in motion.

The idea is that wake and sleep are two different chemical systems hosted in the same “processor”.

These two chemical systems are in dynamic equilibrium: if one retracts, the other advances. This means that our consciousness can fluctuate between two extremes, in which either of the chemical systems totally prevails (neither is ever completely absent). This also means that the brain states of wake and sleep are only two extremes, between which there exists a continuum of aminergic-cholinergic interactions, and therefore a continuum of brain states. This system can be said to control the brain. It resides in the brain stem and from there it can easily control both the lower brain (senses and movement) and the upper brain (feelings and thought).

When it doesn’t work properly, when the balance of chemicals is altered, mental diseases like delirium occur. It is not surprising that diseases such as delirium are so similar to dreams: they are driven by exactly the same phenomenon.\(^{84}\)

\(^{83}\) Ibid.

\(^{84}\) Piero Scaruffi in *The Physics of Consciousness*
Cf. The Chemistry of Conscious States by Hobsen; where this is described in greater detail. This could be what happens during astral projection. By stilling the body, asana, the sleep chemicals may be generated. These it seems, should also be influential in human dreaming, which is but a form of astral projection; especially lucid dreaming.

Hobson claims that the brain is in awake, dream or (non REM) sleep mode depending on whether amines are prevailing, cholines are prevailing or amines and cholines are "deadlocked". Three factors account for the brain behavior at any time: activation energy (amount of electrical activity), information source (internal or external) and chemical system (amines or cholines). When activation energy is high, the information source is external and the mode is aminergic: the brain is awake. As activation energy decreases, the external information source fades away and amines and cholines balance each other: the brain falls asleep. When activation energy is high, the information source is internal and the mode is cholinergic: the brain is dreaming. During an hallucination: activation energy is high, the information source is internal and the mode is aminergic. In a coma: activation energy is low, the information source is internal and the mode is cholinergic. The extremes are rare and usually traumatic. Normally, both external and internal sources contribute to the cognitive life, and both amines and cholines contribute to the brain state.

The ability to produce an internal or aminergic state while awake seems to be a result of meditation and astral practice for the Occultist. Herein, the symbolic production of the brain can be viewed consciously and subsequently directed by the mind or the will. This may also be the description of where and how prophecy may be produced in the Merkabic Tradition.

The interplay of external and internal sources means that our perceptions are always mediated by our memory. Hobson thinks that our brains do not merely react (to stimuli), they also anticipate. The internal source tells us what to expect next, and thus helps us cope with the external source. Emotions are, in a sense, a measure of how well the internal source matches the external source: anxiety is caused by a major mismatch, whereas contentness is a sign of matching sources. The interplay between the aminergic and the cholinergic systems may be responsible for all conscious phenomena (for Hobson, dreams are as conscious as thinking) and ultimately for consciousness itself. After all, conscious states fluctuate continuously between waking and dreaming. Dreams, far from being subjective, are "impersonal necessities forced on brain by nature". This hypothetical history of the mind does not differ too much from the one in which the mind was created by memes. The relationship between memes and dreams is intuitive, and the psychologist Joseph Campbell indirectly summarized it with his celebrated aphorism that "a myth is a public dream, a dream is a private myth".

The public myth is then a zeitgeist or egregore that as a psychic force shows us that our thoughts and feelings can create complex working relationships by which human culture forms.

Emotion appears to be a key component in the behavior of conscious beings. To some extent, consciousness "is" emotion. There is probably no recollection, no thinking and no planning that occurs without feeling emotions. We are either happy or sad or afraid or something else all the time. There is rarely a moment in our day when we are not feeling an emotion. William James conceived mental life as a "stream of consciousness", each state of consciousness possessing both a cognitive aspect and a feeling aspect. Emotions have been traditionally neglected by scientists researching the mind, as if they were a secondary aspect (or simply a malfunction) of the brain activity. The fact is surprising because emotions have so much to do with our being "aware", with differentiating intelligent life from dead matter and non-intelligent life. While the relationship between "feeling" and "thinking" is still unclear, it is generally agreed that all beings who think also feel. That makes feelings central to an understanding of thinking. This is reflected by the way emotions are generated. The central processor for emotions is the brain structure called "amygdala". The thalamus normally connects senses to cortex and cortex to muscles. But the amygdala provides a much faster shortcut for decision making: the route from senses to amygdala to thalamus to muscles is much faster than going through the cortex.

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85 Ibid.
86 Ibid.
An emotional state is created by a situation, through a somewhat mysterious chemical reaction in the nerve system. A cognitive state is created by a number of situations and by a thinking process that relates those situations and draws some kind of conclusion. The relation between emotional states and cognitive states is reduced to the need to draw conclusions when cognition would face combinatorial explosion of possible reasoning threads.

Jauregi distinguishes five systems of communication: the natural system (the sender is a natural thing, such as a tree), the cultural system (the sender is culture, something created by humans), the somatic system (the sender is the individual's own body), the imaginary system (the sender is imagination) and the social system (the sender is another individual). The human brain is genetically equipped to receive and understand all five kinds of messages. What ultimately matters is the emotional translations of sensory inputs.

That we can distinguish five systems of communication, we have a perfect corollation with the symbol of the elemental Pentagram. We then find what may be the origin of the development of the idea of the five elements of the Pentagram. If we adopt into our culture, a reflection of the symbolism of the brain, it is no wonder that human cultures in the past that haven’t had contact or awareness of other cultures, have yet produced the same types of corresponding myths.

The difference is crucial. Emotions are fixed genetically, to a large extent: evolution has endowed us with a basic repertory of emotions that help us survive. My personality (which is mostly shaped by my interaction with the environment) may determine how I express and react to those emotions, but the emotions that occur in me are the same of my whole species. Emotion is a genetically-driven response to a stimulus: when that stimulus occurs (for example, a situation of danger), a region of the brain generates an emotion (fear) that is spread through the brain and the body via the nervous system and therefore causes a change in the state of both the brain and the rest of the body. This change of state is meant to somehow cope with the stimulus. Some emotions are acquired during development (eg, through social interaction) but they too are grounded in the universal, primary emotions of the species.

Somatic markers are the repertory of emotional learning that we have acquired throughout our lives and that we use for our daily decisions. The somatic marker records emotional reactions to situations. Former emotional reactions to similar past situations is just what the brain uses to reduce the number of possible choices and rapidly select one course of action. There is an internal preference system in the brain that is inherently biased to seek pleasure and avoid pain. When a similar situation occurs again, an “automatic reaction” is triggered by the associated emotion: if the emotion is positive, like pleasure, then the reaction is to favor the situation; if the emotion is negative, like pain or fear, then the reaction is to avoid the situation. The somatic marker works as an alarm bell, either steering us away from choices that experience warns us against or steering us towards choices that experience makes us long for. When the decision is made, we do not necessarily recall the specific experiences that contributed to form the positive or negative feeling.

The Automatic Consciousness is then also developed by experience and is not purely the result of the external on the internal as the human evolves. Our emotions, which most Western exoteric systems have sought to suppress as sinful and most esoteric Eastern systems have denigrated as excitations of mind that inhibit the meditative state seem to be the key to our evolution. The problem may actually be more that sometimes are emotions may become so automatically rigid that we then begin to misinterpret experience; skewing our evolutionary process.

In philosophical terms, a somatic marker plays the role of both belief and desire. In biological terms, somatic markers help rank "qualitatively" a perception. In other words, the brain is subject to a sort of "emotional conditioning". Once the brain has "learned" what the emotion associated to a situation, the emotion will influence any decision related to that situation. The brain areas that monitor body changes begin to respond automatically whenever a similar situation arises. It is a popular belief that emotion must be constrained because it is irrational: too much emotion leads to "irrational" behavior. Instead, Damasio shows that a number of brain-damage cases in which a reduction in emotionality was the cause for "irrational" behaviour.

Somatic markers help make "rational" decisions, and help making them quickly. Emotion, far from being a biological oddity, is actually an integral part of cognition. Reasoning and emotions are not separate: in fact, they cooperate.

87 Piero Scaruffi in The Physics of Consciousness
88 Ibid.
There is evidence that specific circuits in the brain are devoted to handling emotions. These regions communicate the “emotion” to the rest of the body via the bloodstream and the nervous system. The effect is to cause a change in the state of the body. So the emotion is really an “amplifier” of a signal that came from either the body itself or from the external world (itself mediated by the senses, which are part of the body). Ultimately, the emotion looks like a loop: a change of state in the body causes an emotion that causes a change of state in the body.

The brain is endowed with another mechanism for survival, the one that we call "cognition". The brain analyzes the world and makes decisions about it. Emotion and cognition work towards the same goal on parallel tracks. The advantage of emotion over cognition is that it provides a short-cut: instead of analyzing every single stimulus separately, it allows the organism to react to different stimuli with the same action. Fear is the reaction to any kind of danger, even if they are completely different events. Emotion enables similar response to different stimuli, without any need to “think” about it.

The disadvantage of emotion is that sometimes the short-cut is not perfect: it may lead us to "over-react". John Aggleton has offered a model of how memories about fearful experiences are created in the brain by interactions among the amygdala, the thalamus and the cortex.

Emotional memory (stored in the amygdala) differs from declarative memory (which is mediated by the hippocampus and the cortex). Emotional memory is primitive, in the sense that only contains simple links between cues and responses. A noise in the middle of the night is enough to create a state of anxiety, without necessarily bringing back to mind full consciousness of what the origin of that noise can be. This actually increases the efficiency (at least the speed) of the emotional response.

Emotional and declarative memories are stored and retrieved in parallel. Adults cannot recall childhood traumas because in children the hippocampus has not yet matured to the point of forming conscious memories, but the emotional memory is there.

Emotions are the brain's interpretation of reactions to changes in the world. Emotional memories involving fear can never be erased. The prefrontal cortex, amygdala and right cerebral cortex form a system for reasoning that gives rise to emotions and feelings. The prefrontal cortex and the amygdala process a visual stimulus by comparing it with previous experience and generate a response that is transmitted both to the body and to the back of the brain.

Childhood memories are then generally false in terms of relating the actuality of events. What becomes important is the emotions stored into the memory from these experiences, which when found under hypnosis is resynthesized into new symbols and then revealed to the mind as a memory that becomes significant. Though, we should be careful not to equate these memories with actual, historicity of our lives; the child not having the opportunity to observe the whole of any actual event that the memories might be impinging themselves upon. Without the ability to comprehend the complicated data of the adult world in which the child is residing, most of these events are never even taken into memory; a by-product of the unconsciousness of the child.

As neurophysiologists make progress on the functioning of the brain, it is beginning to appear that there is a difference between emotions and thinking. Emotions are often not desired: they occur because of external stimuli. I don't have much control over them, but they are not spontaneous: I can always relate them to an external event. Emotions have no logical construct, no flow, no time dimension. They simply happen and slowly fade away or change into other emotions: their only dimension is their intensity.

The main difference between emotions and thought is that thoughts do have a time dimension and can evolve over time. Thoughts can be controlled: I can decide if I want to think or not, and what I want to think. But they can also be spontaneous, just like emotions. Both emotions and thought result in behavior. Therefore, my behavior is driven by both emotions and thought, by both controlled and non controlled inner behavior. Thought also results in emotions, albeit of a different type (like depression or anxiety). Cognition sort of mediates between emotions and thought. Emotions help organize the world in the mind, and that is what thought operates upon. Each emotion changes the mind and how deeply the emotion changes the mind depends on how intense the emotion is. That "change" is a change in cognition.

Thought can also generate a change in cognition, but we can fairly assume that even thought needs to generate an emotion before a meaningful, lasting change is performed on cognition. Basically, we can assume that nothing changes in our mind unless an emotion is created. The emotion is what causes the mind to reorganize itself.

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91 Piero Scaruffi in *The Physics of Consciousness*
90 Ibid.
If this has an affect on DNA, we can then create a personal eugenic process based on the interplay of thoughts and emotions if we can also deliberately control our experience. In the culture of the Occult lodge, this is called *initiation*. In an initiation lodge, an archetypal construct is visually presented to the candidate as an experienced drama-play is performed.

It may then be said that Occultists control the emotions in such settings in order to consciously develop the DNA through the use of symbols and rituals that hold an effect upon a deep, fabric of mind; these archetypal images conforming to the principle: ‘as above, so below’ and hence, these archetypal images foster their effect on the dynamic form of the human body.

The self and free will operate at the level of “thought”. Somehow cognition enables not only the “linguistic” form of consciousness which is thought, but also the self-reflection and the initiative that uniquely characterize thought.

The question, from an almost evolutionary viewpoint, is whether thoughts are simply an evolution of emotions: language enabled us to control emotion and to develop something equivalent to emotion but more subtle. Or whether they are two different aspects, and they always were different. Free will is an important variable in this equation. There is no doubt that the ability to decide what I do has to play a key role in a definition of thought. But note that free will is almost the opposite of emotions: emotions are beyond “our” control.

The machinery of “mind”, or "cognition" (memory, learning, reasoning, language), is at the service of our primary inner life: thoughts and emotions (and even dreams). The machinery of "mind” is really a mediator between our primary inner life and our bodily life.

A similar relationship applies to thought and consciousness. There is one skill, capability, that brains have, and there is the feeling associated to it. By “thought” we normally mean the capability of thinking, of putting memories and words and images together. By "consciousness” we really mean (among other things) the feelings associated with thinking. Thought is therefore also a "mediator": between consciousness and the brain.

This distinction may prove essential to an understanding of emotions. Some emotions (let's call them "bodily emotions") are localized and refer to the life of body parts. Some emotions (let's call them "inner" emotions) are not localized and refer to the inner life of thought. If thought is an evolution of emotions, then these are emotions about emotions.

Consciousness (inner life):
Linguistic consciousness = Thought
Non-linguistic consciousness = Emotions
Sense-generated emotions (which we will abbreviate as "sensations", a particular type of emotions)
Thought-generated emotions (which we will abbreviate as "emotions" tout court)
Dreams

Most animals cannot afford to spend much time philosophizing: their minds are constantly working to help them survive in their environment. Since tools were doing most of the job for us, our minds could afford the luxury of philosophizing, which is really mental gymnastics (to keep the mind in good shape).®

Without the benefit of initiation, the individual may through force of Will; deliberate thoughts to override the forced responses of the emotions to achieve an evolutionary process. But where this may lead, may or may not take one to a higher state of being; the Cosmic Consciousness of a more fully realized human being. The initiation lodge, when instituted by one who has already attained to this state, would contain then, a far more effective scheme.

® Ibid
The Sexuality of Consciousness

The biological construct of the human body is as shown, developed by emotion, which has a corresponding effect on DNA. This begins to be apprehended through the medium of symbols produced by the mind that are then re-cognized in a special set of symbols we call language.

Two questions remain. The first one is: where does language come from? We can answer the first question by relating these findings to neurobiologists such as Gerald Edelman who believe that a mind is a particular set of connections in the brain: if language changes the mind, then it must be capable of changing the connections in the brain. Why would it do that? Because, as Baldwin noticed, species capable of learning are better at evolving. If language is such an efficient tool for learning that shapes an entire system of thought in a few years, then it must certainly be useful to survival and evolution.

Language is more than just sound. Language is sound (or vision, when you are reading) with a structure, and therefore packs more information than just sound. This was a crucial invention: that you can use sound as a vehicle to carry more information than the sound itself. The tip probably came from Nature itself: Nature speaks to us all the time. The noise of a river or the noise of an avalanche create concepts in our minds, besides the representation of those sounds. Brain connections are modified at two levels: first to reflect the stimuli of the noise, and then to reflect what we can derive from the noise. Our brain can learn at two levels: there is a noise in that direction, and it is a river (meaning, for example, water to drink). Stimuli modify connections both at the level of perception and at the level of concepts. Language exploits this simple fact.

(Yes, the same is true of cinema, but our bodies are not equipped with an organ to make images the way we are equipped with an organ to make sounds, and the invention of writing required a lot less technological knowledge than television or cinema, but in the future we may end up carrying our portable image-maker so that we can show what happened in images instead of telling it in words).

The second question is: how does language do what it does to our brain connections?

The answer may be that we are more poets than we think: in order to deliver feelings, poets use a vehicle called "metaphor". Metaphor is more pervasive than we think, and it may well be the foundation of language (some linguists even claim that all language is metaphorical). Metaphor is a powerful tool to shape a mind because it finds "connections" between things in the mind and the new connections enable the mind to "see" the world differently.

The ability to understand and utter language is due to the universal grammar that is somehow encoded in the human genome.

Which reflect in primis the organization of thought itself: a basic tenet of Fauconnier's theory is that linguistic structure reflects not the structure of the world but the structure of our cognitive life.

The idea is that, as the speaker utters one sentence after the other, she is in fact constructing mental spaces and the links among them, resulting in a network of mental spaces. Mental spaces, in particular, facilitate reasoning: while logic-based semantics (Chomskyan logical form, Montague's semantics, situation semantics) assume that language provides a meaning that can be used for reasoning, Fauconnier assumes that language builds the same kind of mental spaces from the most basic level of meaning construction all the way up to discourse and reasoning.

Mental spaces allow for alternative views of the world. Fauconnier thinks that the mind needs to create multiple cognitive spaces in order to engage in creative thought. Fauconnier's theory provides the abstract tools ("accessing", "spreading" and "viewpoint") for the dynamics of mental space construction and linking.

Charles Darwin observed that languages seem to evolve the same way that species evolve, but, just like with species, he failed to propose what the origin of language was.

Today, we have growing evidence that his intuition was correct. Languages evolved just like species, through little "mistakes" that were introduced by each generation. It is not surprising that the evolutionary trees drawn by biologists (based on DNA similarity) and linguists (based on language similarity) are almost identical.

Jones concludes that language may date back to the beginning of mankind. What is puzzling, then, is not the evolution of modern languages from primordial languages: it is how non-linguistic animals evolved into a linguistic animal such as the human being. It's the "evolution of language" from non-language, not the "evolution of languages" from pre-existing languages.

Several biologists and anthropologists believe that language was "enabled" by accidental evolution of parts of the brain and possibly other organs.

The American biologist Philip Lieberman views the brain as the result of evolutionary improvements that progressively enabled new faculties. In particular, rapid vocal communication influenced the evolution of the brain. Human language is a relatively recent evolutionary innovation that came about when speech and
syntax were added to older communication systems. Speech allowed humans to overcome the limitations of the mammalian auditory system and syntax allowed them to overcome the limits of memory. Our mind shares with the other minds a conventional system of metaphor. This is a system of “mappings”, of referring one domain of experience to another domain, so that one domain can be understood through another domain which is somehow more basic. Normally, a more abstract domain is explained in terms of a more concrete domain. The more concrete the domain, the more “natural” it is for our minds to operate in them. Lakoff defined three types of metaphor: “orientational” (in which we use our experience with spatial orientation), “ontological” (in which we use our experience with physical objects), “structural” (in which natural types are used to define other concepts). Every metaphor can be reduced to a more primitive metaphor.

Language was probably created to deal only with physical objects, and later extended to non-physical objects by means of metaphors. Conceptual metaphors transport properties from structures of the physical world to non-physical structures. Reason, in general, is not disembodied, it is shaped by the body.  

So in other words, language as thoughts affect the body and vice-versa. Our evolutionary development must then in some way be hard-wired into our bodies.

A metaphor is recognized as a metaphor on the basis of the semantic anomaly produced by the juxtaposition of referents. And this also means that metaphor must be distinct from ordinary language (as opposed to the view that all language is metaphorical). MacCormac adopts Philip Wheelwright’s 1962 classification of metaphors into “epiphors” (metaphors that express the existence of something) and “diaphors” (metaphors that imply the possibility of something). Diaphor and epiphor measure the likeness and the dissimilarity of the attributes of the referents. A diaphor can become an epiphor (when the object is found to really exist) and an epiphor can become a literal expression (when the term has been used for so long that people have forgotten its origin). Metaphor is a process that exists at three levels: a language process (from ordinary language to diaphor to epiphor back to ordinary language); a semantic and syntactic process (its linguistic explanation); and a cognitive process (to acquire new knowledge). Therefore a theory of metaphor requires three levels: a surface (or literal) level, a semantic level and a cognitive level.

At the other end of the spectrum, Plato claimed that ideas exist in a world of their own, independent of our material world.

These three levels of language can be compared to the three Grades of Liber AL; the Hermit represents language at the cognitive level, the Lover is language at the semantic level and correspondingly, the Man of Earth is language at the surface or literal level. It is at the ‘highest’ grade that one discovers the mystery of self as not-self as one connects fully with the Universal Mind.

The mind is selfless. "Self" refers to a set of mental and bodily formations that are linked by causal coherence over time. At the same time the world is not a given, but reflects the actions in which we engage, i.e. it is “enacted” from our actions (or structural coupling).

Then what is technically referred to as the Holy Guardian Angel must then be pure mind brought to the level where it may be perceived by the body in what may or may not be equivalent to the intuitive, automatic consciousness of the body. This would explain Crowley’s injunction against building a philosophical system based on the literal interpretation of the metaphor or upon any mystical experiences for that matter.

Everything that exists is the projection of a brain. Organisms do not adapt to a pre-given world. Organisms and environment mutually specify each other. Organisms drift naturally in the environment. Environmental regularities arise from the interaction between a living organism and its environment. The world of an organism is “enacted” by the history of its structural coupling with the environment. Perception is perceptually guided action (or sensorimotor enactment). Cognitive structures emerge from the recurrent sensorimotor activity that enables such a process. And perceptually guided action is constrained by the need to preserve the integrity of the organism (ontogeny) and its lineage (phylogeny).

92 Piero Scaruffi in The Physics of Consciousness  
93 Piero Scaruffi in The Physics of Consciousness  
94 Ibid.
Varela assigns an almost metaphysical meaning to Maturana’s biological findings. Life is an elegant dance between the organism and the environment. The mind is the tune of that dance. To some extent the very genome of a cell can be viewed as a representation of the environment inside the cell.

The model of the extended phenotype is consistent with a theory advanced by the biologist Richard Lewontin. Each organism is the subject of continuous development throughout its life and such development is driven by mutually interacting genes and environment. Genes per se cannot determine the phenotype, capacity or tendencies.

The organism is both the subject and the object of evolution. Organisms construct environments that are the conditions for their own further evolution and for the evolutions of nature itself towards new environments. Organism and environment mutually specify each other.

The picture painted by these biologists is completely opposite to the one painted by the logicians who worked on formalizing Logic: where the logician’s program is based on the assumption that reason is an abstract manipulation of symbols, the biologist’s program is based on the assumption that reason is bodily experience grounded in the environment. The two views could not be farther apart.

This would suggest that 'objective' reality is a consensus reality as referred to by Carlos Castaneda. We each make each other and the environment around us; each creator gods. The mystery of ‘Not-I’ has an intimate connection with ‘I’. These two must play together; the above and the below; the environment and the individual; the wave and the particle. Add to that the dynamic of a sexual relationship between a man and a woman; especially if working the Formula of ON, and we have the most interesting creative dynamic known.

Implicit in the logician’s project were the assumptions that meaning is based on truth and reference, that the mind is independent of the body, that reasoning is independent of the mind (logic exists in a world of its own, regardless of whether somebody uses it or not), and all minds use the same reasoning system. The biological approach puts the mind back firmly in the body, the body in the environment and meaning in the relationship between them. The reasoning system we use depends on our collective experience as a species and on our individual experience as bodies.

The development of an organism, an ecosystem or any other living entity, is due to interaction with the environment. In a different world, the same genomes would generate different beings. The universe is a message to life and to mind.

The paradox underlying natural selection (from the point of view of physicists) is that on one hand it proceeds in a blind and purpose-less way and on the other hand produces the illusion of more and more complex design. This continuous increase in information (i.e., the spontaneous emergence of order) seems to violate the second law of Thermodynamics, the law of entropy.

Ludwig von Bertalanffy borrowed the term "anamorphosis" from the biologist Woltereck to describe the natural trend towards emergent forms of increasing complexity. Entropy is a measure of disorder and it can only increase, according to the second law of Thermodynamics. Information moves in the opposite direction.

Most things in this universe, if left alone, simply decay and disintegrate. Biological systems, instead, appear from nowhere, then organize themselves, then even grow! This leads to the "two arrows of time": the behavior of physical systems pointing towards entropy increase and therefore disorder increase, and the behavior of biological systems pointing the other way by building increasingly complex structures of order.

Life displays two fundamental processes: creating order from order (the progeny has the same order as the parent) and creating order from disorder (as every living system does at every metabolic step, eating and growing). Living systems seem to defy the second law of Thermodynamics. In reality, they live in a world of energy flux that does not conform to the closed-world assumptions of Thermodynamics. An organism stays alive in its highly organized state by absorbing energy from the environment and processing it to produce a lower entropy state within itself. "Living organisms feed upon negative entropy": they attract "negative entropy" in order to compensate for the entropy increase they create by living. Life is "negentropic". The existence of a living organism depends on increasing the entropy of the rest of the universe.

Life maintains itself far from equilibrium: the form stays pretty much the same, while the material is constantly being replaced by new material, part of which comes from matter (food, air, water) and part of

95 Ibid.
which comes from energy (sun). The flow of matter and energy “through” the body of the living organisms is what makes it possible for the organism to maintain a (relatively) stable form. In order to stay alive, they have to be always in this state far from equilibrium.96

The above is a scientific description of the dance of life; equating to the hermetic axiom, change = stability. In terms of sexual magick, the first law is the law of attraction, which in itself, is really a human mystery. What we do know about this is that there is an electromagnetic dynamic that takes place physiologically in the bodies of the two who are attracted to each other. This is witnessed by the change in physiological systems; increased heart rate and blood pressure, et al.

Aleister Crowley notes in a footnote to Liber 418 “this explaineth the call of the Aethyrs, the curse that was pronounced in the beginning being but the creation of Sakti. And this mystery is reflected in the legend of the Creation, where Adam represents the Concealed One, for Adam is Temurah of MAD, the Enochian word for God, and Eve, whom he created for love, is tempted by the snake, Nechesh, who is Messiah her child. And the snake is the magical power, which hath destroyed the primordial equilibrium.”

Equilibrium is death, non-equilibrium is life.
(In a sense, organisms die because this process is not perfect: if our bodies could be made to keep their shape exactly the same, they would always remain far from the equilibrium and they would never die).

Thanks to the advent of non-equilibrium Thermodynamics, it is now possible to bridge Thermodynamics and evolutionary Biology. By focusing on entropy, structure and information, it is now possible to shed some light on the relationship between cosmological evolution and biological evolution. Biological phenomena can be viewed as governed by laws that are purely physical. This step might prove as powerful as the synthetic theory of evolution.

Prigogine’s non-equilibrium approach to evolution, i.e. that biological systems (from bacteria to entire ecological systems) are non-equilibrium systems, has become a powerful paradigm to study life in the context of Physics. Life is finally reduced to a natural phenomenon just like electromagnetism and gravity.

The distinguished British biologist John Maynard Smith defined progress in evolution as an increase in information transmitted from one generation to another.

The key to evolution is heredity: the way information is stored, transmitted and translated. Evolution of life as we know it relies on information transmission. And information transmission depends on replication of structures.

The authors believe that evolution was somewhat accelerated, and changed in character, by and because of dramatic changes in the nature of biological replicators, or in the way information is transmitted by biological replicators. New kinds of coding methods made possible new kinds of organisms.

Today, replication is achieved via genes that utilize the genetic code. The authors argue that this is only the latest step in a story that started with the earliest, rudimentary replicators, the first genes.

The first major breakthrough in evolution, the first major change in the technique of replication, was the appearance of chromosomes: when one gene is replicated, all are. A second major change came with the transition from the solitary work of RNA to the dual cooperation of DNA and proteins: it meant the shift from a unitary source of replication to a division of labour. Metabolism was born out of that division of labour and was facilitated by the chemical phenomenon of autocatalysis. Autocatalysis allows for self-maintenance, growth and reproduction. Growth is autocatalysis.

Early, monacellular organisms (prokaryotes) evolved into multicellular organisms (eukaryotes). The new mechanism that arose was gene regulation: the code didn’t simply specify instructions to build the organism, but also how cells contributed to the organism. Asexual cloning was eventually made obsolete by sex, and sex again changed the rules of the game by shuffling the genetic information before transmitting it.

Protists split into animals, plants, fungi, that have different information-transmission techniques.
Individuals formed colonies, that developed other means of transmitting information, namely "culture; and finally social behavior led to language, and language is a form of information transmission itself.
Each of these steps "invented" a new way of coding, storing and transmitting information.

In the beginning was energy, matter came later.
The American physicist Ronald Fox showed how, from the beginning, it was energy flows (lightning, volcanic heat) that allowed for the manufacture of unlikely molecules like aminoacids that are the foundations of life.

The emphasis shifts to polymers: organisms use energy to excite monomers until they start creating polymers spontaneously. The organism reaches a state in which polymers help produce (synthesize) polymers.97
Implicit in the above is the evolutionary philosophy of Eugenics. The parents, producing children that are installed with an increase of information than that of the parents means that heredity is the natural key. If memory and the memory of experience can affect the genetic makeup, these genes are first installed in the child. Should a sexual technique manage to produce change in the individual, what power might be invested in two individuals cooperating to produce a child? Phosphate is a key to the energy in the cell and integral in the new Alchemy of David Ormus as well as Piero Scaruffi, who writes in The Physics of Consciousness:

Fox speculates that organisms used an abundant natural source of energy (phosphate bond energy), that was created during the “iron catastrophe”. That new flow of energy created a new kind of matter. Phosphate is still a key component of energy transactions in living molecules.

The “iron catastrophe” both created the Earth’s magnetic field as it produced the Earth’s core. Interestingly enough, Mars is the Occult planet associated with Iron and of which the meaning is ‘energy.’ It’s as if the ancient Occultists already understood what modern scientists are just beginning to slowly re-discover.

Biological evolution was subsequently driven by energy regulation and storage. Fox uses nonlinear thermodynamics and therefore chaos theory to show how complex structures can then spontaneously emerge. Unlike Prigogine, Wiley and Brooks believe that biological systems are inherently different from dissipative structures. Biological systems, unlike physical systems, owe their order and organization to their genetic information, which is peculiar in that it is encoded and hereditary. Dissipation in biological systems is not limited to energy but also involves information, because of the genetic code, which is transmitted to subsequent generations. Organisms simply live and die, they don’t evolve. What evolves is the historic sequence of organisms, which depends on genetic code. The genetic code must therefore be put at the center of any theory of evolution. Unlike most theories of information, that use information to denote the degree to which external forces create structure within a system, Brooks-Wiley's information resides within the system and is material, it has a physical interpretation. It resides in molecular structure as potential for specifying homeostatic and ontogenetic processes. As the organism absorbs energy from the environment, this potential is actualized and is “converted” into structure.

What they set out to prove (following Lotka's original intuition and exploiting Layzer's ideas) is that evolution is a particular case of the second law of Thermodynamics, that Dollo's law is the biological manifestation of that second law. Biological order is simply a direct consequence of that law. The creation of new species is made necessary by the second law and is a “sudden” phenomenon similar to phase changes in Physics. Phylogenetic branching is an inevitable increase in informational entropy.

In this scenario, the interaction between species and the environment is not as important in molding evolution: natural selection mainly acts as a pruning factor. Over short time intervals, biological systems do behave like dissipative structures. But over longer time intervals, they behave like expanding phase space systems (as proved by Layzer). Their relevant phase space is genetic, an ever increasing genetic phase space.

The Brooks-Wiley theory is darwinian in nature, as it subscribes to the basic tenet that evolution is due to variation and selection, but, in addition, it also allows the possibility for evolution to occur without any environmental pressure.

Visualization is a key to sexual Magick, which occurs in the pineal gland and which has a connection through the endocrine system to the secretions in the genitalia and ultimately the secretions of the genitalia (both male and female). And as the images and symbols are products of the mind, we see the direct connection between mind and body. Our bodies become the products of all our thoughts and experiences. Dreaming reveals the intimately individualistic nature of our symbol systems as they reveal the continuous process of integration in the mind/body complex. The more historical and universal symbols of the Occult tradition represent then, a formation of racial consciousness.

97 Piero Scaruffi in The Physics of Consciousness
98 Ibid
While modern research focuses on how the neural processes of the brain can yield the mind, we often forget that brains are first and foremost alive, and no convincing evidence has been presented so far that dead brains can think. As far as we know, minds are alive. As far as we know, life came first, both from an evolutionary perspective and from a bodily perspective. If we accept this principle, then we come to recognize that “thinking life” may just be a particular case of “life”, that the same type of processes which are responsible for life may be responsible also for the mind. And the mystery of the mind, or at least the mystery of the principle that underlies the mind, may have been solved a century ago by the most unlikely sleuth: Charles Darwin.

Darwin never really explained what he wanted to explain, but he probably discovered the “type of process” that is responsible for life. He called it “evolution”, today we call it “design without a designer”, “emergence”, “self-organization” and so forth. What it means is that properties may appear when a system reorganizes itself due to external constraints, due to the fact that it has to live and survive in this world. This very simple principle may underlie as well the secret of thought. Darwin's theory of evolution is not about "survival of the fittest". Darwin's theory is about "design".

In technical terms, life has two aspects: metabolism and replication. Metabolism is the interaction with the environment that results in growth. Replication is the copying of information that results in reproduction. Metabolism affects proteins, replication affects nucleic acids.

This universe exhibits an impressive spectrum of natural phenomena, some of which undergo spectacular mutations over macro or micro-time (long periods of time, or short periods of time). Life deserves a special status among them for the sheer quantity and quality of physical and chemical transformations that are involved. Nonetheless, ultimately life has to be just one of them.

What becomes necessary for us is a way to interpret the symbols produced by the mind. This would be the key to the entire Merkabah Tradition. Whether we have but to remember that which we have forgotten or to discover it for the first time; the symbols of the mind/body complex must have been interpretable by the ancients and would most probably be of some sort of innate or intuitive language that is constantly evolving or emerging. As per the Gnostic Jesus, that which we have within ourselves must be brought forth.

Symbols, brought forth in images to the mind may be seen themselves to be composed of photons that also then come from what is at least a Fifth Dimension beyond the four-dimensional time/space continuum, as discussed in Testing the Night of Pan. This is referred to by Occultists as the Astral Light. When the character of these symbols address the life of the individual, their interpretation belongs distinctly to that individual. But when the tone addresses a whole group of individuals, these symbols become prophetic; revealing the inner nature of humanity as a whole—rather than the inner nature of any one specific individual.

And as part of the light emitting phosphorylation of the DNA, this may be what connects psychic to physical processes as well as possibly even accounting for the prophetic or ‘trans-dimensional’ experience. Indeed, Charles Q. Choi, in a special to Live Science notes:

Past research has shown that the body emits visible light, 1,000 times less intense than the levels to which our naked eyes are sensitive. In fact, virtually all living creatures emit very weak light, which is thought to be a byproduct of biochemical reactions involving free radicals. (This visible light differs from the infrared radiation — an invisible form of light — that comes from body heat.)

For that matter, the graviton, like the photon is a connector or boson (Cf. Testing the Night of Pan). This sets up the idea of the Bose Condensate and Schuman’s Resonance as involved in self-organization (Cf. Liber Vox Viva Voce vel Video). The human form exists as a hologram generated by the Earth herself. That this can then be affected by memory and experience and then can have an affect upon the DNA, a child who inherits this then altered DNA will carry the knowledge of these memories and experiences in

99 Piero Scaruffi in The Physics of Consciousness
his or her genetic structure and forward to the adding of additional memories and experiences. This then, constitutes a continually emerging racial memory, which for Occultists has an obvious parallel to the *magickal memory* or what Carl Jung refers to as the *collective unconscious*.

In 1957 Crick, by using only logical reasoning, reached the conclusion that information must flow only from the nucleic acids to proteins, never the other way around. In the 1960's biologists cracked the "genetic code", the code used by DNA to generate proteins, i.e. they found out how the four-letter language of DNA is translated into the twenty-letter language of proteins (the DNA is made of four kinds of nucleotides, proteins are made of twenty types of amino acids). And, finally, in the 1980s biologists discovered ribonucleic acid (RNA), a single-strand molecule that partners with DNA to manufacture proteins. Recently, we started deciphering the genome of different animals, including our own.

A DNA molecule is made of two strings, or "strands", each one the mirror image of the other (in the shape of a "double helix"). Each string is a sequence of "nucleotides" or "bases", which come in four kinds (adenine, guanine, cytosine, thymine). These four bases are paired together (adenine is paired with thymine and cytosine is paired with guanine). Each nucleotide in a string is "mirrored" in a nucleotide of the other string. Each strand of the helix acts therefore as a template to create the other template. Nucleotides are the elementary unit of the "genetic code". In other words, the genetic code is written in an alphabet of these four chemical units.

Cells split all the time, and each new cell gets one of the two strings of DNA of the original cell, but each string will quickly rebuild its mirror image out of protoplasm. This process is known as "mitosis". Each cell in an individual has almost exactly the same DNA, which means that it carries the same genome. The genome is made of genes. A gene is a section of the DNA molecule which instructs the cell to manufacture proteins (indirectly, by doing that a gene determines a specific trait of the individual). Genes vary in size, from 500 bases long to more than two million (long genes tend to have just a very long waste). The genome is not a sequential program that is executed mechanically, one gene after the other. It is more like a network of genes that "regulate" each other. The genetic "program" behaves more like a network of switches.

More precisely, the DNA is organized into chromosomes (13 pairs in the case of the human race) which are in turn organized into genes. The human genome has 3 billion base pairs of DNA.  

The five combinations of four DNA nucleotides into twenty types of amino acids brings up the five and four. Using Liber AL’s dictum to divide, add and multiply, by division first, we found the four in twenty that leads to the five sets; equivalent to the five elements. Adding five and four, we get the number nine; where the work of Magick takes place. And in the multiplication, we return to the twenty we started out with. Additionally, the thirteen pairs of chromosomes represents the completed work; thirteen also being the number of transformation or mutation, which sets up the evolutionary paradigm. Interestingly enough, it is the value of the Hebrew word Achad (Unity) and Aheba (Love) and in Magick the number of the work being completed. And indeed, the “four-letter language of DNA” may in itself draw a corollary to the Tetragrammaton.

The human mitochondrial DNA (mtDNA) is a circular genome of 16,569bp that encodes 13 proteins and the RNA components of the machinery for their translation (two ribosomal RNAs and 22 transfer RNAs). Because all 13 proteins are sub-units of the enzymes that perform oxidative phosphorylation, loss-of-function mutations in any part of the mtDNA deprive the cell of most if ATP-synthesis capacity. Once we knew that mitochondria have their own DNA and are also probably the main site of production of toxic oxygen radicals, it was but a small leap of induction to propose that the mitochondrial DNA (mtDNA) was the likeliest site of accumulating mutations leading to aging.

The fact that the mitochondria is inherited through the mother/woman and it’s being circular is synchronistic. It’s lineal nature tells us how many lines descended through the female species dwells on the Earth. XIII is the Death Atu/Transformation and its thrashraq is 31, being the key to AL. To affect this would be a true evolutionary development. Also, there’s a synchronicity of the twenty-two transfer
RNAs and the twenty-two letters of the Hebrew alphabet and the Holy Tarot. More importantly, the function of the RNA is to assist the DNA in its mitotic duplication. To affect these proteins is to append the ‘pure’ line of the mother.

All living organisms use DNA to store hereditary information and they use the exact same code (the "genetic" code) to write such information in DNA. The genome of an individual is written in the genetic code. It is inappropriate (although common) to refer to the "genetic code" of an individual, as all living things on this planet share the same genetic code. The genetic code is a code, just like the Morse code. It specifies how nucleotides (through a "transcription" of the four nucleotides into RNA and a translation of RNA into the twenty aminoacids) are mapped into aminoacids, which in turn make up proteins, which in turn make up bodies. Different genomes yield different bodies. But they always employ the same genetic code to carry out this transformation. Genomes have confirmed the theory of evolution: genomes share common parts and different species are determined by the branching out of the other parts. The genealogical tree of living beings is carefully reflected in the structure of their genomes. The genome of a species is almost a "memory" of that species' evolutionary journey.

Chapter XXVII in Aleister Crowley’s Book of Lies, entitled: STRUCTURE OF MIND BASED ON THAT OF BODY (HAECHEL AND BERTRAND RUSSELL), seems to corroborate or maybe even anticipate Pierro Scaruffi’s scientific insights; describing here, how different states of consciousness connect to our evolutionary journey. In this chapter, he writes:

Sammasati is assuredly one of the most useful, as well as one of the most trustworthy and most manageable, weapons in the armoury of the Aspirant...It may be no more than a personal fancy, but I think Allan Bennett's translation of the term, "Recollection," is as near as one can get in English. One can strain the meaning slightly to include Recollection, to imply the ranging of one's facts, and the fitting of them into an organized structure. The term 'sati' suggests an identification of Being with Knowledge...So far as it applies to the Magical Memory, it lays stress on some such expedient, very much as is explained in Liber Thisarb...This is a case where "clean thinking" is most absolutely helpful. The truth is of exquisite texture; it blazons the escutcheon of the Unity of Nature in such delicate yet forceful colours that the Postulant may well come thereby to the Opening of the Trance of Wonder; yet religious theories and personal perverseness have erected against its impact the very stoutest of their hedgehogs of prejudice.

Who shall help us here? Not the sonorous Vedas, not the Upanishads, Not Apollonius, Plotinus, Ruysbroeck, Molinos; not any gleaner in the field of … priori; no, a mere devotee of natural history and biology: Ernst Haeckel.

Enormous, elephantine, his work's bulk is almost incredible; for us his one revolutionary discovery is pertinent to this matter of Sammasati and the revelations of one's inmost subtle structure.

He discovered, and he demonstrated, that the history of any animal throughout the course of its evolution is repeated in the stages of the individual. To put it crudely, the growth of a child from the fertilized ovum to the adult repeats the adventures of its species.

This doctrine is tremendously important, and I feel that I do not know how to emphasize it as it deserves. I want to be exceptionally accurate; yet the use of his meticulous scientific terms, with an armoury of quotations, would almost certainly result in your missing the point, "unable to see the wood for the trees."

Let me put it that the body is formed by the super-position of layers, each representing a stage in the history of the evolution of the species.

The foetus displays essential characteristics of insect, reptile, mammal (or whatever they are) in the order in which these classes of animal appeared in the world's history.

Now I want to put forward a thesis --- and as far as I know it is personal to myself, based on my work at Cefal[a]--- to the effect that the mind is constructed on precisely the same lines.

You will remember from my note on "Breaks" in meditation how one's gradual improvement in the practice results in the barraging of certain classes of idea, by classes. The ready-to-hand, recent fugitive thoughts come first and first they go. Then the events of the previous day or so, and the reoccupations of the mind for that period.

Next, one comes to the layer of reveries and other forms of wish-phanstasm; then cryptomnesia gets busy with incidents of childhood and the like; finally, there intrudes the class of "atmospherics," where one cannot trace the source of the interruption.

All these are matters of the conscious rational mind; and when I explored and classified these facts, in the very first months of my serious practice of Yoga...The structure of the mind reveals its history as does the
structure of the body... Just as your body was at one stage the body of an ape, a fish, a frog (and all the rest of it) so did that animal at that stage possess a mind correlative.

Now then! In the course of that kind of initiation conferred by Sammasati, the layers are stripped off very much as happens in elementary meditation (Dharana) to the conscious mind.

Accordingly, one finds oneself experiencing the thoughts, the feelings, the desires of a gorilla, a crocodile, a rat, a devil-fish, or what have you! One is no longer capable of human thoughts in the ordinary sense of the word; such would be wholly unintelligible.

Influencing the mitotic process might be called by us as the evolutionary point. And indeed, the transference of memories and experiences into genetic coding as indirectly suggested below creates a spermogenetic process that can put us directly in control of the evolutionary development of our race in generational succession. The eugenic implications of this suggest that an enlightened society could produce a superior progeny than an unenlightened society. Science also confirms this recursively as we understand that the Monarch butterfly learns where it was born (its roots) and it passes this knowledge via genetics on to its offspring (from generation to generation). It seems quite clear that knowledge can be passed genetically, which may in itself be the manifestation of the *magickal memory* on the physical plane.

When a cell divides, the average number of mitochondria per cell in the two daughter cells is obviously half of what it was in the parent. This number must thus be doubled, on average, before those daughter cells are ready to divide again. Mitochondria are, of course, degenerate bacteria. Consequently it is natural to think of the mitochondria of a cell as a population of individuals, which maintain roughly constant numbers through a balance of biogenesis by division and death by autophagy. What is not at all natural is to think of them doing the opposite of biogenesis—fusing. However, there is now very solid evidence that they sometimes do exactly that. Progress has been greatest in a very specialized aspect of mitochondrial biology, spermatogenesis, in which a gene responsible for mediating fusion was cloned in 1997; this gene has homologues in all phyla yet examined and the yeast homologue also mediates fusion. In human cells the evidence is also by now very compelling; the foremost series of studies, including recently the first in vivo work, is that of Hayashi's group.\(^{105}\)

The “degenerate” mitochondria are actually symbiant life forms that live inside every human cell. In the movie series, *Star Wars*, this is presented to us as Mitochlorians; a symbiant life form that is the Force. And indeed, the mitochondria are the energy source of the cell and responsible for its metabolism. One might even speculate that they are the physical or biological link to the Aethyr; energy is the source of life; that force (pun intended) that animates the body. That this can be affected by memories and experiences strongly suggests that we need a thorough understanding of the human creature and the world about us, which is as innate drive in our species, as is the sex drive.

Most human genes, for example, date back to primitive organisms, and they are shared by all modern animals that descend from those organisms. Only a few can be said to be truly “human”. Every single cell in the body contains roughly the same genetic information (barred copying mistakes) but each cell ends up specializing in a task, depending on where it is located: a heart cell will specialize in heart issues and not, say, liver issues, even if the genetic information describes both sets of issues. A muscle cell is a muscle cell, even if it is identical to a liver cell. This is the phenomenon of "cell differentiation", by which each cell "expresses" only some of the genes in the genome, i.e. only some of the possible proteins are manufactured ("synthesized").\(^{106}\) Differentiation seems to be regulated by topology: depending on where a cell is, it exchanges energy (which is information) with some cells rather than others. Neighboring cells "self-organize".

The process of “epigenesis” is the process by which the genotype is turned into the phenotype: DNA is transcribed into messenger RNA, which is in turn transcribed into chains of aminoacids (i.e., in proteins). In other words, the DNA is the sequence of instructions for building molecules called proteins, and proteins are manufactured of amino acids, whose order is determined by the DNA. Note that our genome has only 100,000 genes, but our body has 100 trillion cells.\(^{107}\)

\(^{105}\) Aubrey D.N.J. de Grey from his research on aging
\(^{106}\) Piero Scaruffi in *The Physics of Consciousness*
\(^{107}\) Aubrey D.N.J. de Grey from his research on aging
Self organization readily implies that we are but the amalgamated collection of a community of these symbiant life-forms, the ‘corrupted bacteria;’ perhaps even on a par with William Burroughs theory on our species as a virus. ATP is discussed in the GCL document: Liber Vox Viva Voce vel Video along with the holographic design of the human race. We are creatures of the Earth; indeed formed of the initial protein that created life. Interestingly enough, we are but a complex amalgamation of this protein.

A cornerstone of textbook bioenergetics is that oxidative ATP synthesis in mitochondria requires, in normal conditions of internal and external pH, a potential difference DC of well over 100 MV between the aqueous compartments that the energy-transducing membrane separates. Measurements of DC inferred from diffusion of membrane-permeant ions confirm this, but those using microelectrodes consistently find no such DC — a result ostensibly irreconcilable with the chemiosmotic theory. Transmembrane hydroxide transport necessarily accompanies mitochondrial ATP synthesis, due to the action of several carrier proteins; this nullifies some of the proton transport by the respiratory chain. Here, it is proposed that these carriers’ structure causes the path of this ‘‘lost’’ proton flow to include a component perpendicular to the membrane but within the aqueous phases, so maintaining a steady-state proton-motive force between the water at each membrane surface and in the adjacent bulk medium. The conflicting measurements of DC are shown to be consistent with the response of this system to its chemical environment.

Mitchell’s most comprehensive presentation of the w x chemiosmotic theory I noted explicitly that mitochondria do not maintain a difference of pH DpH , between the two aqueous phases that their energy-transducing membrane separates, sufficient to drive the F F –ATP are backwards as the theory required. Since that membrane has low permeability not only to protons but also to other ions present in solution in vivo, Mitchell suggested that an unequal distribution of charge density at the two membrane surfaces — that is, a potential difference DC across the membrane — adds to the effect of DpH, the two producing a sufficient ‘‘proton-motive force’’ PMF, . or D p to drive ATP synthesis.

Several transmembrane metabolite carriers must operate in order to maintain mitochondrial OXPHOS at steady state. The two with fastest turnover summed over a whole mitochondrion — the number of individual carriers per mitochondrion is not relevant here are the adenine nucleotide and phosphate carriers, which must each cycle once for every ATP molecule synthesised within the mitochondrion and not re-hydrolysed there . The phosphate carrier is relevant to the present discussion because it operates by antiport with hydroxide anions. Traditionally, it has been considered impossible to distinguish between hydroxide antiport and proton symport, due to the membrane’s permeability to HO noted above, but the careful 2 wx kinetic studies in the laboratory of Kramer 36,37 strongly indicate that the phosphate carrier uses hydroxide.

Let us now compare the behaviours of a proton and a hydroxide ion when they are transported between the aqueous phases by a mitochondrial transmembrane carrier. In each case, there is a location at which the charge carrier loses its electrochemical contact with the surrounding water, and a location on the other side of the membrane at which it resumes such contact.

The term “plasma membrane redox system” is used to denote the machinery by which cells oxidize electron donors, typically NADH and/or NADPH, and transfer the resulting electrons to extracellular acceptors. The appreciation that the plasma membrane redox system (PMRS) is so complex has come about as a result of studies in several laboratories and spanning two decades. These experiments have yielded a considerable body of information on the properties of the system in various cell types spanning the entire eukaryotic domain.

An exception to the above characterization of work on the PMRS occurs in phagocytic lymphocytes (phagocytes). Here there is an enzyme with some of the same properties as the PMRS but also important differences, whose molecular structure has now been resolved in detail (e.g. Abo et al. 1992, Dung et al. 2002). This enzyme, phagocyte NADPH oxidase (PHOX), has homologues in other cell types (Meier et al. 1991, 1993) that have recently been discussed systematically (Lambeth et al. 2000) using the terminology “NOX”108.

The term “NOX” indicates some type of shadow protein opposite of the phosphorylation; there is no light involved in the process of using it. This is in the non-nuclear DNA, the mitochondria and if put in parallel with Thelemic cosmogony, as found in my article, Magickal Theory: “The regenerative powers of the darkness come from that called in Thelemic philosophy, N.O.X. come from the depths of matter.” In the medical sense, this represents the regenerative power of the mitochondria; the energy source of the cell.

108 Ibid.
As far as the individual goes, we know that her genome is a synthesis of the genome of the parents plus some random shuffling. But it is not clear yet how much of the final individual is due to the genetic code and how much to the interaction with the environment. For example, the genetic code may specify that a muscle must grow between the arm and the trunk, but exercise can make that muscle bigger or smaller. For example, genetic code may determine some psychological characteristics of the individual, but study, meditation and peer pressure can alter some of them. The British biologist William Bateson thought that only the genetic code mattered: we are machines programmed from birth. John Watson, at the other extreme, thought that conditioning could alter at will the personality of an individual: it all depends on experience, the instruction contained in the genetic code is negligible.

A puzzling feature of genomes is that they contain far more useless junk than useful genes. The human genome, in particular, contains about 95% junk, in between genes.

Recently, a certain attention has been drawn to the internals of the cell. Cells contain a structure called cytoskeleton, which is made of a protein called "tubulin", which forms cylinders called "microtubules". In reality, the process of copying DNA is not so smooth. When a cell splits, its DNA is copied to the new cells but the copying process (for whatever whim of nature) is prone to "error" (or, at least, to loss of information). In other words, genes mutate all the time inside our bodies. These mutations may cause fatal diseases (such as cancer) and they are responsible for death.

Mutation is what causes aging and death. Millions of cells divide each second and a copy of DNA is likely to carry some mistake, which means that the older we are the more chances that serious mistakes have been made and that our genetic instructions are no longer rational.109

It has been suggested that cancer is a failed attempt at evolution. In the erratic mitotic process, and with all the “junk” contained inside the genome, we find the possibility of radically altering the genetic copying; especially when considering the experience of the individual. Perhaps even toxic cellular waste is a hint at the need to learn how to transform waste into energy in order to not just perpetuate the individual by halting the aging process, but to indeed, deliberately focus on the will to evolve this process.

Of course, the Thelemic formula is expressed in terms of a fraction: 93/93...love under will. Love then provides the underwriting experience that we need in order to transform ourselves. As Ben Hecht writes in A Child of the Century, “Love is the magician that pulls him out of his own hat.”111 And of course, when we speak of love, we are also addressing our sexuality.

Mutation is also the whole point of sex, and this turns out to be the mirror story of death. Sex is the antidote to the genetic deterioration due to the imperfect copying process. The human race would rapidly degenerate without sex: each individual would pass on genes that have already lost part of their information through so many million internal copies. Sex is what makes the paradox possible, and almost inevitable: individuals decay, but the race progresses. Because sex recombines the genes of the parents, it can produce both better and worse (genetically speaking) individuals, and natural selection will reward the better ones. The long-term outcome of sex is that it is more likely that better future individuals are produced from the deterioration of present individuals.112

109 Piero Scaruffi in The Physics of Consciousness
110 Aubrey D.N.J. de Grey from his research on aging
112 Piero Scaruffi in The Physics of Consciousness
If sex strengthens the process in order to prevent error in the child; can this energy be used to correct the problem in the copulating couple? Reich notes that the orgasm as an involuntary muscle movement is vital for health; Rick Miller (featured in the GCL article: Liber Vox Viva Voce vel Video) speaks of the child tapping his foot to regulate his relationship with the Earth. Mutation distributed generationally is the definition of evolution; being then, both our bane and our virtue; even as caused by the general breakdown in the efficient management of cellular metabolism.

Most interesting in the above quote is that sex is said to be the “mirror story of death.” This perfectly echoes the hermetic description of sex as ‘le petit morte’ or ‘the little death’; referring more directly to the egoic state of consciousness being ‘annihilated’ or transcended in the mythical crossing of the Abyss. Rather, this is probably more the connection of the ‘above and below’ as lightening connects the sky to the Earth (thus a Tiphareth experience and the realignment of energy in the body; even as one comes to realize the godhead at the center of the Self). The orgasm is equated to a flash of lightening ringing through the electromagnetic system of the body that may indeed be the lighting of the Magick Lamp in the Thelemic praxis.

Most phenotypes of aging in vertebrates may be caused by a progressive decline in the ability of antioxidant defenses to maintain cellular and systemic homeostasis. This is due both to a diminished efficacy of those defenses and to an enhanced level of pro-oxidant toxicity; the imbalance between the two has been termed oxidative stress. However, the cause of this increasing imbalance remains obscure. This article proposes a mechanism by which spontaneously mutant mitochondrial DNA (mtDNA), despite being present only in very small quantities in the body, may be the main generator of oxidative stress.

Spontaneity is a by-product of consciousness and probably the inductor mechanism connected to the flash of lightening. If mtDNA acts in this way, these symbiotic life-forms are centers of consciousness in themselves. It is then, the matrilineal line that evolves by the interaction of generationally recombined nuclear DNA. This might explain why the Jews, who “have the half” according to Liber AL vel Legis, descend along matrilineal lines; the mitochondria being inherited from the mother of the child. The breakdown of the cellular metabolism is also involved in the aging process. Interestingly enough, Crowley proclaims that the ‘elixir vitae’ that is the IXth Degree secret of his O.T.O., produced by sexual means (containing the sperm and vaginal orgasmic secretion), re-energizes the metabolism.

Mutant mtDNA is distributed very unevenly with a tissue: some cells apparently contain no wild-type mtDNA whatever. Those cells must rely on glycolysis for ATP production; furthermore, they require a system to stabilize their NAD+/NADH ratio. This can only be achieved by an efflux of electrons from the cell, most probably mediated by the plasma membrane oxidoreductase (PMOR). It is proposed that the required rate of electron efflux from these anaerobic cells exceeds the local electron-accepting capacity of “safe” acceptors in plasma such as dehydroascorbate, with the result that reactive species, such as superoxide, are formed. This leads to increased oxidation of lipids in the plasma, notably of low-density lipoprotein (LDL) particles, which are subsequently imported into mitochondrially healthy cells. This oxidized lipoprotein must be destroyed by the recipient cells’ antioxidant defenses. That task diverts the cell from the degradation of pro-oxidants that it is itself generating; thus, it imposes oxidative stress on the cell. As the number of anaerobic cells in the body rises, so does oxidative stress in all cells. The consistency of this hypothesis with known facts is discussed, and technically feasible tests are suggested both of the proposed mechanism and of its overall contribution to mammalian aging, including plausible interventions to retard the process.

The fundamentals of the mitochondrial free radical theory of aging were first described by Harman in 1956. Harman proposed that aging results, for the most part, from an ever-increasing level of destructive chemical reactions involving free radicals (molecules with an unpaired electron). He extended this hypothesis in 1972 with the idea that mitochondria are the main mediators of this process, in that:

- Of all subcellular components, mitochondria are both the main source of free radicals and the main direct victim of free radical damage;
- Loss of mitochondrial function, and hence bioenergy capacity, is the driving intracellular change underlying aging, causing (rather than caused by) other pro-oxidant changes such as slower protein turnover.

113 Aubrey D.N.J. de Grey from his research on aging
There has since been strong experimental support for these tenets. There have been numerous reports of a decline in ATP synthesis capacity during aging. These studies have examined all components of the respiratory chain, and only those that are partly encoded by the mitochondrial DNA (mtDNA) are affected. Many other studies have shown a parallel increase in the levels of mtDNA lesions. A severe challenge to the idea that mitochondrial DNA mutations play a major role in the aging process in mammals is that clear loss-of-function mutations accumulate only to very low levels (under 1% of total) in almost any tissue, even by very old age. Their accumulation is punctate, however: some cells become nearly devoid of wild-type mitochondrial DNA and exhibit no activity for the partly mitochondrial-encoded enzyme cytochrome c oxidase. Such cells accumulate in number with aging, suggesting that they survive indefinitely, which is itself paradoxical. The reductive hotspot hypothesis suggests that these cells adjust their metabolism to use plasma membrane electron transport as a substitute for the mitochondrial electron transport chain in the reoxidation of reduced dinucleotides, and that, like mitochondrial electron transport, this process is imperfect and generates superoxide as a side-effect. This superoxide, generated on the outside of the cell, can potentially initiate classical free radical chemistry including lipid peroxidation chain reactions in circulating material such as lipoproteins. These, in turn, can be toxic to mitochondrially non-mutant cells that import them to satisfy their cholesterol requirements. Thus, the relatively few cells that have lost oxidative phosphorylation capacity may be toxic to the rest of the body. In this minireview, recent results relevant to this hypothesis are surveyed and approaches to intervening in the proposed process are discussed. A large and compelling body of evidence has been assembled over the past 30 years in support of Harman's 1972 proposal [1] that oxidative damage to mitochondria, resulting from the adventitious production of superoxide by the respiratory chain, is a major determinant of the rate of aging. The most direct such evidence is the finding that mitochondrial superoxide production rates (measured as a proportion of respiration rate) correlate with rates of aging…

The role of mitochondria as mediators of oxidative damage leading to aging is made especially plausible by their possession of their own genome (the mitochondrial DNA, or mtDNA). The mtDNA encodes proteins essential for aerobic respiration and its proximity to the cell’s major source of free radicals renders it highly susceptible to mutagenic insults.

If the only effect of mtDNA mutation is to generate a very small number of cells lacking OXPHOS function, how can damage to mtDNA matter at the organismal level (i.e., drive aging)? Any such connection would seem to require that those few cells be actively toxic, rather than just bioenergetically dysfunctional. A hypothesis along such lines was put forward by the present author recently [33,34] and is summarised here (see Figure 1).

OXPHOS directly maintains two aspects of cellular homeostasis: the ATP/ADP ratio and the NAD+/NADH ratio. Yeast cells can survive without OXPHOS (as petite strains) because they can maintain ATP supply using glycolysis and also keep a stable NAD+/NADH ratio by reduction of the resulting pyruvate. Mammalian cells, however, die when deprived of their mtDNA unless additional, exogenous pyruvate is provided in the medium [35]. This indicates that, though OXPHOS is still dispensable for maintaining ATP supply, mammalian cells cannot emulate yeast’s ability to “balance the books” with regard to redox state by reducing glycolysis-derived pyruvate to lactate and exporting it; an additional electron sink is needed. In sum, therefore, it is theoretically possible that OXPHOS-negative cells could survive by reducing oxygen at the plasma membrane rather than at the mitochondrial inner membrane. The rate at which they do so may be extremely high, since histochemical evidence of markedly elevated succinate dehydrogenase, even if normalised to mtDNA content, suggests that such cells do not rely solely on glycolysis but also maintain an active TCA cycle, which entails a far greater rate of reduction (and hence reoxidation) of NAD. This may be possible only by reversing the usual direction of the malate/aspartate and glycerophosphate shuttles; the former operates close to thermodynamic equilibrium but the latter may require substantial shifts in cellular state in order to be reversed. (The possibility that electrons from Complex II are fed to cytosolic NAD by a route other than coenzyme Q and the glycerophosphate shuttle must also be kept in mind, however.) …mitochondria with reduced respiratory function, due to a mutation or deletion affecting the respiratory chain, suffer less frequent lysosomal degradation, because they inflict free radical damage more slowly on their own membranes. Once such a mutation occurs in a mitochondrion of a non-dividing cell, therefore, mitochondria carrying it will rapidly populate that cell, thereby destroying the cell’s respiratory capability. The accumulation of cells that have undergone this transition results in aging at the organismal level. The mitochondria of a single cell are an isolated population undergoing replication and destruction, so there is the opportunity for selective pressure to exist and supportive evidence has been reported. Therefore, in order to have any mitochondria left in the long term, the cell must avert the above process by maintaining the degree of contamination of its mitochondrial membranes at a stable level. It achieves this by degrading some
of its mitochondria and replicating others. This works because the degraded membrane is recycled, and the new membrane (added to the parent mitochondrion in order to bring it to a size ready to divide) is pristine. Turnover thus acts to dilute the existing membrane damage.\textsuperscript{114}

OXPHOS or Oxidative phosphorylation is a process that essentially involves light introduced into the cell via enzymes that is discussed in the GCL document, Liber Vox Viva Voce vel Video, wherein we propose: “Light or Fire and Water are key Alchemical elements to the life of the cell. The light of phosphorylation and the by-product of H\textsubscript{2}O in the redox formula shown above provide the Scientific Illuminist with the secret of the nature of life at the cellular level.”

Qabalistically breaking down the scientific term, OXPHOS, we immediately derive two separate words. The first, Ox is a corerlary with the first letter of the Hebrew Alphabet, Aleph, which translates into the Greek Alpha. The second derived word is Phos, the Greek word for Light. Note that Aleph is not assigned as the origin of the Hebrew alphabet in Qabalistic lore; rather that is given to Beth. Aleph then pre-originate the alphabet as light pre-originate the material Universe.

\textsuperscript{114} Aubrey D.N.J. de Grey from his research on aging
\textsuperscript{115} Piero Scaruffi in The Physics of Consciousness
\textsuperscript{116} Cf. our article, The Obeah & the Wanga

It was in 1952 that a young American physicist, Stanley Miller, advanced the idea that the first molecules of life (including aminoacids, the building blocks of proteins) were formed accidentally by the Earth’s early volcanism and then triggered into reproducing systems by the energy of the sun and lightning strikes. His calculations of how lightning may have affected the Earth’s primitive atmosphere gave rise to the quest for the experiment that would reproduce the birth of life in a laboratory (with hints of Frankenstein and all the rest). One catch remained, though: the product of Miller’s prebiotic chemistry would still be inactive chemicals.\textsuperscript{115}

The path of the lightening flash illustrated on the Tree-of-Life introduces this primordial energy that is also equivocated to the orgasm in conjunction with a primal and archetypal drive connected to human sexuality; possibly connected with the cerebellum. The light figures as archetypal symbols indelibly impressed upon the mind during the lightening flash of orgasm. This is a certain key to sexual Magick that mimicks in the microcosm of the copulating couple as it figures into nature’s process for creating life on Earth.

In the conjoined process, it is said that the two genders generate an exchanging loop of energy; sometimes symbolically referred to as an Egg. It is in this that the shared orgasm makes such an imprint into the shared visualization upon an egregore or mind working as one transcendent of the two participants; also called the \textit{Magickal Childe}. But the encoding into the genetic activity of the physical bodies of the man and woman, each individually becomes the \textit{Wanga} to the \textit{Obeah} that is the \textit{Magickal Childe}.\textsuperscript{116}

Since the pioneering work conducted in the 1960s by the German physicist Manfred Eigen, autocatalysis has been a prime candidate to explain how life could originate from random chemical reaction. Autocatalysis occurs when a substance A catalyzes the formation of a substance B that catalyzes the formation of a substance C that… eventually catalyzes the formation of A again. At the end of the loop there is still enough A to restart it. All the substances in this loop tend to grow, i.e. the loop as a whole tends to grow. Life could originate precisely from such a loop, in which case the chances that the right combination of chemical reactions occurred at the right time is much higher.

The German patent lawyer Gunter Waechtershauser has improved on that model by explaining how the first forms of life could have synthesized their own vital chemicals rather than absorbing them from the environment, i.e. how a metabolic cycle could have started. Unlike Miller, Waechtershauser speculates that prebiotic reactions occurred not in water but on the ground. At high temperatures, chemicals bound to a metallic surface are much more likely to mix and form the complex molecules which are needed for life. Particularly, iron sulfide Mars/Horus (a very common mineral on the Earth) could have been a catalyst of chemical reactions that created the biochemistry of living cells. He proved that peptides (short protein chains)
could be created out of a few given aminoacids. The next step in the chain would be the emergence of RNA (ribonucleic acid), that he considers a predecessor to DNA. Waechtershauser’s emphasis is on “autocatalysis” (in general, as a process that is fast enough for yielding dramatic consequences) and on the ability of minerals in particular to catalyse the right reactions. Life would be but the natural evolution of a primitive chemical cycle that originally arose on an iron-sulfur surface.  

This explains why the traditional Philosopher’s Stone might have been found with metal in the athanor. Lead may be turned into gold, but iron may be an energizing agent; shall we say, in one of the processes leading up to the final successful experiment. Mars is the planet attributed to iron and is interpreted astrologically to emphasize force or energy. It is also the planet attributed to Horus, which sits on the throne of Ra, the Sun…or gold. And Iron in its digestible form is a key element in the blood, which is integral to the metabolic process of the cell.

In 1995 the Dutch chemist Anthonie Muller has shown that “thermosynthesis” is a viable alternative to explain the origin of life. Muller points out that life probably originated in conditions where photosynthesis and chemosynthesis (getting energy from light and food) were unfeasible, simply because there were not enough life and food. If life originated in an underwater volcano covered with ice, neither light nor food were abundant. What was abundant was a temperature difference. This “gradient” of temperature would cause convection currents, that would drag the early forms of life up and down in thermal cycles, from hot to cold and back to hot. The larger the temperature difference, the stronger the convection currents, the faster the thermal cycles, the more efficient the energy production. Heat was therefore the main source of energy, and heat was coming from the environment.

Photosynthesis and chemosynthesis do yield much more power, but thermosynthesis was simply the only feasible form of energy production. The early living cells were basically built around “heat engines". Some of their enzymes or membranes worked essentially as heat engines.

Energy seems not to be a particle, but perhaps a wave which suggests the photon (boson) and again, phosphorylation as a Fifth Dimensional attribute. More interesting, thermosynthesis explains the life-force generated of the N.O.X.; the extreme material end of the spiritual-material duality. Consciousness is an a-priori component of movement and all things are moving at each and every moment. Nothing remains at a true inert and still state, but that it is a component of human imagination; an intellectual concept that even has a cosmogonic perspective, i.e. the Ain Soph Aur.

In a steam engine, for example, water is thermally cycled: water is heated until it turns into steam; the steam expands and performs work; the steam loses its energy and returns to liquid form; and the cycle resumes. In a thermosynthetic cell, a protein is thermally cycled in a similar manner: it is heated until it turns into a more fluid state; this generates work in the form of ATP (the chemical which is the energy source for almost all physiological processes) while the protein returns in its original state; and the cycle resumes. Whatever the mechanism that created it, the progenitor of all terrestrial life, four billion years ago, was able to tolerate the extreme heat conditions of the time (a few hundred degrees or even a thousand). As a matter of fact, if we walk backwards up the phylogenetic tree (the tree of species), we find that genetically older organisms can survive at higher and higher temperatures. Thermophiles (the microbes that live at temperatures of 70-80 degrees) are living relics of the beginnings of life on Earth. Based on such a phylogenetic tree, the American biologist Carl Woese has proposed a classification of living creatures in which thermophiles (or “archaea”, first discovered in 1964 by Thomas Brock) are different both from eukaryotes (in which DNA is held by a nucleus) and procaryotes (in which DNA floats free in the cells of bacteria): in thermophiles, DNA floats free (like in procaryotes) but resembles the DNA of eukaryotes. Thermophiles can be found underground: some have been retrieved from 3 km beneath earth. An archaea has about two million base pairs of DNA (a human cell has about three billion).

Surprisingly, very little has been made so far of a discovery due to Louis Pasteur: that living systems prefer molecules with a certain handedness (all proteins are made of L-aminoacids and genetic material is made of D-sugars). Actually this molecular asymmetry is the only difference between the chemistry of the living and of the dead matter.

The mystery of the origin of genes is particularly challenging because a gene is such a complicated structure, unlikely to evolve spontaneously.

117 Piero Scaruffi in The Physics of Consciousness
118 Ibid
Walter Gilbert has noted that most of a person's DNA does not code genes but what appears to be gibberish, and even the part that is code is distributed in fragments (or "exons") separated by useless pauses (or "introns"). In his opinion the first genetic material was made of exons, who symbiotically got together and formed new, more complex genetic material. Introns are not random leftovers, but sort of gluing elements from the original material. In a sense, his theory points to the possibility that the gene is not the ultimate unit, but exons are.

Attention has been focusing on RNA since RNA has been shown to be a self-replicating molecule that can act as its own catalyst. DNA cannot make copies of itself, and proteins cannot create themselves. They both depend on each other. But (some kind of) RNA can act as its own enzymes (i.e., its own catalyst). Therefore, RNA is capable of replicating itself without any need of proteins. Stanley Miller proposed that the first living creatures may have been able to synthesize protein and reproduce without the help of the DNA, depending solely on RNA to catalyze their growth and reproduction. Thomas Cech had already proved (in 1982) that RNA molecules alone can induce themselves to split up and splice themselves together in new arrangements. It is also chemically plausible that all four RNA nucleotide bases could have been created in nature by ordinary atmospheric, oceanic and geological processes. Miller's theory, though, requires that life was born in lukewarm water, not the very high temperatures of thermophiles. 119

Mitochondrial RNA functions to produce ‘specificity’ in mammalian organs. Influencing this could possibly produce new organs in the normally slow process of natural evolution. This is the method of the increasing complexity of organisms leading to the evolution of the homo-sapien. We can speculate that if the replication of the mRNA can be influenced by thoughts and experiences, then we can not only direct the evolutionary process, but speed it up, which is itself the nature of work in the Alchemical laboratory.

The American Nobel laureate Melvin Calvin was perhaps the first one to suggest that "autocatalytic" processes can make life more likely by speeding up the manufacturing of the basic ingredients. The German physicist Manfred Eigen induced RNA molecules to replicate by themselves, thereby lending credibility to the hypothesis that RNA came before DNA and that the first forms of life employed only RNA. Eigen's experiments with "autocatalytic cycles" involving RNA showed that, under suitable conditions, a solution of nucleotides gives rise spontaneously to a molecule that replicates, mutates and competes with its progeny for survival. The replication of RNA could then be the fundamental event around which the rest of biology developed. Eigen speculates that the genetic code was created when lengths of RNA interacted with proteins in the "primordial soup". First genes were created, then proteins, then cells. Cells simply provide physical cohesion. Cells first learned to self-replicate and then to surround themselves with protective membranes. 120

Mutation can be postulated as the nature of the work of evolution. Any possibility in the theory we present, also presents great danger. We can imagine that like the disease of cancer, which may be one of the probable range of potential failures in experimentation, another could be that which leads to evolutionary lines that suffer weakness and or other genetic defects, such as those lines (the Neanderthal or even the Nephilim!...et al).

The American physicist Freeman Dyson believes that one cannot consider life only as metabolism or only as replication. Both aspects must be present. Therefore, we must look not for the origin of life, but for the origin of replication and the origin of metabolism. Since it is unlikely that both metabolism and replication occurred at the same time in one of the primitive organic molecules, life must have had a double origin. It is more reasonable to assume that life "began" twice, with organisms capable of reproduction but not of metabolism and with (separate) organisms capable of metabolism but not of reproduction, and only later there arose a mixture of the two: organisms capable of both reproduction and metabolism.

Dyson's idea is that first came organisms that could reproduce but not replicate. Reproduction is simply a cell division: two cells are created by dividing a cell in two. Replication implies that molecules are copied. Reproduction with replication implies that the new cells "inheret" the molecules of the mother cell. Replication became a parasite over metabolism, meaning that organisms capable of replication needed to use organisms capable of metabolism in order to replicate. First proteins were born and somehow began to metabolize. Then nucleic acids were born and somehow began to replicate using proteins as hosts.

The two organisms became one thanks to a form of symbiosis between host and parasite. Dyson borrows ideas taken from Manfred Eigen (who claims that RNA can appear spontaneously) and Lynn Margulis (who

119 Piero Scaruffi in The Physics of Consciousness
120 Ibid
claims that cellular evolution was due to parasites). Basically, his theory is that RNA was the primeval parasite.
Genetic code is just a code that relates mRNA triples and protein's aminoacids.
The paradox of DNA is that a mono-dimensional structure like the genome could specify the function of a three-dimensional structure like the body: the function of a protein is underspecified in the code, it is the environment that determines a unique interpretation. There is no causal connection between the syntactic (genetic) information and the semantic (phenotypic) information that results from it.
Then the growth of our body, the spontaneous and autonomous morphogenesis, rests upon the properties of proteins. 121

The “mono-dimensional” structure of the DNA has a parallel with both the one-dimensional aspect of the Tree-of-Life in the Atzlhithic world and as well, the mono-atomic elements in the alchemical science that has developed into a product called Ormus. That life itself emerges from two methods or sources shows the inherent dualistic nature of life in this dualistic Universe.

My basic theory is that the written word was actually a virus,” he once said, "that made the spoken word possible. The word has not been recognized as a virus because it has achieved a state of stable symbiosis with the host... 122

That the RNA is some sort of virus is also reminiscent of William Burroughs Virus. It both appears spontaneously and enters a symbiotic relationship with the cell. Much as the formulation of vocabulary enters into a symbiotic relationship with human thought. And of course, human thought is the measure of experience. Words are then used in Magick formulary and given what until now, can only be assumed to be strong power and the now we can positively induce to be accurate.

The term “negligible senescence” was coined to denote the absence of a statistically detectable increase with organismal age in a species’ mortality rate. It is accepted as the best operational definition of the absence of aging, since aging is itself best defined as an increase with time in the organism’s susceptibility to life-threatening challenges. It has been compellingly shown to exist only in one metazoan, Hydra; certain cold-blooded vertebrates may exhibit negligible senescence but limitations of sample size leave the question open;1 and it has not been suggested that any warm-blooded animal (homeotherm) does so. Indeed, humans are among the slowest-aging homeotherms.
Since Gilgamesh, civilization has sought to emulate Hydra – to achieve a perpetually youthful physiological state – by intervention to combat the aging process. Such efforts may appropriately be termed “strategies for engineered negligible senescence” (SENS). This phrase makes explicit the inevitable exposure to extrinsic, age-independent causes of death (which is blurred by more populist terms such as “immortality” or “eternal youth”), while also stressing the goal-driven, clinical nature of the task (in contrast to the basic-science tenor of, for example, “interventive biogerontology”). Here we discuss the feasibility, within about a decade, of substantive progress towards that goal.
It is worth stressing, at the outset, civilization’s considerable untapped ability to increase mean lifespan. One of us (B. N. A.) has devoted much energy to spreading awareness of the extremely cheap and straightforward measures already available for reducing one’s age-specific susceptibility to the major lifethreatening diseases, particularly cancer, by micronutrient supplementation. In poorer societies, micronutrient deficiency is endemic due to poor diet; efforts to induce better dietary habits (particularly the greater consumption of fruit and vegetables) have been notably unsuccessful. However, such dietary shortfalls can also be avoided with a daily multivitamin costing just 3 cents. A large increase in such societies’ mean healthy lifespan should result, just as has been achieved by public health measures in the past century. 123

The very nature of Crowley’s O.T.O. IXth Degree secret; the production of the Elixir of Life is produced by sexual contact. Its affect is partially demonstrated by a masturbatory process (noted to belong to the VIIIth Degree instruction); the results of which Crowley details in his autohagiographical account of his well-known experience on Oesopis Island.

121 Piero Scaruffi in The Physics of Consciousness
122 (from The Job, 1974)
123 Aubrey D.N.J. de Grey from his research on aging
On the IXth Degree elixir, Crowley contemplates perpetual youth; writing in a June 7, 1919ev entry in his diary:

The conditions of life are that the organism should be able to adjust itself continually to its environment. Any individual, to do this for long, needs either very great intelligence or very great luck. His chief physical asset is elasticity, the power of compensation and recuperation. Our bodies are some 75% pure water; we are a mere sponge, our strength arises from the great mechanical ingenuity of our structure. But we are not ‘solid bodies’ like most inanimate beings. This water, by kidneys, lunds, and skin, contstantly cleanses us, and carries off most of our waste and oxious matter. Block one of these conduits; death follows very rapidly. However, this drainage system is not quite perfect; our pipes ‘fur’ like a kettle. Disease and accident apart, we die of arterio-sclerosis caused by the gradual deposite of insoluble salts which harden the arteries and destroy the elasticity which enables them to adjust themselves to new conditions...

As in philosophy, change is life, stagnation death; we should not fear a brisk metabolism. Why should the process which we call growth only a few years ago become degeneration?...

Now all means that we take to prolong life, such as I have outlined above, have so far failed to supply this superfluidity of energy which we really desire...

There are only two solutions possible, the invention of either a solvent more perfect than water, or a super-Food. The first alternative is theoretically none too probable. As to the second, if food were merely a chemical and mechanical agent in us, the problem would be one of diet. But there is some reason to believe that food contains a substance yet unanalyzed and unweighed which is of the nature of puer Energy. Live foods, like oysters, stimulate inexplicably; foods long stored lose their nutritive value, though the chemist and physicist can detect no change. We need to phyical research but only common sense and common experience to tell us that here is a difference netween a live thing and a dead one beyond the detective powers of the laboratories of Mid-Victorien arrogance and dogmatism...

As yet we cannot drink at the source of Life, Keep Youth perfectual as we can no keep Light—strange realization of the Rosicrucian’s dream, or, it may be, discovery of his secret!

But we have found the Super-food. We know a vehicle of which a few greains can house enough pure light to fil a man not only with nourishment, but with Energy almost superhuamn, and parallel, Intelligence incredibly sub-bright for four-and-twenty hours. That substance is theoretically easy, but practically hard to obtain.124

Some of the Ormus elements, Copper, Silver, Gold, Platinum, Rhodium and Irridium are micro-nutrients that have been found in daily vitamins and of course, nutritional food sources. “The iridium and the gold seem to speed up the metabolism of the body about 40% and they seem to not go into the bloodstream and not go through the kidneys. It seems to be taken into the acupuncture system of the body and it seems to be associated with the spinal and the thymus. Which, in fact, is the consciousness and the metabolic rate of the body,”125 as suggested to be a key factor by Aleister Crowley in his notes on the Elixir of Life. These elements, along with gold are atomically altered into mono-atomic (one electron) elements and may be classified inert minerals. They are found to permeate the environment, our food sources, and our bodies and are often referred to as colloidal metals; also mentioned in another deGray document on the aging process.

When Darwin discovered evolution, he also indirectly created the premises for a momentous shift in the scientific paradigm. Over the centuries, Science had always held that order can be built only rationally, by application of a set of fundamental laws of Physics. Scientists like Newton and Einstein simply refined that model by using more and more sophisticated mathematics. Throughout the theoretical developments of Physics, the fundamental idea remained that in nature order needs to be somehow created by external forces. Darwin showed that order can build itself spontaneously, without any help from the outside. Evolution is such a process: it is capable of building higher and higher degrees of order starting from almost nothing. As far as Darwin was concerned, this paradigm only applied to Biology, but the idea has been so powerful that recently more and more natural phenomena have been reduced to some kind of spontaneous "emergence" of order.126

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124 The Magickal Record of the Beast 666; the Journals of Aleister Crowley
125 Notes from Portland workshop, July 29, 1995
126 Piero Scaruffi in The Physics of Consciousness
Both Isaiah in the Old Testament and Jesus of the New Testament reaffirms that “ye are gods.” This certainly implies that we create ourselves; not our parents and not some anthropomorphic god. It is we ourselves, that organize both our minds and bodies...or I should say, the mitochondriatic consciousness, an aggregate or “Force” determine its own consciousness through its own volition (Will in Thelemic terms). Darwin refers to this as natural selection.

Natural selection optimises each species’ rate of aging for its evolutionary niche, and that optimum is thought never to be infinitesimal – in other words, negligible senescence is always sub-optimal. (*Hydra* escape the logic underlying this generalisation because their lack of long-lived cells means that the “maintenance cost” of living indefinitely is no more than that of living a few months.)

... we suggest that reversing mammalian aging is not necessarily any harder than dramatically postponing it. The most influential molecular changes in age-related decline, such as accumulation of mutations and undegradable material in long-lived cells, are irreversible by natural cellular processes. A low-technology, but nonetheless important, aging-reversal strategy with considerable promise is appropriate exercise. Though conventional sporting activity will not extend maximum lifespan, other regimes (particularly pliometric contraction, where the muscle is extended while in tension) have the potential to restore both muscle mass and bone density, and are indeed used by body-builders. This appears to operate by releasing a splice variant of liver IGF-1 that is secreted by skeletal muscle and operates in an autocrine and paracrine fashion.127

Exercise is also a key factor in the preservation of vitality in the body. This also seems to effect the consciousness in that regular exercise seems to stimulate or nurture a state of alertness and increased awareness of the senses. And of course, it is a part of the process of sexual coitus; along with imagination, emotion and mood. These elements, added together create an operating point where distinct impressions can be imprinted on the mind and hence, as shown above, into the experiential database that is human DNA.

Muscle and bone are also rejuvenated by hormone supplementation, since hormonal changes underlie (for example) the change in relative activity of osteoblasts and osteoclasts that causes loss of bone density and eventually osteoporosis. Similarly, growth factor-induced reversal of thymic involution has been reported recently and may comprehensively restore youthful immune function.128

The thymal secretions are induced during sexual engagement; again, a true physical workout. The pineal secretions, a part of the visualizations during sexual foreplay are connected with the emotional aspects of sexuality and trigger still other secretions in the genital glands adding to the complexity of this most complex, life-energizing primordial stew.

Actually, all of our mitochondrial DNA and the nuclear DNA in some cells are rather short-lived too, but DNA in general is functionally long-lived. This is because new DNA is synthesised by copying old DNA, so DNA damage can still accumulate, even though it’s not all inflicted upon the same molecule. DNA suffers three major types of damage: mutations (changes to the sequence), epimutations (persistent changes to the decorations, that control gene expression), and senescence-inducing changes (such as telomere shortening). [Note: the term “epimutation” was coined many years ago by the eminent gerontologist Robin Holliday (3), but has not really caught on. I like it, because the more usual phrase “heritable epigenetic change” clearly also encompasses the plethora of “deliberate” changes that occur during cellular differentiation (during development and throughout life) to control gene expression.] All three happen to nuclear DNA; only mutations happen to mitochondrial DNA. Outside the cell, the situation is even simpler. Nothing in our blood exists for very long. The proteins that form blood vessels, and, indeed, maintain the three-dimensional structure of all our tissues, are rather different. Many of them are very long-lived, and they accumulate the “crosslinking” referred to above. Also, especially in the brain and the artery wall, junk accumulates between cells.

*The immune system.* The immune system relies heavily on the coexistence of a wide spectrum of different cell types that are distinguished by the presence or absence of certain proteins on the cell surface; also, within each such cell type there needs to be substantial genetic variation, which is achieved by special "hypervariable" regions of the DNA that are deliberately scrambled in order to make the immune system discriminating (that is, capable of homing in on anything foreign while not destroying the body itself). This polyclonality diminishes with age, and there are also changes to the relative and absolute abundance of the various cell types. Both of these changes lead to a progressively impaired immune system. However, because all this complexity is laid down by a genetic system that is still present in the old individual, the declining immune system might just recover on its own if its cellular environment were restored to a youthful state. A hint that this hypothesis might be true comes from the finding in mice (4) that restoring youthful concentrations of certain

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127 Aubrey D.N.J. de Grey from his research on aging
128 Ibid.
growth factors stimulates regrowth of the thymus, an organ that produces many of the immune cell types mentioned above and loses as many as 90% of its cells during the first half of life. The endocrine system. The endocrine system is in the same boat—but, luckily, it is also a relatively straightforward system to repair directly if such repair is needed. Most glands secrete progressively less of the hormones that they make, and this decline, in most cases, does not occur because the glands shrink in size (like the thymus), but because the constituent cells become less active. This inactivation could result from debilitating changes in the extracellular environment, or from accumulation of lysosomal junk. It’s hard to see what else could drive it, so I’m optimistic that the endocrine system will mostly fall off the list of things we need to fix. But also, since (by definition) these glands make substances that circulate in the blood, it doesn’t matter which cells make them. We can therefore engineer other cells to do the same job, and we already know to some extent how to do this; this would also work for hormones whose decline is “programmed”, such as estrogen. It wouldn’t help for hormones whose levels rise with age, such as insulin, but those are the ones most likely to revert when everything else is fixed, because the age-related rise is a compensatory response.  

We have shown in other writing (documents of the GCL) that the endocrinal system is an integral consideration in Sexual Magick. These secretions are let into the blood, which circulates throughout the body and is particularly involved in the genital secretions. Indeed, in Occult symbology, these secretions are referred to as if they were the blood itself.

Indirectly Darwin is causing a dramatic change in the idea of Physics itself: are splitting the atom and observing distant galaxies the right ways to explain the universe? Or should we focus instead on the evolutionary process that gradually built the universe the way it is now? Should we study how things are modified when a force is applied (the vast majority of what Physics does today) or should we deal with how things modify themselves spontaneously? As a matter of fact, Darwin’s laws, unlike the laws of nature claimed by physical sciences, cannot be written down in the form of differential equations. They can only be stated in a generic manner, and any attempt to formalize them resorts to algorithms rather than equations. Algorithms are fundamentally different from equations in that they are discrete, rather than continuous, they occur in steps rather than instantaneously, and they can refer to themselves. A Science based on algorithms would be inherently different from a Science based on equations.

Finally, Darwin’s paradigm is one that is rooted in the concept of organization and that ultimately aims at explaining organization. Indirectly, Darwin brought to the surface the elementary fact that the concept of organization is deeply rooted in the physical universe. Darwin’s treatise on the origin of species was indeed a treatise on the origin of order. There lies its monumental importance.

One of the themes straddling both biological and physical sciences is the quest for a mathematical model of phenomena of emergence (spontaneous creation of order), and in particular adaptation, and a physical justification of their dynamics (which seems to violate physical laws).

Bernard Derrida will show that a system goes through a transition from order to chaos if the strength of the interactions among its parts is gradually increased. But then very "disordered" systems spontaneously "crystalize" into a higher degree of order.

First of all, the subject is "complexity", because a system must be complex enough for any property to "emerge" out of it. Complexity can be formally defined as nonlinearity.

The world is mostly nonlinear. The science of nonlinear dynamics was originally christened "chaos theory" because from nonlinear equations unpredictable solutions emerge. A very useful abstraction to describe the evolution of a system in time is that of a "phase space". Our ordinary space has only three dimensions (width, height, depth) but in theory we can think of spaces with any number of dimensions. A useful abstraction is that of a space with six dimensions, three of which are the usual spatial dimensions. The other three are the components of velocity along those spatial dimensions. In ordinary 3-dimensional space, a "point" can only represent the position of a system. In 6-dimensional phase space, a point represents both the position and the motion of the system. The evolution of a system is represented by some sort of shape in phase space.  

Overall, Darwin challenges endeavors and values had been generally assumed and imply the immanence of consciousness in matter that provide order out of chaos. As ultimately this involves the rearrangement of atoms in their formation of complex molecules, electricity, especially in the form of a lightening flash (stirring the primordial stew as the Earth was cooling) must be an integral part of this operational formula. Dr. Royal Raymond Rife discovered in the 1930s that certain precise electrical frequencies not only affirms this, but can even reverse many diseases; viral, bacterial and cancerous. At these frequencies only

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129 Aubrey D.N.J. de Grey from his research on aging
130 Piero Scaruffi in *The Physics of Consciousness*
the malignancy is uprooted without any collateral damage to tissue. An interesting question confronts the experimenter; can such frequencies be produced by the mind, utilizing visualization and thought combined with the rhythmic movement of the two bodies in coitus?

The shapes that chaotic systems produce in phase space are called "strange attractors" because the system will tend towards the kinds of state described by the points in the phase space that lie within them. Darwin's vision of natural selection as a creator of order is probably not sufficient to explain all the spontaneous order exhibited by both living and dead matter. At every level of science (including the brain and life) the spontaneous emergence of order, or self-organization of complex systems, is a common theme.

From this complexity emerges the true religion in its evolutionary nature, which is why Horus sits on the throne of Ra, temporarily. We must assert then that life and order are immutable forces, they cannot be destroyed; but merely changed or temporarily suppressed by another force while simultaneously affecting whichever force is concerned. This would only be a logical necessity since science is showing more and more that order is a condition of chaos and vice versa. But it’s the involutionary nature of spirit, down into matter that is more clearly suggested by the above quote. For this, Madame Blavatsky offers the Occult account; both criticizing Darwin for having missed half the formula as she by inference, praise him for his important discovery. Those who would stick specifically with the ‘evolution only’ formula, have but to consider AL:II.32 - Also reason is a lie; for there is a factor infinite & unknown; & all their words are skew-wise. In other words, we don’t know everything. As Crowley states in Magick in Theory and Practice, logic itself is but an agreed-upon convention.

The spontaneous emergence of order would be more akin to the forces of N.O.X. (the darkness of matter), which are themselves evolutionary as the L.V.X. (light) is involutionary. The L.V.X. seems more self-explanatory than the N.O.X., which we might say is that matter that the L.V.X. then infuses itself into. Yet, even that matter is but a structure of light, though it doesn’t seem apparent that this also comes from the fifth dimension of which we said light emanates. We might then suggest that as this fifth dimension is postulated as originating from that which is above our material plane, the N.O.X. then might originate from a plane beneath the material plane.

What we are readily implying here is that life itself is organized into a hierarchy, which should be self-evident to the reader. From minerals to plants, animals to human beings, all of life displays various levels of complexity. The so-called simpler forms of life, including minerals, plants and animals, exist with consciousness but no awareness of that consciousness. Human beings are distinguished as being the sole possessors of this special awareness.

Language has to do with a hierarchical process of spelling out implicit ideas in explicit terms by means of rules and feedbacks. Organisms and societies also exhibit the same hierarchical structure. In these hierarchies, each intermediary entity ("holon") functions as a self-contained whole relative to its subordinates and as one of the dependent parts of its superordinates. Each holon tends to persist and assert its pattern of activity. Wherever there is life, it must be hierarchically organized. Life exhibits an integrative property (that manifests itself as symbiosis) that enables the gradual construction of complex hierarchies out of simple holons. In nature there are no separated, indivisible, self-contained units. An "individual" is an oxymoron. An organism is a hierarchy of self-regulating holons (a "holarchy") that work in coordination with their environment. Holons at the higher levels of the hierarchy enjoy progressively more degrees of freedom and holons at the lower levels of the hierarchy have progressively less degrees of freedom. Moving up the hierarchy, we encounter more and more complex, flexible and creative patterns of activity. Moving down the hierarchy behavior becomes more and more mechanized. 

131 Piero Scaruffi in The Physics of Consciousness
132 Ibid
Humanity is an aggregate of many living beings producing one chaotic consciousness that itself, must become unified; a congealing of the soul (as noted in our article: Congealing of the Soul). Dr. Buck in his book; Cosmic Consciousness, details a theory of the evolution of human consciousness that shows us first having perceptual awareness, which may still be part of the cognition process involving the cerebellum and the precept or symbol-laden dreaming brain. This was said to evolve into an aggregate of precepts to form conceptual awareness that is the current capacity in humanity. From there, cosmic consciousness then would be our destined aggregating of concepts into meta-concepts, which we can speculate may be a part of our intuitive mind. Consciousness as it develops and evolves is itself and aggregate of physical organization.

These meta-concepts have already approached our consciousness in the form of symbols, which start in philosophy with Plato’s concept of the ideal form. From there, they take on a multi-layered complex of meaning that address both our external and internal lives; the most basic of these forms being geometrical.

Our universe presents us with forms (that we can perceive and name). A form is defined, first and foremost, by its stability: a form lasts in space and time. Forms change. The history of the universe, insofar as we are concerned, is a ceaseless creation, destruction and transformation of form. Life itself is, ultimately, creation, growth and decaying of form. Every physical form is represented by a mathematical quantity called "attractor" in a space of internal variables. If the attractor satisfies the mathematical property of being "structurally stable", then the physical form is the stable form of an object. Changes in form, or morphogenesis, are due to the capture of the attractors of the old form by the attractors of the new form. All morphogenesis is due to the conflict between attractors. What catastrophe theory does is to "geometrize" the concept of "conflict."

The universe of objects can be divided into domains of different attractors. Such domains are separated by shock waves. Shock wave surfaces are singularities called "catastrophes". A catastrophe is a state beyond which the system is destroyed in an irreversible manner. Technically speaking, the "ensembles de catastrophes" are hypersurfaces that divide the parameter space in regions of completely different dynamics. The bottom line is that dynamics and form become dual properties of nonlinear systems. This is a purely geometric theory of morphogenesis. His laws are independent of the substance, structure and internal forces of the system.

Thom proves that in a 4-dimensional space there exist only 7 types of elementary catastrophes. Elementary catastrophes include: "fold", destruction of an attractor which is captured by a lesser potential; "cusp", bifurcation of an attractor into two attractors; etc. From these singularities, more and more complex catastrophes unfold, until the final catastrophe. Elementary catastrophes are "local accidents". The form of an object is due to the accumulation of many of these "accidents". In the early 1960s, Monod and others discovered that genes are assembled not in a long string of instructions but in "genetic circuits". Within the cell, there are regulatory genes whose job is to turn on or off other genes. Therefore genes are not simply instructions to be carried out one after the other; they realize a complex network of messages. A regulatory gene may trigger another regulatory gene that may trigger another gene… etc. Each gene is typically controlled by two to ten other genes. Turning on just one gene may trigger an avalanche of effects. 

Our internal visualization process can then be speculated to be a conduit for genetic response. It has always been a matter of intensity in the production of images brought about by a variety of trance-inducing activities in order to heighten and narrow the focus. Indeed, as these symbols may be said to manipulate genetic response, we find a parallel in the circuitry of neurons on the brain; one thought or observation bringing about a host of memories and associations from the brain’s complex filing system.

The genetic program is not a sequence of instructions but rather a regulatory network that behaves like a self-organizing system. By using a computer simulation of a cell-like network, Kauffman proved that, in any organism, the number of cell types must be approximately the square root of the number of genes.

133 Piero Scaruffi in The Physics of Consciousness
134 Ibid
The nuclear repair of mtDNA mutations inherently involves phosphorylation. If the nucleus can fix mtDNA mutation, we have ‘mind over matter’ possibility. At least we have the possibility of making some slight alterations. That there are 13 proteins that are encoded into the mtDNA corresponds with the qabalistic number of transformation. From this we can perhaps surmise some synchronicity as in all Occult Science that is now correlating so well with modern science.

Mitochondrial DNA is extremely minimal—it encodes only 13 proteins. Unfortunately, those proteins are really, really important; there is still doubt whether mitochondrial DNA damage matters in aging, but that’s only because such damage is present only at very low levels. Work has been on going for over a decade to solve the problem of mitochondrial DNA damage in a comprehensive way—by making mitochondrial DNA superfluous. Basically, all we need to do is make some fairly obvious changes to the DNA sequences that encode these important proteins and then put that DNA into the nucleus of cells, where it would benefit from the much greater fidelity of maintenance that our naturally nuclear genes enjoy (see below). As with lysosomal enhancement, this would be done by germ line transformation in mice and, later, by gene therapy in people. The machinery to make this work already exists in our cells, because the 1,000 or so other proteins that make up mitochondria are encoded by nuclear genes. And, sure enough, a couple of groups recently have caused one of the 13 target genes to be expressed in exactly this way in culture.\textsuperscript{135}

Finally, it is in the synergistic energy worked up by the copulating couple that works up these images through the frenetic embrace. It has been presupposed by some Thelemites, including Crowley that one, and most specifically, the male in a heterosexual union should be the one that focuses on the symbol and directs the operation. But it doesn’t seem that there can be any synergy if the two are not working in tandem. The male then becomes the active director of the operation as the female is the passive reflector; returning the energy back to the male. We may then possibly experiment with a reversal of these roles; and there’s also need to consider the dynamics in lesbian and homosexual workings.

In the 1970s the American physicist Buckminster Fuller developed a visionary theory, also called "synergetics", that attacked traditional science at its very roots.

"Synergy" is the behavior of a whole that cannot be explained by the parts taken separately. Synergetics, therefore, studies system in a holistic (rather than reductionistic) way.

The way it does this, is by focusing on form rather than internal structure. Because of its emphasis on shape, Synergetics becomes a branch of Geometrics, the discipline of configurations (or patterns). Synergetics employs 60-degree coordination instead of the usual 90-degree coordination. The triangle (and tetrahedron) instead of the square (and the cube) is the fundamental geometric unit. Fuller’s thought is inspired by one of his own inventions, the "geodesic" dome (1954), a structure that exploits a very efficient way of enclosing space and that gets stronger as it gets larger.\textsuperscript{136}

Indeed, we can even speculate on the positions used in coitus by the working couple to be representations of geometric patterns; perhaps as complex as the patterns drawn into the sky that is the Starry Gnosis. To this end, it would be worth exploring the work of the Citatiza-Tet Tarot for more in this.

\textsuperscript{135} Aubrey D.N.J. de Grey from his research on aging
\textsuperscript{136} Piero Scaruffi in The Physics of Consciousness
The Cosmogony of Consciousness

Sacred Geometry is the first occult truth revealed in the West; particularly by the Pythagorean Mystery School (cf. Greek Qabalah II). In her historical accounting, Madame Helena Petrovna Blavatsky demonstrated that this Gnosis was also a part of Eastern philosophy in and around the same period with the onset of Buddhism (cf. Theosophical Discussion).

[Editor’s Note: Buddhism emerged during a period in which there was an increased popularity of ascetic traditions in India. Buddhism is estimated as emerging around 4-500 BCE and the Upanisads are believed have been composed around 4-600 BCE. The Upanisads essentially provide ascetic teachings within the Vedic framework often reinterpreting the mainstream rituals in terms of inner meditative techniques and moral developments and placing emphasis on soteriology rather than worldly gain as traditionally emphasized in the earlier vedic rituals and literature. (Cf, Rg Veda) Buddhism is really an innovative interpretation of it's contemporary Upanisadic teachings, and the much earlier Jain and other ascetic teachings associated with the pre-Aryan peoples that inhabited India]

The bottom line is that reality is not made of "things", but of angle and frequency events. All experience can be reduced to only angles and frequencies. 137

This may at first, come as a theoretical exegesis to the modern mind; leaving mathematics involvement in spirituality to the abstraction of symbols and symbolism. Yet in the previous chapter we have already noted the transcendental or evolutionary importance of symbols and symbolism to the development of the mind and cellular structure of the body. That this now can be shown to have a fundamental importance in the physical sciences shows the integral connection with spiritual science in an emerging interdisciplinary paradigm.

Fuller finds "prisms" to be ubiquitous in nature and in culture. All systems contained in the universe are polyhedra, "universe" being the collection of all experiences of all individuals. 138

Arriving at a point in life where the mind begins to perceive the spiritual aspect of life, after having reached the nadir of involution into matter and as apart from its religious dimension, one can be said to have raised one’s awareness; positioning such on the Tree-of-Life, in its lower triad of Sefiroth, in what is called the Veil of Qesheth. Here it is shown that the singular ray of divine light coming from the Sun (Tiphareth; just above the Veil of Qesheth) is said to be fragmented as if having gone through a prism. One also comes to realize the interconnectedness of all humanity as a collective consciousness, with the divinity itself being revealed in all things and referred to as the Universal Mind.

Considering the electrical dynamic discussed above in relation to morphogenesis, we have a working, scientific theory that affirms our interconnectedness as human beings on a purely racial topology; this synergetic connection being called the ‘morphogenetic field.’ This has been explained for the simian race; showing a monkey that on one side of an island, learns to wash the dirt off potatoes before eating them, and suddenly, spontaneously, monkeys on the other side of the island start doing the same thing. In human culture we often refer to this as psychic activity.

Synergetics rediscovers, in an almost mystical way, most of traditional science, but mainly through topological considerations (with traditional topology extended to "omnitopology"). For example, Synergetics proves that the universe is finite and expanding, and that Planck's constant is a "cosmic relationship". 139

137 Piero Scaruffi in The Physics of Consciousness
138 Ibid.
139 Ibid.
We have also shown that the synergistic relationship between a man and woman in coitus develops a special synergistic dynamic that we can now extend to the field of consciousness in human society on this Earth. That thought generates waves and waves then have an integral relationship with energy, we have a perfect corollary with the Thelemic principle of Energized Enthusiasm; consistent with the physical principle known as Planck’s Constant, where the energy of a photon is said to be directly proportional with the frequency of its wave. It all comes down to a theory of mind and its particulate connection with the Aethyr. We should note that though modern science has rejected Newton’s theory of the Aethyr, all that Newton put into the Aethyr is rejuvenated philosophically, with the theory of Dark Energy and Dark Matter. Our minds have an intimate connection with each other and with the Universe surrounding us.

The vast majority of theories of mind still assume that the world is a Newtonian world of objects, of continuous time, of absolute reality and of force-mediated causality. What that means is very simple: most theories of mind are based on a Physics that has been proven wrong. Newton's Physics does work in many cases, but today we know that it does not work in other cases. We don't know whether mind belongs to the set of cases for which Newton's Physics is a valid approximation of reality, or whether mind belongs to the set of cases for which Newton's Physics yields wrong predictions. Any theory of mind that is based on Newton's Physics is a gamble.  

Einstein noted that “God doesn’t play dice with the universe.” Dr. Harold Aspen shows us that the Aethyr can be a geometrical substratum of mind. (cf. Scientific Proof of Levi’s Aethyr). To this end, Sacred Geometry has a vital corollation. Geometry is an intellectual construct with the various shapes and forms not being inherently found in nature. In other words, these forms are a product of the human mind; giving validity to Plato’s theory of ideal forms, which in itself suggests a plane of consciousness that is inherently human in origin.

These forms were said to be on a higher plane, where they manifested in their ideal state. Any higher plane is a plane of mind and in modern thought, these forms are then existent within a ‘field;’ giving them position and movement, which necessarily and especially in Qabalistic thought, also gives them consciousness.

Modern Physics is not necessarily right (although Newton is necessarily wrong on several issues, otherwise Hiroshima would still be standing). But many theories of mind rely on a Physics that, de facto, is either Newton's or is a Physics that has not been invented yet. In the Nineteenth century, the Irish mathematician William Hamilton realized what Newton had only implied: that velocity, as well as position, determines the state of a system. He also realized that the key quantity is the overall energy of the system. By combining these intuitions, Hamilton redefined Newton’s dynamic equation with two equations that derived from just one quantity (the Hamiltonian function, a measure of the total energy of the system), that replaced acceleration (a second-order derivative) with the first-order derivative of velocity, and that were symmetrical (once velocity was replaced by momentum). The bottom line was that position and velocity played the same role and therefore the state of the system could be viewed as described by six coordinates, the three coordinates of position plus the three coordinates of momentum. At every point in time one could compute the set of six coordinates and the sequence of such sets would be the history of the system in the world. One could then visualize the evolution of the system in a six-dimensional space, the “phase” space.

These forms then actualize in material nature into a three-dimensional construct in the same way that the fourth Sefira of the Tree-of-Life also represents this same construct. The fifth Sefira then implies motion, with the sixth being derivative and stating that motion implies consciousness. Therefore, energy is consciousness; expressed in a “six-dimensional space,” which is itself represented in time.

As life, the incarnation of spirit into matter is but one part of a dualistic process that is completed by death, we now then, arrive where we began; in our first quote on page 8 of this work, written by David M. Kiersey in his work, entitled: Towards the Physics of Death, wherein he writes that death is a process where “major levels of complexity within the context of dissipative structures,” such as the human body.

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140 Piero Scaruffi in The Physics of Consciousness
141 Ibid.
upon death, “release stored information that is key to the further evolution of complexity.” This this is “inherent in the massive dissipative structures,” and that it is “thermodynamic” in nature, the breakdown of the body, though as Mr. Kiersey asserts, “returns to chaos.” That the body loses a small amount of weight upon death, demonstrates that the soul or aethyric consciousness that houses the spirit has mass and weight in and of itself. But that the body moves to a ‘hot death’ as discussed in Liber DN of the GCL, information is then passed that evolves to an even greater complexity, generationally.

And as the soul is itself a mirrored reflection of the body, or the Khu in Thelemic terms, that houses the spirit (the Khabs), it must then shake off certain, less complex elements in order to refine itself to greater complexity. We must then deduce from this that this is a part of the process of congealing or avoiding what the ancient Egyptians termed the ‘second death.’

Hot Death is then a transformation of energy; allowing the Will of the Individual to work in harmony with the Law of Change. But more to the point, Hot Death is passionate and connected to karmic evolution, while the Cold Death, freezes the physical body and denies its return to the womb of Babalon...the Earth. In other words, the immortality of the body sought by ignorant Alchemists can only result in the formation of a vampire.

The single biggest change in scientific thinking may have nothing to do with Relativity and Quantum theories: it may well be the discovery that some processes are not symmetric in time. Before the discovery of the second law of Thermodynamics, all laws were symmetric in time, and change could always be bi-directional. Any formula had an equal sign that meant one can switch the two sides at will. We could always replay the history of the universe backwards. Entropy changed all that. Entropy was "discovered" around 1850 by the German physicist Rudolf Clausius in the process of revising the laws proposed by the French engineer Sadi Carnot that would become the foundations of Thermodynamics. The first law of Thermodynamics is basically the law of conservation of energy: energy can never be created or destroyed, it can only be transformed. The second law states that any transformation has an energetic cost: this "cost" of transforming energy Clausius called "entropy". Natural processes generate entropy. Entropy explains why heat flows spontaneously from hot to cold bodies, but the opposite never occurs: energy can be lost in entropy, not viceversa. The universe as a whole is proceeding towards its unavoidable fate: the "heat death".

The law of change (change=stability) should be enough to lead such ignorant Alchemists away from the intuitively obvious and to a truth that is counter-intuitive. The state of maximum entropy, in which no heat flow is possible, assumes that temperature is a ubiquitous constant, which would mean that there is no energy available to produce more heat and evolution would become an impossibility. All the energy in the Universe is to our perception, heat; a heat that naturally moves towards the coldness of space to reconnect with the Aethyr and reformulate itself into form.

The only escape from the heat death would be if the energy in the universe were infinite, which would require an infinite source, such as God; making God into a holism at a hierarchical dimension above our 4 dimensional universe…the fifth or in Qabalistic terms, the Ain Soph Aur. Involution and evolution require time; the fourth dimension, which is itself a product of our consciousness.

Even the very concept of the flow of time is questionable. There appears to be a fixed space-time, and the past determines the future. Actually, there seems to be no difference between past and future: again, it is just a matter of perspective. Mass and energy are not exempted from "relativity". The mass and the energy of an object increase as the object speeds up. This principle violates the traditional principle of conservation, which held that nothing can be destroyed or created, but Einstein proved that mass and energy can transform into each other according to his famous formula (a particle at rest has an energy equal to its mass times the speed of light squared), and a very tiny piece of matter can release huge amounts of energy. Scientists were already

142 Piero Scaruffi in The Physics of Consciousness
familiar with a phenomenon in which mass seemed to disappear and correspondingly energy seemed to appear: radioactivity, discovered in 1896. But Einstein's conclusion that all matter is energy was far more reaching. 143

Energy moving from a hot to a cold object is then becoming crystallized in that object; much in the same way that energy moving into the coldness of matter is the animating factor that we commonly refer to as soul; it is the involution of the light into matter. Time therefore, must move into the future and cannot move into the past so that our effort at living and reaching to pinnacles in the human experience are not simply illusory vanities.

The speed of light is finite and one of Relativity’s fundamental principles is that nothing can travel faster than light. As a consequence, an object located in a specific point at a specific time will never be able to reach space-time areas of the universe that would require traveling faster than the light.

The "light cone" of a space-time point is the set of all points that can be reached by all possible light rays passing through that point. Because the speed of light is finite, that four-dimensional region has the shape of a cone (if the axis for time is perpendicular to the axes for the three spatial dimensions). The light cone represents the potential future of the point: these are all the points that can be reached in the future traveling at the speed of light or slower. By projecting the cone backwards, one gets the light cone for the past. The "world line" is the spatio-temporal path that an object is actually traveling through space-time. That line is always contained inside the light cone.

Besides the traditional quantity of time, Relativity Theory introduces another type of time. "Proper" time is the space-time distance between two points on a world line, because that distance turns out to be the time experienced by an observer traveling along that world line.

Relativity erased the concept of an absolute Time, but in doing so it established an even stronger type of determinism. It feels like our lives are rigidly determined and our task in this universe is simply to cruise on our world line. There is no provision in Relativity for free will. 144

The idea of light being considered “perpendicular” to the three spatial dimensions has been rendered in spiritual writing as coming “from above.” Indeed, it is the first acknowledgment of most banishing rituals in Magick. To “cruise on our world line” both suggests that we interact (at least) with this light as if to travel the orbit of our True Will. However, it should be noted that the “determinism” should not be viewed as predestination; merely as the natural finite limitations as each our beings are and moving within this finite speed of light. Therefore, we are what we are or “I am that I am.” Or as Liber AL vel Legis puts it:

AL II.58: "Yea! deem not of change: ye shall be as ye are, & not other…”

On a macroscopic scale, to escape the limitations of our individuality we should shall we say, ride up that perpendicular beam of light to its origin; wherein we propose this beam emanates; the Fifth Dimension (cf. Testing the Night of Pan). The primordial problem is the weight of our interconnected consciousness; often referred to as the ‘machine’ or in more contemporary terms, the ‘Matrix.’ To be able to effect this escape of our individually limited viewpoint then becomes a paradoxical action because the mechanism won’t allow us to do so. An ‘abyss’ is approached requiring a loss of the consciousness of our individual ego that is electromagnetically connected to the machine by an affect of consciousness by which we fully actualize ourselves in order to become the polar opposite of that NOT that awaits us in the Fifth Dimension. Transcendence then becomes an act of Will that is simultaneously a phycial event!
Einstein’s Relativity Theory is ultimately about the nature of gravitation, which is the force holding together the universe. Relativity explains gravitation in terms of curved space-time, i.e. in terms of geometry. Since gravitation is natural motion, Einstein’s idea was to regard free falls as natural motions, as straight lines in space-time. The only way to achieve this was to assume that the effect of a gravitation field is to produce a curvature of space-time: the straight line becomes a “geodesic”, the shortest route between two points on a warped surface (if the surface is flat, then the geodesic is a straight line). Bodies not subject to forces other than a gravitational field move along geodesics of space-time.

The curvature of space-time is measured by a “curvature tensor” originally introduced in 1854 by the German mathematician Bernhardt Riemann. The Riemann geometry comprises the classical Euclidean geometry as a special case, but it is much more general. Minkowsky's four-dimensional spacetime is characterized by a "metrics". A metrics is a 4x4 matrix, each row and column representing one of the dimensions. The metrics for Newton's spacetime has zeros everywhere except in the diagonal of the matrix. The diagonal has values 1,1,1 and -1. This means that Pitagora's theorem still works, and time is an added dimension. The zeros in the other positions of the matrix specify that the space is flat. When the ones and the zeros change, their values specify a curvature for spacetime. Euclidean geometry works only with the flat-space metrics. Riemann's geometry works with any combination of values, i.e. with any degree and type of curvature.  

Gravitation as the ‘law of attraction’ (a Thelemic concept) is what takes the fully realized self-mind construct in its positively charged polarization to the negatively charged source that is effectively the NOT in Qabalistic rendering. Viewing this as an ultimate natural motion in psychic forces, we gain from this that "View from Nowhere" that Thomas Nagel asserts allows us to view the Universe outside the finite limitations, yet connected to the self in an objective manner. And it is by this that we gain the creative power that is the integral motive of human evolution.

A specific consequence of Riemann's geometry is that "force" becomes an effect of the geometry of space. A "force" is simply the manifestation of a distortion in the geometry of space. Wherever there is a distortion, a moving object feels a "force" affecting its motion. Riemann's geometry is based on the notion of a "metric (or curvature) tensor" that expresses the curvature of space. On a two-dimensional surface each point is described by three numbers. In a four-dimensional world, it takes ten numbers at each point. This is the metric tensor. Euclid's geometry corresponds to one of the infinite possible metric tensors (the one that represents zero curvature). Not only space and time are relative, but space-time is warped.

With his 1915 field equations, Einstein made the connection with the physical world: he related the curvature of space-time caused by an object to the energy and momentum of the object (precisely, the curvature tensor to the "energy-momentum tensor"). Einstein therefore introduced two innovative ideas: the first is that we should consider space and time together (three spatial dimensions and one time dimension), not as separate; the second is that what causes the warps in this space-time (i.e., what alters the metric from Euclid's geometry) is mass. A mass does not voluntarily cause gravitational effects: a mass first deforms space-time and that warping will affect the motion of other objects that will therefore be indirectly feeling the "gravitational force" of that mass. 

Essentially, this is the N.O.X.; the unseen force of attraction expressed in a material manner. The gravitational force between two masses impels them together; withstanding the interference of other forces in proximity. But what we experience as time, perceiving with the mind is not so immaterial at all. And even further, the ‘law of attraction’ is the ‘force’ that distorts the geometry of space; a sort of breakdown of the original material form to be recapitulated into ever expanding new forms. The ontology described in Liber Trigrammaton, may be said to represent mass through the symbol of the stain or imperfection as shown in its second verse:

**Now cometh the glory of the Single One, as an imperfection and stain.**

Before that, the NOT is introduced as the informant of all things, which we may admit through the medium of light, as described above. We might even postulate that the NOT is pure undifferentiated consciousness involuting into form; a “Single One” or Kether, the first Sefira on the Tree-of-Life. This

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145 Piero Scaruffi in *The Physics of Consciousness*
146 Ibid.
then creates that initial disturbance in the field of space, which is nothing more than its own reflection; that reflection being pure, undifferentiated consciousness, which informs all being (absolutely everything that exists; the “ALL”) as the field of space is the emanation of this reflection, physically described as the Aethyr. The condensation of any grouping of these sub-atomic particles disturbs this as yet, unconscious equilibrium is the cause of the warping in the Aethyrlic field, which is the first attempt at organization in this chaotic menstruum. It originates as a blind volition; itself, yet, an “imperfection or stain” that then forces a continuing effort at reorganization to more and more sophisticated levels of complexity in being. God is then the Grand Geometer as taught in Freemasonry; the intent of perfection, which can only exist in the NOT or Ain Soph Aur.

Summarizing: the dynamics of matter is determined by the geometry of space-time, and that geometry is in turn determined by the distribution of matter. Space-time acts like an intermediary device that relays the existence of matter to other matter. 147

Space-time and matter meet on an electromagnetic pole; each holding an opposite charge with the other. The movement from zero through to the three-dimensional expression of nature as shown by the numerical emanation of the Sefirot on the Tree-of-Life is itself a Pythagorean application of this important symbol. As shown by the Sixth Sefira, consciousness emerges out of space-time, a-priori by the sefirotic emanations. The seemingly apparent tautology is easily by-passed; the emanations are the unfolding of dimensions from the NOT and through the first, second and third dimensions, respectively. The ontology is of the one becoming the many with the many existing by the coagulation of Aethyr into crystallized matter.

Relativity Theory and Quantum Theory said something important about the mind. They were as much about mind as they were about matter, only in a more subtle way. Relativity Theory was not only about reality being "relative" to something. It was (first and foremost) about reality being beyond the reach of our senses. Einstein's underlying principle is that we don't always see the universe as it is. Newton's underlying principle was that we see the universe as it is. Newton's Physics is a description of how our mind perceives the universe. There are bodies, there is absolute time, etc. Einstein's Physics is a "guess" about what the universe really is, even if our mind cannot perceive it. Einstein's Physics implied that there may be aspects of the universe that our mind cannot perceive, and that we can guess only by analyzing the aspects that we can perceive. 148

Thomas Nagel uses his deductive reasoning to demonstrate an objective reality beyond the direct experience of the mind attached to the individualized self (as discussed above). Philosophically, he presents a path beyond the solipsism suggested by the problem of the observer in quantum physics. This is that the point where the mind moves beyond its intellectual reach; separated by this apparent ‘Abyss’ to a quantum level of consciousness that might even correspond to a greater consciousness of the congregate life-force of the mitochondria in each and all the cells in our bodies.

Quantum Theory was not only about reality being "quantisized". It was also about reality being beyond the reach of our mind. The single most distressing finding of Quantum Theory is that reality as we know it only occurs when somebody observes it. The electron is in a certain place only when somebody actually looks at it, otherwise the electron is, simultaneously, in several different places. We can analyze this finding with either of two stances. Our mind has no limitations. It can perfectly perceive nature as it is. It observes only one value because that is what nature does: the multiple choices for a quantity's value collapse to just one value when that quantity is observed by an observer.

Our mind has limitations. The quantum collapse from many values to just one value is due to a limitation of our mind. Our mind cannot perceive nature as it is. It can only perceive one value for each quantity. The electron is in many places, but our mind cannot perceive a thing being in many places at the same time, so it "collapses" the electron into only one specific place at a time. This is just an effect due to the limitation of our mind. We are forced to "sample" reality because we can't handle all of it. After all, that's what all our senses

147 Ibid.
148 Piero Scaruffi in The Physics of Consciousness
do. They are bombarded all the time with data from the environment, and they only pick up some of those data. We don't perceive every single detail of what is going on around us, we are forced to be selective. The mind turns out to be a sense that also has limited capacity, although the limitation is of a different kind. Each item of reality (a position, a speed, etc) "has" many values. The reason we observe only one value is that our mind can't handle a universe in which quantities have more than one value.

The conceptual revolution caused by Quantum Theory was somewhat deeper than the one caused by Relativity Theory. Reconciling Newton and Einstein is relatively easy: Newton's theory was not false, it was just a special case of Einstein's theory, the one in which the spacetime is Euclidean. Reconciling Newton and Quantum Theory is, on the other hand, impossible: Newton's theory is just false. It seems to work because we insist to assume that such things as big objects truly exist.  

To get us beyond the limitations of the mind, symbols are cleverly employed in Occult science. The layers of meaning built into a symbol become multi-dimensionally appealing to our intellect and what is called Astral Perception or perception of the Aethyr. The mistake commonly made in reference to Astral Projection is that the soul/mind is ‘projected’ outwards to some fixed point or theoretically real place. But in a Universe of non-locality, this doesn’t need to be and actually can’t be so. The non-locality of the Aethyr and aethyric particle/waves can be most readily proscribed as a ‘sea of possibilities’ to borrow a phrase from Patti Smith.

A theory of mind that does not take into account Relativity is a legitimate approximation, just like a theory of the Earth that does not take into account Relativity is a legitimate approximation. But no theory of mind can ignore Quantum Theory.

These two constants were determined, indirectly, by studying two minor phenomena that were still unsolved at the end of the century: the ether and the black body radiation. The presence of the ether could not be detected by measuring the speed of light through it; so Einstein assumed that the speed of light is always the same. The black body does not radiate light with all possible values of energy but only with some values of energy, those that are integer multiples of a certain unit of energy; so Planck assumed that energy exchanges must only occur in discrete packets.

Einstein was proven wrong in 1964 by the Irish physicist John U., whose theorem basically ruled out "local hidden variables", precisely the type that Einstein invoked. Bell's conclusion is that, on the contrary, there are objective, non-local connections in the universe. In other words, two particles, once they have interacted, will keep interacting forever (their wave functions get entangled forever). Einstein believed in the law of locality, i.e. that two objects can interact only if they touch each other or if their interaction is mediated by some other object; but Bell proved that the "wave" is enough to provide interaction. Two measurements can be related instantaneously even if they are located in regions too far apart for a light signal to travel between them. Non-locality, or inseparability, is a fact of nature. Since then, experiments have provided concrete examples of non-locality. The American physicist David Bohm believed in an "undivided whole" even before Bell's experiment. His idea was that the whole universe is entangled in one gigantic wave.

Non-locality in itself seems to specify an Aethyr; a-priori. Each and every wave touches all and that each and every part of that which we call ourselves, body and soul, are put quantum particle/waves; touching all. The ONE is ALL and the ALL are ONE has been heralded by mystics since ancient times. This is the mystical truth of our existence as much as it is scientific fact. It has been said that what was once Magick is now Science…and we can add that what has been Magick is becoming Science in this, our time. This giant web that binds us is the physical and vital Aether that we may also call ‘Universal Mind.’

Bohm assumed that the wave function does not represent just a set of probabilities: it represents an actual field. A particle is always accompanied by such a field. This field is a real field and acts upon particles the same way a classical potential does. (Bohm resurrected an interpretation of Quantum Theory that de Broglie had abandoned, the theory of an ordinary wave guiding an ordinary particle). The beauty of this assumption is that, with the introduction of this additional potential, something momentous happens to the equations of Quantum Mechanics: position and momentum of a particle are no longer incompatible, they can be measured precisely at the same time, and Heisenberg’s principle is defeated.  

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149 Ibid.
150 Piero Scaruffi in The Physics of Consciousness
151 Ibid.
The most sublime truths in mystical study have always been recognized by the intrinsic beauty found in a potently revealing simplicity. And so the same goes with scientific theory and the solving of practical problems in the creativity that goes with discovery and invention. Einstein’s ‘Special Relativity Theory’ \((E=MC^2)\) is as simple as it is sublime. When Frater Achad presented the number 31 as the Key to Liber AL, Crowley was moved in the same way.

That the Aethyr is a projection of Universal Mind into a field is as beautifully sublime a proposition that we could possibly hope to consider in respect to the ineffable source of this projection (God) that we can only postulate as the NOT (Ain Soph Aur). This source is beyond the totality of the field it projects and that totality is all that we can reasonably apprehend.

In Physics, a potential describes a field in terms of how, at each point in space, the particle located at that point will be affected by that field. In Newton’s physics the effect of the classical potential on a particle is proportional to the magnitude of the field. Bohm thought that his quantum field, in particular, had to reflect whatever is going on in the environment, including the measuring apparatus. Therefore, the quantum potential depends only on the form, and not on the magnitude, of the quantum field. The “strength” of the quantum potential does not depend on the intensity of the wave but only on the form of the wave. Even a very weak quantum potential can affect the particle. Even a very distant event can affect the particle. The field that Bohm introduced in the equations to fix Heisenberg’s indeterminism represents a “sub-quantum” reality. Bohm’s quantum potential does not act within the 4-dimensional geometry of spacetime; it acts beyond it. In a sense, it defines a common pool of information, a way to connect everything together, just like dancers can use the music to move together in harmony.

We have already discussed that which is beyond the four-dimensional space-time continuum as being a fifth dimension that is the realm of light. And we also have the Aethyr as the material “environment” of which the “quantum potential” for the materialization of a wave into a particle is left up to the ‘will’ of the observer; consciousness itself. The dance of life is our creation as is all of nature; we are all gods. This dance involves the interaction a various particles that distort the geometry of space; forcing it to re-adjust—a theme inherent in the Adjustment Atu of the Holy Tarot. Intellectually of course, this gives us the concept of Justice; the original title of this Atu.

Bohm thought that this field must be fluctuating rapidly and what Quantum Theory observes is merely an average over time (just like Newton’s physics reads a value for quantities that are actually due to the Brownian motion of many particles). Quantum physics deals with mean values of an underlying reality just like Newton’s physics deals with mean values of thermodynamic quantities. At this “sub-quantum” level, quantum effects all but disappear: a particle’s position and momentum are well-determined. The mystery of the collapse of the wave function, of the discontinuity in the transition from the quantum world to the classical world, occurs only at the quantum level, whereas Bohm believes there is a deeper level at which the apparent discontinuity of the collapse disappears. After all, the study of “elementary” particles has shown that even elementary particles can be destroyed and created, which means that they are not the ultimate components of the universe, that there must be an underlying reality, or, in Bohm’s terms, an underlying “flux”. Bohm thought that the basic problem lied in an obsolete notion of “order”. Thus, Bohm distinguished between the “explicate” order (the world of isolated spacetime thing-events that our senses experience) and the “implicate” order (all thing-events are part of a whole, the “holomovement”). The explicate order emerges from the holomovement. The holomovement contains all instances of explicate order as potentialities.

This has led to the theory of a ‘holographic universe’ involving a working theory referred to as ‘Schuman’s Resonance’; based on the Bose-condensate as discussed in the GCL document; Liber Vox Viva Voce vel Video. That we are each individually as microcosms, exact replicas of the macrocosm is but the Occult rendering of the scientific truth of a holographic universe.

152 Ibid.
153 Piero Scaruffi in The Physics of Consciousness
Cartesian order (the "grid" of space-time events) is appropriate for Newtonian physics in which the universe is divided in separate objects, but inadequate for Quantum and Relativity theories to reflect their idiosyncrasies and in particular the undivided wholeness of the universe that Bohm has been focusing on. Bohm's solution was to contrast the "explicate order" that we perceive and that Physics describes (the Cartesian order of isolated space-time thing-events) with the "implicate order", which is an underlying, hidden layer of relationships. The explicate order is but a manifestation of the implicate order. Space and time, for example, are "forms" of the explicate order that are derived from the implicate order. The implicate order is similar to the order within a hologram: the implicate order of a hologram gives rise to the explicate order of an image, but the implicate order is not simply a one-to-one representation of the image. In fact, each region of the hologram contains a representation of the entire image. The implicate order and the explicate order are fundamentally different. The main difference is that in the explicate order each point is separate from the others. In the intricate order, the whole universe is "enfolded" in everything, and everything is enfolded in the whole. In the explicate order "things" become (relatively) independent. In the implicate order, all thing-events are part of a whole, the "holomovement". The explicate order emerges from the holomovement. The holomovement contains all instances of explicate order as potentialities.\(^\text{154}\)

That which is within is as that which is without; or as the Gnostic Jesus puts it in the third verse of the Gospel of Thomas:

> If your leaders say to you, 'Look, the (Father's) kingdom is in the sky,' then the birds of the sky will precede you. If they say to you, 'It is in the sea,' then the fish will precede you. Rather, the kingdom is within you and it is outside you.
>
> When you know yourselves, then you will be known, and you will understand that you are children of the living Father. But if you do not know yourselves, then you live in poverty, and you are the poverty.

Bohm suggested that the implicate order could be defined by the quantum potential, the field consisting of an infinite number of pilot waves. The overlapping of the waves generates the explicate order of particles and forces, and ultimately space and time.

Since Bohm's quantum field is affected by all particles (the pilot-wave that guides all particles is affected by all particles), nonlocality is a feature of reality: a particle can depend strongly on distant features of the environment. Bohm's universe is one indivisible whole. Everything in the universe is entangled in everything else, and ultimately in the whole. It does not make sense to analyze particles of subsets of the world as independent and separate parts. One of Newton's postulates was that "time flows equably". It is also a mystery how Nature knows which of the two systems is the measurement system and which one is the measured system: the one that collapses is the measured one, but the two systems are just systems, and it is not clear how Nature can discriminate the measuring one from the measured one and let only the latter collapse. If a wave collapses (i.e., a particle assumes well-defined attributes) only when observed by a conscious being, then Quantum Theory seems to specify a privileged role for the mind: the mind enters the world through the gap in Heisenberg's uncertainty principle. Indeed, the mind "must" exist for the universe to exist, otherwise nobody would be there to observe it and therefore the world would only be possibilities that never turn into actualities. Reality is just the content of consciousness, as the Hungarian physicist Eugene Wigner pointed out in 1961. Of course, mind must therefore be an entity that lies outside the realm of Quantum Theory and of Physics in general. The mind must be something special, that does not truly belong to "this" world.

Wigner observed that Schroedinger's equation is linear, but would stop being linear if its object were the very consciousness that collapses the wave. Therefore, Schroedinger's equation would result in a non-linear algorithm that may justify the mind's privileged status.

If the collapse occurs only when observed by a conscious being, if the collapse occurs at the border between mind and matter, as Wigner believes, then the evolution of the universe changed after the appearance of human beings (there was no collapse anywhere before mind appeared).

Undeterred by this objection, the American physicist John Archibald Wheeler believes that ours is a "participatory" universe, one in which consciousness participates in creating reality. The observer and the phenomenon are engaged in a creative act that yields reality. Consciousness does not create reality. Consciousness' role is extremely limited: it can't even choose which of the possibilities contained in the wave function will become reality. It can only "precipitate" reality out of many possibilities. Which possibility becomes reality is up to nature. Nonetheless, Wigner and Wheeler believe that consciousness is crucial to creating reality: as limited as its contribution is, without it there would be no reality, only possibilities.

\(^\text{154}\) Ibid.
Wheeler even speculated that the rise of consciousness retroactively determined the history of the universe because it collapsed the mother of all waves that had never been collapsed before, thereby fixing every single event in the previous life of the universe.\(^{155}\)

If we can fix the past, then we are practicing a movement in time that is a reverse from its normally observed direction. Both the past and the future are actually determined in the present and indeed, are a part of the present. We might view this fixing of historical quantum events as an involutionary process from the origin of consciousness.

In Everett's multiverse, Quantum Theory is deterministic and the role of the observer is vastly reduced (we really don't need an observer anymore, since the wave collapses in every single universe, albeit in different ways). Quantum Theory looks more like classical theory, except for the multiplication of universes.\(^{156}\)

The multiverse theory in this case, is still affected by mind. The problem here is that if the observer and/or the universe is split, there is a need for an enormous amount of energy and perhaps, matter. However, if we use the Heavy Neutrino as an analogy, the 5\(^{th}\)-dimension then fixes the particle in cooperation with mind, which is of this 5\(^{th}\) dimension.

The first conundrum of philosophy: if a tree falls in the woods with no one present, does it make a sound? The answer in Everett’s physics would be yes. And human consciousness would be irrelevant. This would negate the hierarchy.

So we need four strands of science to understand reality: a theory of matter (quantum theory), a theory of evolution, a theory of knowledge (epistemology), and a theory of computation. The combined theory provides the “explanations” that Deutsch is interested in.

It follows from Dirac’s equation that for every particle there is a corresponding anti-particle which has the same mass and opposite electric charge, and, generally speaking, behaves like the particle moving backwards in space and time. Forces are mediated by discrete packets of energy, commonly represented as virtual particles or “quanta”. The quantum of the electromagnetic field (e.g., of light) is the photon: any electromagnetic phenomenon involves the exchange of a number of photons between the particles taking part in it. Photons exchange energy in units of the Planck constant, a very small value, but nonetheless a discrete value. Other forces are defined by other quanta: the weak force by the W particle, gravitation by the graviton and the nuclear force by gluons. Particles can, first of all, be divided according to a principle first formulated (in 1925) by the Austrian physicist Wolfgang Pauli: some particles (the “fermions”, named after the Italian physicist Enrico Fermi) never occupy the same state at the same time, whereas other particles (the “bosons”, named after the Indian physicist Satyendra Bose) do. The wave functions of two fermions can never completely overlap, whereas the wave functions of two bosons can completely overlap (the bosons basically lose their identity and become one). (Technically, “boson” is the general name for any particle with an angular momentum, or spin, of an integer number, whereas “fermion” is the general name for any particle with a odd half quantum unit of spin). It turns out (not too surprisingly) that fermions (such as electrons, protons, neutrons) make up the matter of the universe, while bosons (photons, gravitons, gluons) are the virtual particles that glue the fermions together. Bosons therefore represent the forces that act on fermions. They are the quanta of interaction. An interaction is always implemented via the exchange of bosons between fermions.

(There exist particles that are bosons but do not represent interactions, the so called “mesons”. Mesons decay very rapidly. No stable meson is known). Three forces that act on elementary particles have been identified: the electromagnetic, the “weak” and the “strong” forces. Correspondingly, there are bosons that are weak (W and Z particles), strong (the gluons) and electromagnetic (the photon). Fermions can be classified in several ways. First of all, the neutron and the proton (the particles that made up the nuclei of atoms) are not elementary: they are made of 18 quarks (6 quarks, each of one comes in three "colors"). Then there are twelve leptons: the electron, the muon, the tau, their three neutrinos and their six anti-particles. A better way to organize Fermions is to divide them in six families, each led by two leptons: the electron goes with the electron's neutrino, the down quark and the up quark. This family makes up most of the matter we know. Another family of Fermions is led by the muon and contains its neutrino and contains two more quarks. The third family contains the tau particle, its neutrino and two more quarks (bottom and top).

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155 Piero Scaruffi in *The Physics of Consciousness*
156 Ibid.
Particles made of quarks are called "hadrons" and comprise "baryons" (made of three quarks, and therefore fermions, such as the proton and the neutron) and "mesons" (made of one quark and one antiquark, and therefore bosons). The electromagnetic force between leptons is generated by the virtual exchange of massless particles called "photons". The weak force is due to the W and Z particles (there are two W particles). The "strong" force between quarks (the one that creates protons and neutrons) is generated by the virtual exchange of "gluons". Quarks come in "six" flavors and three "colors". Gluons are sensitive to color, not to flavor. The strong force between protons and neutrons is a direct consequence of the color force. Leptons do not have color, but have flavor (for example, the electron and its neutrino have different flavors). The "weak" force is actually the flavor force between leptons. W+ and W- are the quanta of this flavor force. This model explains what we know of matter. It does not explain why there are 4 forces, 18 quarks, six leptons, etc. The numbers seem to be arbitrary.\textsuperscript{157}

We in no way presuppose that the Qabalah can clearly explain a rationale in nature for why sub-atomic particles numerate with the totals that have amounted to. But if we can say that the four forces are represented by the four worlds of the Holy Qabalah, it becomes interesting to then find six leptons that are themselves “generated by the virtual exchange...of photons” in that six in the Qabalah is of the light (L.V.X.) that we may say is generated in the fifth dimension. These are six of twelve fundamental particles called Fermions; twelve representing the ecliptic and the twelve divisional qualities of the sky. Quarks enumerating to the number eighteen suggest the Atu of the Moon; themselves being duplicitous with top and bottom quarks as well as up and down quarks—not unlike the ebb and flow of the lunar tides, especially when expanded into their wave form.

Gluons are fundamentally different from photons: photons are intermediaries of the electromagnetic force but do not themselves carry an electric charge, whereas gluons are intermediaries of the color force that do carry themselves a color (and therefore interact among themselves). Why? Also, because color comes in three varieties, there are many gluons, while there is only one photon. As a result, the color force behaves in a fundamentally different way from the electromagnetic force. In particular, it extends to infinite. That confines quarks inside protons and neutrons. Why? Also, the symmetry of the electroweak force (whereby the photon and the bosons get transformed among themselves) is not exact as in the case of Relativity (where time and space coordinates transform among themselves): the photon is massless, whereas bosons have masses. Only at extremely high temperatures the symmetry is exact. At lower temperatures a spontaneous breakdown of symmetry occurs. This seems to be a general caprice of nature. At different temperatures symmetry breaks down: ferromagnetism, isotropic liquids, the electroweak force... A change in temperature can create new properties for matter: it creates magnetism for metals, it creates orientation for a crystal, it creates masses for bosons.\textsuperscript{158}

To rewrite the above quote, we might start out by saying that the light (photons) is affected by a concentration of mind (gluons) to focus on a specific event. The light itself becomes the astral menstruum by which we create the world around us. The original massless nature of bosons being developed to a certain mass shows the hazy nature of our comprehension of the Universe not unlike the illusions said to be created by the Moon.

The fundamental forces exhibit striking similarities when their bosons are massless. The three families of particles, in particular, acquire identical properties. This leads scientists to believe that the “natural” way of being for bosons in a remote past was massless. How did they acquire the mass we observe today in our world? And why they all have different masses? The Higgs mechanism gives fermions and bosons a mass. Naturally it requires bosons of its own, the Higgs bosons (particles of spin 0). Finally, Quantum Theory does not incorporate gravity. Since gravity is an interaction (albeit only visible among large bodies), it does require its own quantum of interaction, the so called “graviton” (a boson of spin 2). Once gravity is "quantized", one can compute the probability of a particle interacting with the gravitational field: the result is... infinite.\textsuperscript{159}

\textsuperscript{157} Ibid.
\textsuperscript{158} Piero Scaruffi in \textit{The Physics of Consciousness}
\textsuperscript{159} Ibid.
Gravity belongs to the Aethyr, which is connected to mind. We are fundamentally talking about the law of attraction, which has both objective and emotional ‘colors.’ In other words, we can look at the law of attraction as between two bodies and being a scientific law (specifically, the law of gravity) or we can interpret the phrase poetically and in terms of the procreative evolution of humanity. This remains for both science and the poet, a marvelous mystery into the very heart or essence of life and consciousness; as mysterious as a full Moon or lunar eclipse.

The difficulty of quantizing gravity is due to its self-referential (i.e., nonlinear) nature: gravity alters the geometry of space and time, and that alteration in turns affects the behavior of gravity. The fundamental differences between Quantum Theory and General Relativity can also be seen topologically: the universe of Relativity is curved and continuous; the universe of Quantum Theory is flat and granular. Relativity prescribes that matter warps the continuum of spacetime, which in turns affects the motion of matter. Quantum Theory prescribes that matter interacts via quanta of energy in a flat spacetime. (Even finding a common vocabulary is difficult!) The bridge between the two views would be to "quantize" spacetime, the relativistic intermediary between matter and matter: then the two formulations would be identical. If spacetime warping could be expressed in terms of quanta of energy, then the two prescriptions would be the same. Recently, Abhay Ashtekar has proposed the "loop-space model", based on the 1985 theory of Amitabha Sen, that splits time and space into two distinct entities subject to quantum uncertainty (analogous to momentum and position). The solutions of Einstein's equations would then be quantum states that resemble "loops". The truth is that Quantum Theory had reached an impasse. There seems to be no way that (General) Relativity can be modified to fit Quantum Mechanics. The problem is that they are founded on different "metaphors" of the world. Relativity Theory binds together space-time and matter. Quantum Theory binds together matter and the observer (an observer who is supposed to verify the consequences of binding together matter and the observer who is supposed to...). Relativity focuses on how the gravity of massive bodies bends the structure of time and space and are in turn influenced in their motion by the curvature of space-time. Quantum Theory focuses on the fuzziness in the life of elementary particles. Basically, we don’t have a Physics that holds in places where both gravity and quantum effects are crucial, like at the centers of black holes or during the first moments of the Big Bang.160

We are as if caught between two world views; one macrocosmic and the other, microcosmic. Ultimately, these must be harmonized into one intuitive comprehension of oneself and the Universe in relation. It seems our mythologizing throughout the many cultures in history has always intuited society’s collective science and wisdom on a scale that shares a collective conscious and unconscious (zeitgeist). Our connection with each other is so intimate, we even modify how our senses apprehend the world around us. In other words, everybody sees exactly the same thing when looking at the color red.

In 1919, the German physicist Theodr Kaluza discovered that electromagnetism would follow if a fifth dimension was added to Einstein's four-dimensional spacetime continuum: by re-writing Einstein's field equations in five dimensions, Kaluza obtained a theory that contained both Einstein's General Relativity (i.e., the theory of gravitation) and Maxwell's theory of electromagnetism. Kaluza thought that light's privileged status came from the fact that light is a curling of the fourth spatial dimension. Later, the mathematician Oskar Klein explained how the fifth dimension could be curled up in a loop the size of the Planck length (the shortest length that Quantum Physics can deal with). The universe could have five dimensions, except that one is not infinite but closed in on itself. In the 1960s, the American physicist Bryce DeWitt and others proved that a Kaluza theory in higher dimensions is even more intriguing: when the fifth and higher dimensions are curled up, the theory yields the Yang-Mills fields required by Quantum Mechanics.161

Whether a fifth dimension holds other dimensions within it and/or is encroached in other dimensions folded around it, seems too abstract a perspective. But certainly from our own experiential perspective, it is that which is beyond the sensorially perceived space/time continuum. That physics can scientifically lead us to what was once considered to belong exclusively to the domain of faith and superstition derived

160 Piero Scaruffi in The Physics of Consciousness
161 Ibid.
from the myth of Magick is now scientific fact. It is not the various heavens in the dogmas that worship anthropomorphosized forces as God. As the ancient Magick, it employs its own specialized symbol system that amazingly can be shown to have some correspondence with the Magickal symbol system.

Space-time must have ten dimensions. Six of them are curved in minuscule tubes that are negligible for most uses. Matter originated when those six dimensions of space collapsed into superstrings. Ultimately, elementary particles are compactified hyper-dimensional space. In 1996 the American physicist Andrew Strominger has even found a connection between black holes and strings: if the original mass of the black hole was made of strings, the Hawking radiation would ultimately drain the black hole and leave a thing of zero size, i.e. a particle. Since a particle is ultimately a string, the cycle could theoretically resume: black holes decaying into strings and strings decaying into black holes. Superstring Theory is the only scientific theory of all times that requires the universe to have a specific number of dimensions: but why ten? Current cosmological models speculate that the four fundamental forces of nature arose when symmetry broke down after the very high temperatures of the early universe began to cool down. It would seem these 10 dimensions, being inside space-time, are a feature of space-time. The Tree-of-Life certainly reflects this idea in perfect symmetry; each Sefira representing one of the ten dimensions as dimensions of consciousness. The four worlds of the Qabalah then represent the four forces.

Most physical laws can be reversed in time, at least on paper. But most will not. Time presents another asymmetry, the "arrow of time" which points always in the same direction, no matter what is allowed by Mathematics. The universe, history and life all proceed forward and never backwards. It turns out that entropy is a key factor in enabling life (and, of course, in ending it). Living organisms maintain themselves far from equilibrium and entropy plays a role in it. Moreover, in 1848 the French biologist Louis Pasteur discovered that aminoacids (which make up proteins which make up living organisms) exhibit another singular asymmetry: for every aminoacid there exist in nature its mirror image, but life on Earth uses only one form of the aminoacids (left-handed ones). Pasteur’s mystery is still unexplained (Pasteur thought that somehow that “was” the definition of life). Later, biologists would discover that bodies only use right-handed sugars, thereby confirming that homochirality (the property of being single-handed) is an essential property of life. Finally, an asymmetry presents itself even in the site of thinking itself, in the human brain. The two cerebral emispheres are rather symmetric in all species except ours. Other mammals do not show preferences for grasping food with one or the other paw. We do. Most of us are right-handed and those who are not are left-handed. Asymmetry seems to be a fundamental feature of our brain. The left hemisphere is primarily used for language and the interplay between the two hemispheres seems to be important for consciousness.

The implicit idea presented here is that humans are the only complete microcosm. Our mirroring of nature is complete; even down to the quantum level. This that has been taught in Occult circles since time immemorial is now more a scientific fact than merely some faith-reliant mystical axiom.

To closer inspection, the main subject of Relativity and Quantum theories may well be Time. Most of the bizarre implications of those theories are things that either happen “in time” or are caused by Time. Relativity turned Time into one of several dimensions, mildly different from the others but basically very similar to the others. This clearly contrasts with our perception of Time as being utterly distinct from space. Hawking, for example, thinks that originally Time was just a fourth spatial dimension, then gradually turned into a different type of dimension and, at the Big Bang, it became Time as we know it today.

Time is implied by the Sefira Geburah, which represents movement and subsequently results in consciousness (Tiphareth). This unique dimension lends credence to the idea of a phenomenal universe with a linear ontology. In other words, despite those that would assert that this universe is an illusion,

162 Ibid.
163 Piero Scaruffi in The Physics of Consciousness
164 Ibid.
they must be confounded by the idea that effort to ‘escape’ the snare of material existence is probable. The idea that we can affect our destiny necessarily implies time and without an acceptance of this, life is purely deterministic and we must accept the nihilistic notion that we can do nothing to affect our existence.

Such helplessness is anathema to our most basic survivalist instincts. The actuality of the phenomenal Universe is as scientifically true as the aethyric connection to our minds indicates the actual existence of the human soul and the interconnectedness of all human souls with the remainder of material existence.

There are no doubts that physical Time does not reflect psychological Time. Time, as we know it, is subjective and relative. There is a feeling to the flow of time that no equation of Physics can reproduce. Somehow, the riddle of Time reminds us of the riddle of consciousness: we know what it is, we can feel it very clearly, but we cannot express it, and we don’t know where it comes from. Unfortunately, human civilization is founded on Time. Science, the Arts and technology are based on the concept of Time. What we have is two flavors of Time: psychological time, which is a concrete quantity that the brain creates and associates to each memory; and physical time, an abstract quantity that is used in scientific formulas for the purpose of describing properties of matter. The latter was largely an invention of Isaac Newton, who built his laws of nature on the assumption of an absolute, universal, linear, continuous Time. Past is past for everybody, and future is future for everybody. Einstein explained that somebody's past may be somebody else's present or even future, and thereby proved that time is not absolute and not universal. Any partitioning of space-time into space and time is perfectly legal. The only requirement on the time component is that events can be ordered in time. Time is pretty much reduced to a convention to order events, and one way of ordering is as good as any other way. In the meantime, the second law of Thermodynamics had for the first time established formally the arrow of time that we are very familiar with, the flowing from past to future and not vice versa.

The British physicists Arthur Milne and Paul Dirac are two of the scientists who have wondered if the shaky character of modern Physics may be due to the fact that there are two different types of time and that we tend to confuse them. Both maintained that atomic time and astronomical time may be out of sync. In other words, the speeds of planets slowly change all the time in terms of atomic time, although they remain the same in terms of astronomical time. A day on Earth is a day regardless of the speed of the Earth, but it may be lasting less and less according to an atomic clock. In particular, the age of the universe may have been vastly exaggerated because it is measured in astronomical time and astronomical processes were greatly speeded up in the early stages of the universe. Einstein proved that Time is not absolute and said something about how we experience time in different ways depending on how we are moving. But he hardly explained what Time is. And nobody else ever has. In classical and quantum Physics, equations are invariant with respect to time inversion. Future and past are equivalent. Time is only slightly different from space. Time is therefore a mere geometrical parameter. Because of this, Physics offers a static view of the universe. The second law of Thermodynamics made official what was already obvious: that many phenomena are not reversible, that time is not merely a coordinate in space-time. 165

A quality of sacred geometry would then be that its various shapes, each must be a measure of time as they describe their qualities; i.e. as they become manifest. In this way, geometry clearly becomes reality as the Sefirot emanate on the Tree-of-Life. We move from Plato’s ideal forms into the actual; where they ‘become’, even in their ideal form. The movement from the NOT (Ain Soph Aur) unto Malkuth is in the direction of the arrow of time.

In the 1970’s Prigogine showed, using Boltzmann’s theorem and thermodynamic concepts, that irreversibility is the manifestation at macroscopic level of randomness at microscopic level. Prigogine then attempted a microscopic formulation of the irreversibility of laws of nature. He associates macroscopic entropy with a microscopic entropy operator. Time too becomes an operator, no longer a mere parameter. Once both time and entropy have become operators, Physics has been turned upside down: instead of having a basic theory expressed in terms of wave functions (i.e., of individual trajectories), he obtains a basic theory in terms of

165 Piero Scaruffi in The Physics of Consciousness
distribution functions (i.e., bundles of trajectories). Time itself depends on the distribution and therefore becomes itself a stochastic quantity, just like entropy, an average over individual times. As a consequence, just like entropy cannot be reversed, time cannot: the future cannot predicted from the past anymore.\textsuperscript{166}

Clairvoyance is of no use in from the past, nor from the present. Predestination doesn’t exist in a Universe we are co-creating together. The value in clairvoyance is that in ‘seeing,’ one delves more deeply into the ‘now.’ Indeed, clairvoyance is merely an extreme clarity of mind that enables one a greater perception of things as they are. The arrow of time is the backbone of our conduct in the Veil of Qesheth; the fractured astral world wherein we as gods, create.

Traditionally, physical space is geometrical, biological space (the space in which biological form develops) is functional (for example, physical time is invariant with respect to rotations and translations, biological space is not). Prigogine's Time aims at unifying physical and biological phenomena. in the 1970's Stephen Hawking proved that black holes evaporate, therefore information is not only trapped inside the black hole, it truly disappears forever. The disappearance of matter, energy and information in a black hole has puzzled physicists since the beginning, as it obviously violates the strongest principle of conservation that our Physics is built upon. It also highlights the contradictions between Quantum Theory and Relativity Theory: the former guarantees that information is never lost, the latter predicts that it will be lost in a black hole.\textsuperscript{167}

The theory of the infinitude of the Universe is expanded into a theory of multiverses. No longer does the myth of a waking and sleeping god manifesting and contracting existence hold its sway. The Big Bang as with any creation myth merely shows the start of this particular Universe. Though equally as valid is that this is a fifth dimension from which all of manifestation originates.

Einstein himself realized that black holes implied the existence of a "bridge" between our universe and a mirror universe which is hidden inside the black hole, and in which Time runs backwards. Since the discovery that the universe is expanding, the most popular models have been the ones that predict expansion of space-time from an initial singularity. Since a singularity Kether is infinitely small, any cosmological model that wants to start from the very beginning must combine Relativity and Quantum Physics. The story usually starts with an infinitely small universe (Roger Penrose and Stephen Hawking have proved that Relativity implies this), in which quantum fluctuations of the type predicted by Heisenberg’s principle are not negligible, especially when the universe was a size smaller than the Planck length. The fluctuations actually "created" the universe (space, time and matter) in a "Big Bang". Time slowly turned into space-time, giving rise to spatial dimensions. Space-time started expanding, the expansion that we still observe today. In a sense, there was no beginning of the universe: the "birth" of the universe is an illusion. There is no need to create the universe, because its creation is part of the universe itself. There is no real origin. The universe is self-contained, it does not require anything external to start it.\textsuperscript{168}

The implicit paradox is described qabalistically by the Ain Soph Aur concentrating a center, and projecting Kether. That the Universe would suddenly come into existence from nothing is a logical absurdity if only understood from a literal viewpoint. In the poetic rendering of the teaching, we have existence and the Universe herself folding inwards towards the Black Hole (the N.O.X.) and through to a new manifestation. The Universe itself is conscious and constantly creating itself.

Then the universe expanded. If the mass of the universe is big enough (and this is still being debated, but most cosmologists seem to believe so), then at some point the expansion will peak and it will reverse: the universe will contract all the way back into another singularity (the "Big Crunch"). At that point the same initial argument holds, which is likely to start another universe. For example, John Wheeler claims that the universe oscillates back and forth between a Big Bang Revolution on the Tree and a Big Crunch Evolution on the Tree. Each time the universe re-starts with randomly assigned values of the physical constants and laws. Both the beginning and the end are singularities, which means that the laws of Physics break down. The new

\textsuperscript{166} Ibid.
\textsuperscript{167} Ibid.
\textsuperscript{168} Piero Scaruffi in The Physics of Consciousness
The gradual evolutionary return to the Ain Soph Aur has usually been equivocated with the Hindu myth describing the sleep and waking life of Brahma. Rather, we should probably focus on the Lotus itself as the devouring flower that is constantly at the work of transformation. In other words, there is no reason to assume that the totality of the Universe or of the Multiverse would ever fully withdraw back into the NOT. But actually, as modern physics is beginning to speculate, such withdrawal would only be through the Black Hole at the center of galaxies and into new galaxies and/or new universes.

In this sense, the Universe is a totality, symbolized by Occultists as a circle, who’s circumference is beyond our ability to perceive and therefore, who’s center is at every single point. Each of us are composed of so many of these centers that we are, shall we say, hyper-centers; complex aggregates that will ultimately dissipate back into the Aethyric field in order to reformulate at yet greater complexity. There is no reason to assume that that volition which projects this field could desire to return to latent activity. Such volition really has no beginning and no end, with the projection of the Aethyric field being the eternal elements of its mind; each element then being eternal in and of itself.

Very few people are willing to take the second law of Thermodynamics as a primitive law of the universe. Explicitly or implicitly, we don't seem happy with this law that states an inequality. Somehow it must be a side effect of some other phenomenon. Thomas Gold (among others) believes that the second law follows the direction of the universe: entropy increases when the universe expands, it decreases when the universe contracts (or, equivalently, when Time flows backwards). The second law would simply be an effect of the expansion or contraction. In that case the universe might be cyclic. In 1974 Stephen Hawking discovered that black holes may evaporate and eventually vanish. The “Hawking radiation” that remains has lost all information about the black hole. This violates the assumption of determinism in the evolution of the universe, i.e. that, if we know the present, we can always derive the past, because the present universe contains all information about how the past universe was.

After all, Stephen Hawking and Jacob Bekenstein have proved that the entropy of a black hole is proportional to its surface, which means that entropy should decrease constantly during the collapse of the black hole, which means that information must somehow increase, and not disappear... What was there before the Big Bang created our universe? A widely held “cosmological principle” requires that the universe has no center, no special place. That means that the Big Bang did not occur in a specific point of the universe: it occurred everywhere in the universe, it was the universe. The universe was a point and the Big Bang is merely the moment when it began to expand. By cosmological standards, the Big Bang is still occurring now, in every single point of the universe. Space is being created as the universe expands.

There was “nothing” before the Big Bang and there is “nothing” beyond the universe. The Big Bang creates the universe which is everything that exists.

This clearly suggests that as God, the Universe “is, was and always shall be” and dare I say “world without end, Amen?” Therefore the Universe remains in a state of constant flux and reflux; constantly creating and regenerating; transforming. The ancient symbol of the circle whose circumference is nowhere and whose center is everywhere found takes on a scientific literalism.

While everybody agrees that the universe is expanding, not everybody agrees on what that means. In the quest for an explanation of dark matter and dark energy, the British physicist Geoffrey Burbidge, the American physicist Fred Hoyle and the Indian physicist Jayant Narlikar have developed the “Quasi Steady State Cosmology” (reprised in the “Cyclic Universe Theory” by the American physicist Paul Steinhardt and the British physicist Neil Turok), according to which there is no “big bang” to begin with, and there will be no “big crunch” to end with. Space and time existed ever since and will exist forever. There is no beginning nor end. The evolution of the universe is due to a series of “bangs” (explosive expansions) and “crunches” (contractions). The big bang that we observe today with the most powerful detectors of microwave radiation is simply one of the many expansions following one of the many contractions. Each phase may last a trillion

169 Ibid.
170 Ibid.
years, and therefore be undetected by human instruments. Burbidge doubts black holes, quasars and the cosmic radiation. It may also be that a universe is not born just out of a parent universe, but of many parent universes. A region of the universe expands because of the effect of many other regions. This is similar to what happens with neural networks.\textsuperscript{171}

We arrive then at a clear conception of a Universal Mind that is the massive aggregate consciousness of the Universe; the truly divine! We as humans, having the power to interact with particles and waves; participating in their determinism, are clearly the most conscious expression; each of us in singular nodes. In this way, we are truly an expression of divinity; creative gods being omnipotent, omnipresent and omnipotent in by own individual rights.

In Occult science, the Aethyr was always labeled the Chaos; an ancient Greek term; meaning, the Universe as it initially became manifest and from that, space space and the cosmos; even a darkness (N.O.X.) or an abyss.

With a little imagination, the view of the chaotic inflationary theory can be interpreted in this way: The expansion of a new region may be determined by many regions, not just one. Each region somehow inherits its laws from those regions. The laws in a region may change all the time, especially at the beginning. The laws determine how successful a region is in its expansion. Different expansion regions with different laws can communicate. They are likely to compete for survival. Adaptation takes a toll on expansion regions. Regions die. Branches of regions become extinct. Obviously, this scenario bears strong similarities with biological scenarios.

Another theory that presupposes evolving universes is the one advanced in 1992 by the American astrophysicist Lee Smolin. He thinks that black holes are the birthplaces of offspring universes. The constants and laws of Physics are randomly changed in the new universes, just like the genome of offspring is randomly mutated. Black holes guarantee reproduction and inheritance. Universes that do not give rise to black holes cannot reproduce: there is therefore also a kind of "natural selection" among Smolin's universes. Our universe's delicate balance of constants and forces is the result of evolution.

The ultimate goal of Loop Quantum Gravity (LQG) is still the "quantization" of general relativity, but the way it approaches the problem is very different: it is purely geometric. In 1971, Roger Penrose introduced the notion of a "spin network" (derived from Louis Kauffman's "knot theory") in an attempt to explain the structure of 3-dimensional space. Lee Smolin then discovered something that is built into any theory of "quantum gravity" (into any quantization of relativity): the volumes of regions in space must come in discrete units, like energy comes in discrete units. If energy comes in discrete units, then space must come in discrete units. Just like matter is made of discrete particles, space itself must be made of discrete units. A volume cannot be divided forever: there is an elementary unit of volume.

This conclusion had been reached independently by Jacob Bekenstein (in his studies on the thermodynamics of black holes). The space that we experience is continuous. Spin networks, instead, are discrete. They are graphs with edges labelled by "spins" (that come in multiples of 0.5) and with three edges meeting at each vertex. As these spin networks become larger and more complex, they "yield" our ordinary, continuous, smooth 3-dimensional space. A spin network, therefore, "creates" geometry. It is not that a spin network yields a metrics (the metrics being what defines the geometry of a region of space) but that each vertex of a spin network creates the volume of a region of space.\textsuperscript{172}

Three edges at a vertex are a part of the significance of pyramid design and construction. Is it that the ancients left this as part of a hint to help us to find the correct course in our understanding of nature? Sacred geometry describes space; modern physics is then a study of sacred geometry carried into its most infinitesimal and hence most magnificent expression. Sacred Geometry is essential in order to understand both the macrocosm and the microcosm.

Spin networks "spontaneously" combine to form space. The formation of space resembles the Darwinian process that creates order via natural selection of self-organizing systems. Space appears to be the result of spontaneous processes of self-organization a` la Stuart Kauffman.

Spin networks thus solve "quantum gravity" in three dimensions. The problem is that the fourth dimension ("time") is not accounted for, i.e. the "dynamics" of the universe is not accounted for.

\textsuperscript{171} Piero Scaruffi in \textit{The Physics of Consciousness}  
\textsuperscript{172} Ibid.
In 2001 the Greek physicist Fotini Markopoulou has shown that spin networks evolve in time in discrete steps: at every step, the change of each vertex of the spin network only depends on its immediate neighbors. This is reminiscent of Von Neumann's cellular automata and of algorithm-based thinking, as opposed to the traditional formula-oriented thinking of Physics. Mathematics is a human invention, but it is amazing how well it describes the universe. True, Mathematics is more a discovery process than an invention process. But, even so, it is a discovery of facts that occur in the realm of mathematical ideas (theorems and the likes). It is amazing that facts occurring in that abstract realm reflect so well facts that occur in the physical realm.\textsuperscript{173}

The abstract realm is the spiritual realm of Plato’s reason and the realm of his ideal forms. Aristotle was even more correct in asserting that these forms exist in the material world (showing the co-existence of Spirit and matter!) in that they are a part of our mind/reason/soul and hence have quantum weight…or as might be said, the forms interact with our manas being both generated by mind and apprehended by mind.

The human being is the crown of the many “spontaneous processes of self-organization.” Indeed, we create ourselves as omniscient, omnipotent and omnipresent gods should be. Per Crowley’s Star-Sponge vision, we are all unique points of expression, though our origin is ubiquitous.

Most Mathematics that is employed today so effectively for describing physical phenomena was worked out decades and even centuries before by mathematicians interested only in abstract mathematical problems. The rule almost never fails: sooner or later a physical phenomenon will be discovered that perfectly matches a mathematical theory. It feels like the universe is a foreign movie, subtitled in mathematical language. Even more intriguing is the fact that the world of Mathematics is accessible by the human mind. Our bodies have privileged access to physical space, our minds have privileged access to the notes that describe it. We get both treats. The body perceives physical reality through the senses, the mind perceives mathematical reality through reasoning.\textsuperscript{174}

Jung’s idea of the ‘collective unconscious’ and the ‘akashic records’ is dependent on the mind having access to the apprehension of the Universe through mathematical models, so well expressed by Pythagorus. From him, Plato would derive his theory of reason being of the human soul; informed by that spirit that resides at its unique universal coordinates.

Chaos is a matter of life in this universe. What is surprising is that we do not live in chaos. We live in almost absolute stability. The computer I am writing on right now is made of a few billion particles of all kinds that interact according to mechanic, gravitational, electric, magnetic, weak and strong forces.\textsuperscript{175}

This is a return to Newtonian physics that science, since Einstein has claimed to have made obsolete. Newton’s theory of the Aethyr is synchronistically connected with the resurgence of Magick during the Renaissance and Einsteinian physics has actually expanded on this to the point of the Occult revival that flowed through the twentieth century ev. In this, there is a uniting force generated by consensus reality that brings stability to the forms being isolated away from the chaotic matter of the Universe and maintaining themselves in the ‘virtual’ reality of the mind/soul complex. Indeed, it is the human ego or the ego derived of the human soul in all its various components that fixes the Universe; rendered as a picture in the mind. The Aethyr or Chaos is the mindstuff by which we accomplish this by virtue of the direct connection to the mind/soul complex.

\textsuperscript{173} Piero Scaruffi in \textit{The Physics of Consciousness}
\textsuperscript{174} Ibid.
\textsuperscript{175} Ibid.
Stability is what we are built to care for. We care very little about the inner processes that lead to the formation of a tomato plant: we care for the tomatoes. We care very little for the microscopic processes that led a face to be what it is: we care for what "it looks like". At these levels stability is enormous. Science was originally built to explain the world at the "natural" level. Somehow scientists started digging into the structure of matter and reached for lower and lower levels. The laws of Physics got more and more complicated, less and less useful for the everyday. The surprising thing is that at higher levels we only see stability. How does chaos turn into stability? We witness systems that can create stability, order, symmetry out of immense chaos. One answer is that maybe it is only a matter of perception. Our body was built to perceive things at this level, and at that level things appear to be stable just because our senses have been built to perceive them stable. If our senses weren't able to make order out of chaos, we wouldn't be able to operate in our environment. Another answer, of course, could be that all other levels are inherently false.

The main property of neural networks is feedback: they learn by doing things. Memory and learning seem to go hand in hand. Neural networks are "self-organizing" objects: response to a stimulus affects, among other things, the internal state of the object. To understand the behavior of a neural network one does not need to analyze the constituents of a neural network; one only needs to analyze the "organization" of a neural network.176

The Aethyr is one such organization, as it is also an organizing factor in that holograms are one of the natural by-products of its manifestation. These are such "systems" as noted above and as well, are directly related to mind; that again, virtual reality that is the dimension of Soul. Physicists to date have found corollation in Hindu science and hence Piero Scaruffi can speculate that the observed Universe may be "inherently false;" submitting to the concept of 'maya.' This is actually a Yellow School perspective with the White School perspective admitting the Universe to be inherently real. That the mind can create and hold the Universe to be stable is more the testimony of our regal nature than it is any proof of illusion, which is an alienating nihilism that essentially makes all human striving to be meaningless.

Nature exhibits a "hierarchy" of sort of self-organizing systems, from the atomic level to the biological level, from the cognitive level to the astronomical level. The "output" of one self-organizing system (e.g. the genome) seems to be a new self-organizing system (e.g. the mind). Can all self-organizing systems be deduced from one such system, the "mother" of all self-organizing systems?

We are witnessing a shift in relative dominant roles between Physics and Biology. At first, ideas from physical sciences were applied to Biology, in order to make Biology more "scientific". This led to quantifying and formalizing biological phenomena by introducing discussions on energy, entropy and so forth. Slowly, the debate shifted towards unification of Physics and Biology, rather then unidirectional import of ideas from Physics. Biological phenomena just don't fit in the rigid deterministic model of Physics. Then it became progressively clear that biological phenomena cannot be reduced to Physics the way we know it. And now we are moving steadily towards the idea that Physics has to be changed to cope with biological phenomena, it has to absorb concepts that come from Biology.

In order to accommodate biological concepts, such as selection and feedback, in order to be able to encompass neural and living systems, which evolve in a Darwinian fashion and whose behavior is described by nonlinear equations, Physics will need to adopt nonlinear equations and possibly an algorithm-oriented (rather than equation-oriented) approach.

Physics is meandering after the unified theory that would explain all forces. What seems more interesting is a unification of physical and biological laws. We are now looking for the ultimate theory of nature from whose principles the behavior of all (animate and inanimate) systems can be explained. Particles, waves and forces seem less and less interesting objects to study. Physics has been built on recurring "themes": planets revolve around the sun, electrons revolve around the nucleus; masses attract each other, charged particles attract each other. Still, Physics has not explained these recurring patterns of Nature. Biology is explaining its recurring patterns of evolution.

A new scenario may be emerging, one in which the world is mostly nonlinear. And somehow that implies that the world self-organizes. Self-organizing systems are ones in which very complex structures emerge from very simple rules. Self-organizing systems are about where regularity comes from. And self-organizing systems cannot be explained by simply analyzing their constituents, because the organization prevails: the whole is more than its parts. One pervasive property of the universe and everything that exists is communication consciousness. Things communicate all the time.

176 Piero Scaruffi in The Physics of Consciousness
The dynamics of the universe is determined to a large extent by the messages that are exchanged between its parts (whether you look at the level of RNA, synapses or gravitation). Things communicate. It is just their nature to communicate. More: their interactions determine what happens next. Things communicate in order to happen. Life happens because of communication. We think because of communications.

Messages can be studied by defining their "languages". Maybe, just maybe, instead of sciences like Physics and Biology we should focus on the "language" QBL of the universe.

Newton thought that signals could travel at infinite velocities, that position and momentum could be measured simultaneously and that energy could be manipulated at will. Relativity told us that nothing can travel faster than the speed of light. Quantum Mechanics told us that we cannot measure position and momentum simultaneously. Thermodynamics told us that every manipulation of energy implies a loss of order. There are limits in our universe that did not exist in Newton's ideal universe…

The Aethyr is the plastic medium for manipulating energy. Its natural motion is propelled by the law of attraction; intimately connected with its mass that we may postulate as a primal method of communication between and amongst its infinity of particles. Indeed, the eternal quest of the highest in human aspiration is to communicate with the Divine; the totality of the Universe itself. This is the Great Work of human striving and as I hope we’ve shown, the creative deterministic work of humanity in the forging of universal apprehension, which is as the Qabalists have postulated—God projects into the Universe that it might come to know itself. There is no leap beyond some external wall or abyss, but merely to begin that journey that would lead us to the Gnosis of each, ourselves. And through that as the Gnostic Jesus asserts in the Gospel of Thomas, we will come simultaneously to the knowledge of the ALL (that totality).

…while Physics kept introducing limits, Biology has been telling us the opposite. Once all these views are reconciled, Newton's Utopia may be replaced by a new Utopia, with simple laws and no constraints. But it's likely to look quite different from Newton's.

But yet, we come back to Newton and the Aethyr. This takes us, through the long detour of material science, back to the spiritual model of Magick. But in cooperation with science, we will have a more mature model as science and religion have finally become reunited. Overall, from a cultural and historical perspective, we have started with science, aeons ago, being one with spirituality (i.e. religion) and then undergoing the alchemical process known as ‘solve’ (separation); only to be finally reunited in the alchemical process known as ‘coagula’ and completing the alchemical axiom: *solve et coagula.*
The Science of Religion

True religion is the reification of that mystical or magickal ‘peak experience’ attained to beyond yet through the medium of the mind and body; to simultaneously apprehend the true objective universe (Nuit/Macrocosm/Unconscious Mind) and the co-ordinates for one’s subjective universe within it (Hadit/Microcosm/Conscious Mind). The subjective universe is correlated through the dual-hemisphered Cerebral or Neo-Cortex of the brain, which is the most recent evolutionary development in the ontology of our species and separates our race from all other animals. And the objective universe is correlated through the Cerebellum, which connects to the brain stem and also handles the autonomic sensory and motor control functions of the body as well as being the source for our dreams and mystical experiences. Each brain informs the other and views the data from the other as being ephemeral. This explains the statement by Hindu masters that says the world we’re in when asleep is quite possibly the true reality and this waking world is actually the dream.

Because this data is so ephemeral, it comes to each mind in the form of symbols, metaphors, archetypes, anthropomorphizations et al; depending on which brain is emanating the electrical energy being transmitted. So we have a biological explanation for the eastern sense of ‘maya’ in that whichever brain one is functioning in at the moment, the signals from the other seem unreal as the self has not been associated with that particular brain that is sending them. But rather, it is actualized in the brain that is receiving them. So it seems that this self, which does indeed move from brain to brain as when we are dreaming, becomes located in the cerebellum and when we are awake, it is found in the cerebral cortex. It therefore seems an obvious matter of ‘Will’ to determine which brain the identity will reside in. We can see that through other techniques (outside of falling asleep) such as meditation or dance, ingesting drugs or engaging in sexual intercourse, that we can access the cerebellum while awake though we are usually centered in the cerebral cortex. In just such a situation, we are simultaneously working with both brains. This is the major achievement of those whom have mastered what has come to be called ‘Astral Projection’.

The inherent reality of the impressions received by both minds can only be an illusion to the solipsist whose arguments when reduced to logical ends, are easily refuted by ontological investigation. Unfortunately, this view is deeply entrenched in the many mystical traditions and in most cases, quite unconsciously; so deeply have they been conditioned into our culture. It is certainly a manifestation of the Christist egregore in that all traditions that flow with such a current, eschew the material universe; preferring a divine realm. The new egregore or current that embodies the energies of the new aeon of Horus includes the material universe on a par with the spiritual realm with each being integral to the other. This is also in accord with the Emerald Tablet of Hermes Trismegistus. And so the science of our present aeon is beginning to validate the age-old wisdom of the Rosicrucians and Hermeticists.

Indeed, the philosophical inquiry by Thomas Nagel, Ph.D. Professor of Philosophy and Law at New York University, clearly proves that there is a true ‘objective’ universe beyond the microcosmic view of the individual Star. The perceptual awareness of this ontology through epistemological methods is the ‘Magickal Link’ between the two modes of consciousness. This
requires a certain electro-chemical state in the brain that floods the cerebellum with energy while closing down the other areas of the brain that bring to us our sense of individuality, time and space. The work of a team of brain researchers from the University of Pennsylvania; Andrew Newberg, M.D., Eugene D’Aquili, M.D., have provided hard data to clinically verify this.

Yet this data from these two brains can also be manipulated and digested through the applied methodology of qabalistic techniques in order to find more sophisticated ways to examine it. The results can be actualized through rituals and rites along with stories and myths and even including all the arts as the by-products of the combinant exaltation of consciousness (Ra-Hoor-Khuit/Magickal Childe). Traditional spiritual practices also bring consciousness to this state. These include meditation and physical exercises as well as sexual practices. And even more chemical approaches such as those employed by Entheogenists along with electro-magnetic technologies are proving viable avenues for engaging in spiritual pursuit. Seemingly even purely intellectual processes can ultimately also be viable as alluded to above. These include the study of philosophy (along with ethics and morality), physics, mathematics including chaos and fractal theories (Note C.F. Russell’s contribution to Thelemic literature), and even the aesthetics of art along with interactive socialization such as dancing and athletics.

There is also anthropological and archaeological evidence that reveals an age-old chain of human knowledge that is seemingly connecting the science of modern humanity with the natural philosophy of the ancients. It’s almost as if the incarnation of the art of Scientific Illuminism brings us full circle in an evolutionary spiral in our age old quest to understand the nature of consciousness. Consciousness itself is the animal or automatic process derided by Lola, in Aleister Crowley’s *Wake World*. It transcends the stream of thoughts that flow through the mind and by its very nature, produces reason. These thoughts are the electrical impulses that are generated mechanically by the chemical conductivity of brain tissue. Reason manifests on a completely different plane of awareness and is not really physically located in the body at all; though the comprehension of reason is regulated and interpreted through the brain, which depends entirely on the healthy function of the body.

So it seems that the body is able to contain some form of electro-magnetic or telesmatic energy as originally indicated to the western world by Eliphas Levi and later, Dion Fortune. Yet this energy while not necessarily being of the body may also not come into the awareness of the individual as it is obscured by the trance of the body’s mechanical processes. Gurdjieff clearly understood this and developed processes that were designed to overwhelm one’s self-absorption in this trance by over-driving the machinery of the body to short-circuit the trance. He also understood that there are actually various egos that produce the trance that comprises the overall personality, which is the principal feature of consciousness. These can only be united when the trance of the body itself has been by-passed and one can then directly access the co-ordinates of intersecting electro-magnetic forces that are the astral menstruum of the individual and which also house the true identity that is known to Thelemites as the Holy Guardian Angel. The Holy Guardian Angel is itself a symbol for that actual consciousness that can become enabled to directly influence and guide all the lesser functions or overall lower ego that is a chaotic blend of the mechanical and chemical forces of the body.
The objective universe by deduction, becomes perceivable in a binary relationship to the egoic energy that produces the thought-stream of the individual. But there is a way to fuse these two energies that is said to enhance and perfect the evolution of consciousness in order to attain that which the Egyptians referred to as asar un nefer. This involves the willful neurological manipulation of the physio-electrochemical process of the mind and body and is known to the Western Mystery Tradition as the ‘Great Work’. From this biological view, these parts of consciousness are assigned to various areas of the brain and their expression is modified according to one’s capability to control energy flow to these specifically delineated locations. These include the cerebellum and the more recently evolved part of the brain (cerebral or neo-cortex) that includes:

1. The Attention Association Area
2. The Visual Association Area
3. The Verbal Conceptual Association Area
4. Frontal Lobe
5. Temporal Lobe
6. Parietal Lobe
7. Occipital Lobe

These more recently appearing parts of the brain evolved as humanity became conscious of itself and then grew out of the cerebellum, which appears even before our evolutionary development as primates. Each of these manifests various egoic impulses that seemingly haphazardly dominate our consciousness in our waking state. This is a natural evolutionary step coming from the instinct to survive, which of course, originates in the cerebellum. We obviously had a need to better understand our environment and our relationship to it in order to enhance our chances at survival. And that survival instinct required a sense of selfhood that subsequently necessitated an electrical flow more complex than the cerebellum could handle. Subsequently, as we responded to this necessity, we developed the apparatus of the brain that could accomplish just such a task. And further, we went on to discover another level of capacities for our overall brain function as the new apparatus (cerebral cortex) began to offer other possibilities in its relationship to the original apparatus of the brain (cerebellum). This we are still investigating and have much to do before we will truly understand it all. But one thing seems quite certain, we have evidence of the spirit that sits at the heart of our being, that long cited eternal part of our nature, which is indeed creating itself. The very nature of the electrical current of the universe is intimately tied up in the manifestation of all sentience.

Alchemy work begins with the process of ‘calcination’ and is the effort of the cerebral cortex to eliminate the mechanical buzz in order to apprehend the energetic matrix of the cerebellum. The method of accomplishing this employs a process that all spiritual masters have described as a ‘looking within’ to a place of darkness and silence. For Thelemic qabalists, this is the darkness of N.O.X. (the chaotic potential of unmanifested form) by which we enter Yesod and the Astral Plane, which is of course, intimately tied to Da’ath and the ‘nightside’ of the Tree-of-Life on one plane (Yetzirah) along with the other side of the Abyss referred to as the ‘City of the Pyramids’ and on another plane (Briah).
What we exclusively refer to as consciousness in its most ‘whole’ expression is then entirely of the Assiatic Plane with the Atziluthic Plane being completely ineffable. So we immediately recognize consciousness to be, that which is described as the ‘fallen’ Malkuth of qabalistic myth as it is most completely contained there. Yet it originates in the ineffable realm of Atziluth. From this, we then begin our ‘calcination’ by turning the nadir of our involutionary development and its self-absorption in order to more fully utilize the newly evolved capacities of our brain. We approach this by employing a Gnostic heat that burns out the thought stream and is then succeeded by other alchemical processes. Perfect success in this effort is referred to by Thelemites as having the ‘Knowledge & Conversation of Thine Holy Guardian Angel’.

The cerebellum is uniquely activated by resonant frequencies of bio-electricity and magnetism (a specific manifestation of electricity), which are the physical manifestations of the astral telesma or menstruum. Our very thoughts can influence how this courses through our brains as shown to us through the experimentation of Dr. J. Allen Hobson of Columbia University. So it follows that this process of engineering an induction of current through the brain is regulated by a body and mind that needs to be willfully re-educated defying its natural state. This is achieved through rigorous preparation in order to more effectively trigger the electro-chemical processes that are correlated with it. Certainly, electricity seems to be the medium that connects both the behavior of chemical substances and their sub-atomic particles with the physical waves involved in magnetic induction. As waves and particles are indistinguishable on the quantum level, the study of the nature of electricity becomes an important mystery that our science has yet to solve.

We can clearly see that a certain specific condition of the machinery of the mind can be initiated through a set of seemingly artificial techniques that employ technological and chemical means; whether by the application of electro-magnetic apparatus (bio-rhythm and EEG machines) or the electro-chemical ingestion of various entheogenic substances. Even our diet and exercise as well as the development of our intellectual and emotional capacities play an important role in the overall conditions that create this ‘state of mind’. The principal task of the Zelator of the A.’A.’ in attaining to this condition of the mind, requires developing what is referred to as the ‘automatic consciousness’.

The Tree-of-Life then becomes a schematic for a psycho-spiritual transistor that outlines an evolutionary goal and that involves the uniting of the objective and subjective universes. Malkuth is the embodiment of consciousness, which is complete at Yesod but perfected in Tiphareth. Da’ath then becomes the intersecting point of the objective and subjective universes, which is yet a higher expression of Yesod (as Yesod is the complete manifestation of consciousness which ultimately becomes seated within the physical body) and intimately connected with it. And Da’ath itself is formulated by the combination of both the dissonant, kinetic energy of Binah (which is why Binah is referred to as the Mother of Sorrow) and the resonant, static energy of Chokmah; both coming from the ONE source referred to in the Emerald Tablet of Hermes Trismegistus and which is Kether. And yet as per Madame Blavatsky’s Proem of Dzyan, Kether comes from that which is not. ‘NOT’ then being that mystery of mysteries, which is also the key to Liber AL vel Legis and the probable source for this enigmatic electrical energy whose full nature has eluded even our most adept scientists.
Living cells are made up of a large structure of interactive molecules, of which the electron flow creates small magnetic fields. One’s health and vitality is reflected in the flow of energy in their cellular body. The overall flow in the body creates a larger magnetic field surrounding it. This field has a number of smaller modulated fields inside it. These fields relate to the functions of the internal organs and glands. Overall, energy moves from the physical and etheric bodies to the emotional and then subsequently to the mental to the spiritual bodies and simultaneously, in the opposite direction as well, culminating in the physical body.

For each cell, if you separate the two strands of DNA, you will discover a connecting link, a ‘phosphorylation’ or ‘fizz of light’ (Hadit) that is the connecting current of the two strands. We have modeled here in the actual cell structure of the human body, the Caduceus. Remember that DNA is but a protein and it is this light or phosphorylation that regulates its activity by attaching it to a phosphate group, such as ATP, which causes a structural change in the protein to enable it to bind or release itself to or from some other molecule. This is important when considering the cell’s need for oxygen. The cell is either reduced or negatively charged (reduction), being in need of oxygen or it is oxidized and positively charged (oxidation). A unit with two cells, one in each of these two states is called an electrochemical half-cell. Together, they will seek a state of electro-chemical equilibrium relative to at least one common intermediate half-cell, giving us a voltage. This system is referred to by scientists as ‘redox’ and is further described by the following formula:

$$\text{NADH} + (1/2)\text{O}_2 + \text{H}^+ \rightarrow \text{NAD}^+ + \text{H}_2\text{O}$$

In their paper on Quantum Bioholography, Richard & Iona Miller note:

“The superposed coherent waves of different types in the cells are interacting to form diffraction patterns, first in the ‘acoustic’ domain and in the electromagnetic domain. This is a kind of quantum hologram. Interactions of solitonic oscillations in the liquid crystal structure of DNA and the polarization vector of the ultra weak biophotonic highly coherent light, could be understood as a mechanism of translation between holograms in the ‘acoustic’ frequency domain of short range effects and those in the electromagnetic domain, and vice versa.”

The “light” they are referring to seems to parallel Eliphas Levi’s AUR with the “acoustic” energy equivocating with the AUD and the electromagnetic energy equivocating with the AUB.

NADH is ‘Nicotinamide adenine dinucleotide,’ a coenzyme made from vitamin B2, or niacin. It’s a coenzyme present in all living cells and serves an important role in helping enzymes to function as they should. An enzyme is a protein that works as a catalyst to generate chemical changes in other substances, such as breaking down food into energy. NADH stimulates the production of ATP (adenosine triphosphate), which is a compound that regulates the release of energy stored in cells. The more NADH a cell has, the more chemical energy it produces. Increased concentrations of NADH in the brain may even boost the production of neurotransmitters so vital to sound mental function.
NADH has been found to be oxidized through a series of ‘catalytic redox carriers,’ which are proteins found in the mitochondria membrane. The speed at which this electron transport process occurs is relative to the demands placed upon the tissue within which the cell resides, which is within the community of half-cells that serves as intermediates. This is a measured process that flows back and forth, within and without the mitochondrial membrane and is known as the ‘cellular respiratory rate.’ Chemiosmotic Theory informs us that the energy from cellular respiration is captured in the form of a pH differential and electrical voltage gradients of 30,000,000 volts per meter across the inner mitochondrial membrane.

Light or Fire and Water are key Alchemical elements to the life of the cell. The light of phosphorylation and the by-product of H$_2$O in the redox formula shown above provide the Scientific Illuminist with the secret of the nature of life at the cellular level. But phosphorylation was not an option for the original organisms that evolved on this planet. Rather, they relied on a fermentative metabolism derived from a ‘pre-biotic synthesis’ as a result of thunderstorms and volcanic events that produced the necessary stable metabolites in the ground. This was due to the fact that there was no free oxygen in the atmosphere. Yet eventually, the ground-based oxidants would become scarce and oxygen would become a component of the air, probably having been released into the air as a by-product of the activity of these early organisms. The Alchemist can readily see the Earth and Air interacting externally as the Fire and Water are interacting internally. The next evolutionary step would then be photosynthesis and oxidative phosphorylation.

The Earth-foraging and more primitive Eukaryotes maintained one relative advantage over the newly evolving Prokaryotes; they could swallow other organisms whole. So not only would the Prokaryotes become food, but a few could be contained in a symbiotic manner, supplying them with substrates in return for ATP. This more complex organism is known to us as Mitochondria, especially found in Yeast and Mammals. Yet Carl Woese, a micro-biologist at the University of Illinois is arguing that this ‘Endosymbiosis’ was not a determining factor in cellular evolution as the theory itself starts out assuming fully evolved cells. He goes on to claim that life did not originate from one primordial cell, but in a communal environment of cells with probably three cell lines. A horizontal gene transfer system promoted evolution vertically for these three lines. Note the allusion to the cross and one can even consider the cell as the circle.

But light remains the common source of all cellular structures and is the key to the origin of the Universe. One question that may arise here is the speed of light relative to universal expansion. Physicists have noted a problem of inconsistency in explaining a fixed speed of light and the rate at which the Universe expanded from the original and theoretical ‘Big Bang’. A variable speed theory is being developed, but at this point, no experiment has been created that can prove it. Yet within the still accepted present model, there are two schools that work at reforming the Big Bang theory in order to answer these inconsistencies. The first is the ‘Inflationists’ who argue that the Universe expanded much faster than it does today and the more interesting second school is the ‘Epirotics’ who argue that the Universe itself is a cellular organism with breathing membranes in eleven dimensions.
It is especially important to understand how cells communicate with each other. Evidence is accumulating that is pointing to a temporal code that is rhythmic in nature. These rhythms follow certain rules that play throughout the collective community of cells. Gyorgy Buzsaki Neuroscience Professor of Rutgers University-Newark, NJ, notes that hippocampal neurons discharge together in bursts of activity as they consolidate gathered information into long-term memory. This is indirectly corroborated by the research of Richard and Iona Miller in their study of atmospheric harmonics and the ‘Schumann Resonance’ (SR).

“There is a harmonic relationship between the earth and our mind/bodies. Earth’s low frequency isoelectric field, the magnetic field of the earth, and the electrostatic field that emerges from our bodies are closely interwoven. Our internal rhythms interact with external rhythms, affecting our balance, REM patterns, health, and mental focus. SR waves probably help regulate our bodies’ internal clocks, affecting sleep/dream patterns, arousal patterns, and hormonal secretion.”

As Buzsaki’s ‘Spike Train Dynamics’ addresses the theta-related phase in the pyramid cells of the hippocampus, the Millers note that during meditation, alpha and theta rhythms cascade across the brain, allowing the cells of the body to not only resonate with the electro-magnetic field of the Earth, but they speculate that these cells can then directly communicate with it on a cellular level. They note the dancing of shamans and the often misinterpreted ‘nervous’ or frantic energy of children as movements intuited by the body that allow it to connect with “greater mind,” which to us sounds like Yantras unto Babalon.

Mother echoes this when she says:

“[T]he consciousness is a sort of limitless like waves, but not individual waves, corporeal waves, I might say, a movement as vast as the earth, but not…not round or flat or…something quite infinite in its sensation, but a wave movement. And this wave movement is the movement of life.”

If we observe the great periods in human history, we readily see the ‘movements’ of groups of people. Perfect examples of this are the Rosicrucians and the Beats, the Transcendentalists and the Surrealists. This tells us that the Avatar can not function alone. Rather, cells of individuals, churches, need to organize and collectively generate the vibratory force.

Sri Aurobindo addresses this:

“Each individual being, even if he is of quite a superior quality, even if he has been created for quite a special work, is only one individual being; this is, THE TOALITY OF THE TRANSFORMATION CANNOT TAKE PLACE THROUGH ONE SINGLE BODY…If the effect is to be a general one, at least a minimum number of physical individuals is necessary.”

So it is not enough as Grant suggests, to open some allegorical gate to consciousness. This assumes that one person alone could be fixed with too much power. The implications of this would show us a universe that couldn’t maintain any stasis at all as it would constantly be radically changed by each individual player across its field of activity. Probably such a person vibrating alone would be more discarded; not unlike waste material as a post operative by-product in a cell. And for the trained Alchemist, the hint about the value of excretory matter is pretty overt.
Rather, one cell needs to stimulate sympathetic vibration in a block of cells, which then in turn, stimulate the entire organism and of course, subsequently, affects other organisms. The physicist, Lian Siderov is quoted by the Millers as he hypothesizes:

[B]rainwaves (particularly in the alpha range) can be transmitted along the perineural system (or via Frohlich excitation) to any distal parts of the body, and even to adjacent organisms, via ELF EM waves. These frequencies can be amplified by closely-related Schumann resonance waves, or by feedback mechanisms typical of the body's physiological pathways (akin to immunologic and neuroendocrinologic cascades). In turn, these basic frequencies can re-activate stalled healing processes, enhance growth, accelerate immune responses, and generally "jump-start" functions inherent to the body's tissues, by "rebalancing its energies" (according to Oriental medicine) or (in Beal's terminology) by re-configuring the liquid crystal orientation of cell membrane components and thus triggering specific intracellular responses.

Mother’s devotee, Satprem notes:

“The next species is not one that will be endowed with new wondrous organs or splendiferous powers, but one whose cellular functioning and cellular perception will completely and naturally change the condition of the mortal bodies we are temporarily garbed in.”

This is complemented by Mother:

“It's as if the cells, the organization that makes a form we call human and which holds all this together, as if this had to learn that it can persist without the sense of separate individuality, whereas for thousands of years it had been used to separate existence only because of the ego—without the ego, it continues...through another law which the body doesn’t yet know, but...which is beyond its understanding. It isn’t a will, I don’t know, it’s...something: a manner of being.”

Siderov then takes us further:

“[T]he magnetic sensory canvas hypothesis provides a mechanism for "sharing qualia" associated with distant points on the geomagnetic sphere - essentially a form of cognitive entanglement between operator and target. One clear advantage of TGD\(^{179}\) over other models of subtle energy transmission is that the EM fields are not directly carried from sender to target, but are simultaneously generated at the two locations by a vacuum (geometrical) current: hence they remain coherent while bypassing the paradox of non-attenuation with distance. The illusion of our locality is perpetuated by the data fed to us by our senses - that is, those perceptions we are habituated to pay attention to.”

We are now finding validation for the Morphogenetic Field Theory and hinting at what the nature of an Avatar is along with the Shakti-pat or sympathetic vibration that would be generated by such a person. An Avatar is someone that originates the vibratory current, much different from a prophet who merely shares a vision. This vibration as a physical movement, we purport to be identical to the movement of two bodies in the midst of sexual activity. If our destiny is connected to getting our consciousness to the cellular level, it seems that built into our collective destiny is the drive to reproduce. Perhaps that’s why Crowley kept getting the statement from his oracular channelings, “It’s in the egg.” He didn’t understand this and the entity could easily have been alluding to the cell.

\(^{179}\) Topological Geometrodynamics
Satprem says:

“[W]ithout a doubt, sex is one of the keys to the Secret of the body, and the mastery of sex, says Sri Aurobindo, is an imperative condition for the manifestation of the new evolutionary force, the Supramental force in the body.”

Gurdjieff seems so on the mark to have described levels of consciousness in terms of hydrogens and carbons. Consciousness is in the Prana, the logos that is the light is pulled from the air by way of breathing as the macrocosmic energy in contrast with the microcosmic, which pulls through the foods that we eat. Even thoughts and emotions are foods for their corresponding ‘bodies’. We then find an additional idea that the “lost word” of the Masons has its own vibratory power as does every word that enters our heads and hearts. This calls for a mantra, a word spoken by the Earth herself and heard by heart of each and every cell in the body.

Mother’s Mantra was ‘OM NAMO BHAGAVATE’ and may be translated as ‘Divine power is in the name of one who is sunlike or godlike.’ The Gnostic Mass uses HRILIU though we might more aptly consider ABRAHADABRA (for this work) as the mantra; the seed germ coming from the Hebrew ‘ha brachah dabarah,’ originally transliterated as ‘abracadabra’ and meaning ‘speak the blessing’ and has also been translated as “I bless the dead.” As well, we have a host of words from the Masons and other pseudo-Masonic orders but these don’t seem to serve our purposes though what we do have is more an intellectual rather than an empirical derivation. We do receive words through divination and evocative practices that ring for semesters of time such as that derived by the hierarchy of the A.’.A.’. at both the Vernal and Autumnal Equinoxes. And it’s uncertain whether or not there’s any one particular word or sound that can be intoned by the human voice that will unlock the secrets of the Earth…though it’s been sought after since time immemorial.

However, it seems ABRAHADABRA has a five-fold pulsing nature (not unlike the five-fold nature of AUMGN) that is quite unique when it comes to its vibration. If we consider it in just such a manner, we get AB-RA-HAD-AB-RA (and even a possible complement to ABMN as discussed in Words of Power). The AB gives us the idea of father or ‘all-father’ (the generative force) with RA being the Sun or light that crystallizes in the blood as per the Gnostic Mass. And HAD is the Starry and essential center of our life-force; concealed by these outer veils (AB and RA).

But what we do have is Mother’s record of her work at getting to the subconscient level of consciousness. She was attempting to make the leap to that state called Immortality by the sheer repetition of the mantra in order to get the cells of her body to take up the vibration and find their own individuated consciousness. In this next quote, we have perhaps the most potent description of the Tiphareth experience ever uttered by someone:

“Death is the decentralization of the consciousness contained in the body’s cells. The cells composing the body are held in form by a centralization of the consciousness in them, and as long as that power of concentration is there, the body cannot die. It’s only when the power of concentration disappears that the cells scatter. And then the body dies. The very first step toward immortality is therefore to replace the mechanical centralization by a willed centralization.”
It’s important here to state that what is meant by Immortality is not what it seems. Change does equal stability; the body must eventually die. But consciousness need not die along with it as is presumed to usually be the case. In unleashing the conscious force of the cells, the aggregate being becomes a whole force, greater than the sum of his or her parts. This is certainly a Great Work. But not an easy work as Mother warns:

“What’s a little difficult is the moment of transition from one way of being to the other. It’s done very progressively, yet at the moment of transition there are a few seconds that are…the least we can say is ‘unexpected.’ All habits are undone. It’s the same with all the functionings—blood circulation, digestion, breathing—all the functions. At the moment of transition its not that one abruptly takes the place of the other, but there is a state of fluidity between the two which is difficult…And I can see that for years the body and the whole body consciousness used to rush back in the old way to seek safety, to escape; but now, the body has been persuaded not to do it any longer and on the contrary to accept: ‘Well, if its dissolution, let it be dissolution.’ You feel all the usual stability vanishing…the great adventure.”

Perhaps it takes more than simply a word, no matter how perfect that word, no matter how that word resonates with the electro-magnetic vibration of the Earth. In a study on timbre by Stanford University in California, it has been suggested that the temporal lobe stream of the brain identifies auditory objects “analogous to the ventral visual pathway involved in object recognition.” And in the Millers’ first paper on Quantum Bioholography, they also assert that sound waves on the surface of the brain, create a movement “that is used as the basis for creation of an optical hologram.”

The Millers’ set up the idea that DNA is the projector of a bio-holographic field that manifests the cell in relation to the aggregate bio-holographic field projected by the nervous system. The cells then speak to each other chemically through the enzymes of the RNA with each cell activating only that part of the DNA strand that is consistent with the particular localized tissue of the particular organ within which it is functioning. The polarization due to its electro-magnetic nature connects it with photons that then constitute a broadband radio wave spectrum. “This is the main information channel of DNA, the same for both photons and radio waves.” In other words, sound and light are the same thing…or two separate manifestations of the same thing; but both intimately connected to the ultimate physical manifestation of the cell and hence the entire organism.

Reminiscent of Frater Achad’s ‘Snowflake’, the Millers’ then go on to identify the hologram with the fractal, showing us how simplicity evolves into complexity, and yet retains its original simplicity:

“Like holograms, magnify a fractal again and again and more detail emerges from its infinitely embedded structure. The same self-similar patterns repeat, over and over, no matter what level you care to examine. You look closer and closer and still see the same form. A single image is infinitely reiterated. Thus, a wealth of structure emerges from simplicity. So, too, the disease process can be seen at the physical, emotional, mental; and spiritual levels. Yet, the form remains the same. The key to his process lies in our DNA, in our genes and gene-expression.”

In the Millers’ review of basic biophysics, they affirm that photosynthesis is “the basic builder of biological structures.” Molecular systems with mobile electrons are formed by way of a chemical bond called the ‘resonance bond’ most readily possible in hydrogen, carbon, nitrogen and oxygen atoms as well as sulphur and phosphorus… “All the essential biochemical substances, which perform the fundamental functions of living matter…”
So now the question of what to visualize becomes as important as what sound to manufacture in order to tap into the electro-magnetic resonance of the Earth; Levi’s plastic medium, the ‘Ether’. Light gives the shape of the Cross when observing any of the celestial objects in the sky. And the ancient mystery schools have conveyed this to us since time immemorial, even by way of the Southern and Northern Cross constellations. The cross even forms the shape of the conjugal couple; perhaps suggesting that the sound is found in the ‘moaning’ that is part of sexual intercourse. Or perhaps in coitus, the ‘Word of the Aeon,’ Abrahadabra, might be the word conveyed; assuming it is the Earth itself that has given us this word. This would have to be empirically validated.

But if this projection is to be proved as scientific fact, it would seem necessary that we develop the capacity to re-grow severed limbs and repair damaged nerves. Reptiles are capable of this and it may only be that we need to learn how to calibrate the frequency of the EM hologram projected by our DNA in order to attain the same capacity. We already know that EM fields are integral in generating and defining biological tissue and organs. Now it is but a matter of creating a stronger science out of such things as ‘laying on of hands’ and other forms of psychic surgery. Dion Fortune’s polarity experiments may play a profound role in this.

Bioluminescence can be considered an indicator of life activity. It is the emission of photons of light produced when certain energized electrons drop into a lower or ground state. A common example is the visible light (or electromagnetic radiation) generated by the firefly. The importance of this phenomena is seen by taking the broad view of the life process as we know it: photons from the sun excite electrons here on earth; this high energy state is transformed into high energy phosphate bonds by the process of photosynthesis; the release of the energy stored in these bonds is the fuel of life; electrons are transferred between molecules in a downward cascade fashion to lower energy states; this action produces the electric current that produces the motion that we call life.” (Miller 1974ev)

Based on the experiments of the Russian scientists Peter Gariaev, “it’s possible to suppose that photon fields, emitted by chromosomes as sign fields, can be teleported within or even outside the organism’s space.” In light of this the Millers’ assert a bit further that it should be possible for these “wave fronts” to interact with, interpenetrate and inter-determine biological tissue amongst multiple biological systems. It seems readily apparent that we have here, a sublime scientific hypothesis that asserts our omnipotence, omnipresence and our omniscience.

Innate to all of this is the idea that we will have to redefine temporal experience and our awareness of our connection to matter and consciousness. Patrizia Norelli-Bachelet in her book The Gnostic Circle, gives us the following:

“[I]f it is true that as proven in physics time lengthens as the gravitational pull increases, it is equally true than that where this pull lessens there is an acceleration of time...as the body becomes more subtle, as its present gross substance becomes modified, there is at the same time a modification of temporal experience.”

“The key would be to transform the cell, or to come to a new experience of Time, which would not alter the evolutionary capacity of Earth life but rather render the experience free from the imposition so the Ignorance while still retaining the possibility of fully accelerated growth.”

Growth is a creative activity of the unconscious mind as the Millers teach by way of quoting Ernest Rossi’s ‘Dream-Protein Hypothesis:’
“[D]reaming is a process of psychophysiological growth that involves the synthesis or modification of protein structures in the brain that serve as the organic basis for new developments in the personality...new proteins are synthesized in some brain structures associated with REM sleep.”

Sleep then becomes a creative process where the personality and even the physical body is re-created. But up until now, this has been a largely unconscious process. It would seem a sign of our evolutionary advance would be found in our becoming fully aware or conscious in sleeping and trance states in order to control, direct and perfect a highly developed Gnosis.

Norelli-Bachelet goes on to state:

“The cells as yet have not manifested the full power because the divine light which is their core has not yet been allowed to come forth. Following the path of the gnostically illumined consciousness, their experience will also be one of immortality. But still Matter, will retain its characteristic of eternal motion, of perpetual change.”

“To reach this point there must be a transformation of the consciousness, into a consciousness that has unmasked Death, has seen its illusion and in this state is able to work upon the structure of the cells in their own field—that is, the field of Eternal Motion.”

Pralaya is total dissolution or absorption of consciousness. If this occurs on the physical plane, we have an Alchemy that takes the moving energy away from the mortal cell as it is now manifest in our species, and moves it into the newly developing etheric body created from the astral consciousness that now occurs in dream states for most of us; though the practice of Astral Projection is a first conscious step towards this goal.

The Millers confirm this scientifically:

“[T]he genome emits light and radio-waves whose delocalized interference patterns create calibration fields (blue prints) for a system’s space-time organization. This holographic-type information is being constantly and simultaneously read in billions of cells, accounting for the quick coordinated response typical of living systems.”
For the trumpet shall sound, and the dead shall rise incorruptible ad we shall be changed. For this corruptible body must put on incorruption, and this mortal body must put on immortality. I Corinthians XV.52-53

Free Radicals are produced in the cell by the Mitochondria that are the tiny structures inside cells acting like furnaces and manufacturing most of the energy that is used by the body. They are the molecules inside cells that strip other molecules of vital electrons. And this of course, produces cancer and the aging of the cells. Modern physics teaches us that electrons themselves are also involved in a process called Beta Decay, integral in converting hydrogen into helium in the Sun. At the sub-atomic level, a neutron is converted into a proton employing the Weak Nuclear Force and causing an electron and a neutrino to be emitted.

This leads us to wonder about the true nature of the Mitochondria. Certainly we know of the phosphorylation, that light\(^{180}\) that holds the two strands of the nuclear DNA together. But this extra-nuclear DNA, which as we’ve suggested before (Cf. Liber LH) seems so integral to human immortality as evidenced by the maintenance of matrilineal bloodlines amongst the ancient Egyptians. And here we can note the importance of Pranayama, remembered by the Hindus as the Mitochondria utilize ninety-five percent of the oxygen consumed by a cell to convert food into fuel. Oxygen of course, fuels the fire of any furnace, including the Alchemical Furnace.

Mother searched for a mantra that would produce a certain vibration to activate the cells of her body to sentient consciousness (Cf. Liber Vox Viva Voce vel Video). And of course, Mantra Yoga is a form of Pranayama. Oxygen is a food for the Alchemical Furnace so that as the Alchemist, John Reid III so eloquently points out in his book: Alchemical Gnosis:

Light and air are the fundamental food sources for all life on this planet. The air carries within it the vital charge that animates all life on this planet…Hydroponics and aeroponic indoor or outdoor soil-less growing systems have shown this. Plants like the rest of life on earth receive a nutritional quotient from the air. Breathing is not just respiration it is also an act of eating.

These misplaced electrons or Free Radicals bond indiscriminately with other molecules in a process called Oxidation. They then cause the Mitochondria to respond chaotically, creating a cascade of cellular pollution that lowers energy levels and can cause cellular mutation and even cell death. The mutation often leads to cancer and both symptoms together and separately, cause aging. So we can say that Free Radicals cause more Free Radicals in an insidious process that leads to human mortality. The very oxygen that we need for our survival is also the cause of our ultimate death.

\(^{180}\) Light is defined in physics as electromagnetic radiation of any wavelength.
Telomeres are structures on both ends of every chromosome, containing a repeated DNA sequence suggesting a holographic structure not that different from the theories proposed by Richard and Iona Miller. However, as cells divide in their routine process of Mitosis, the Telomeres of the new cells become shorter and shorter until ultimately a signal is sent to the cells so that this process stops and Senescence ensues. In short, the cell begins to age and decay, though it remains alive. This may seem like a bad turn for the life of the cell or set of cells in a physical organ. But the upside is that because the cell can no longer divide, there is no chance that a tumor can form from this cell.

So far, the function of oxygen and oxidation has been addressed. But in getting back to John Reid III’s quote, there is also mention of light as the other of two fundamental food sources on this planet. And phosphorylation has already had so far, a brief mention. Oxidation it seems is unavoidable and may in itself not be a terrible thing as mutation of necessity does not have to be synonymous with cancer; but may also suggest the idea of evolution. The proper employment of the light of phosphorylation through the induction of a vibration as hinted at in the Masonic legend of a lost ‘Word,’ seems to be what Mother was certainly after. And on the other hand, this light as it is may be the source of power that might indefinitely sustain the senescent cell if we can but find a way to make it work as such.

Some physicists suggest that light waves are actually vibrations emanating in a fifth dimension with the other four of course being the known space-time continuum. This is considered a key that combines Einstein’s General Theory of Relativity with James Clerk Maxwell’s Electromagnetic Theory. Electromagnetism of course, is also a key to Dion Fortune’s work as discussed in such documents as: Sexual Polarity in Magick and Qabalistic Magnetism. It is one of the four powers in the theory of physics, seemingly corresponding with the four elements of Western Magick. It’s that fifth element found in Hindu Magick and corresponding to the invention of the ‘Ether’ by nineteenth century physicists.

We certainly know that light interacts with matter and may even be the source of matter. String Theory provides us with the idea that these curved, one-dimensional strings of light do nothing but vibrate in order to emanate the various sub-atomic particles that make up all the atoms of the Atomic Table and from which all the forms of matter are comprised. So it seems not too far a logical leap that this string at the sub-atomic level and the phosphorylation at the cellular level have a mutual correlation in form and substance but only different on the seemingly illusory level of generation.

It is mind and the microcosmic level and Universal Mind at the macrocosmic level that can even conceive of light. And through the function of Will or the bud-Will, it can direct it (Cf. Liber Laiad)…if but only for the proper mantra, that lost Word.

In the beginning was the Word, and the Word was with God; and the Word was God. He was in the beginning with God. All things were made through him, and without him was made nothing that has been made. In him was life, and the life was the light of men. And the light shines in the darkness; and the darkness grasped it not. John 1:1-5
The Body of Light  
& the Magick Lamp

“May my soul lift itself up before [Osiris], having been found to have been pure when on earth. May I come into thy presence, O Lord of the gods; may I arrive at the Nome of Maati (Truth); may I rise up on my seat like a god endowed with life; may I give forth light like the Company of the Gods who dwell in heaven; may I become like one of you…and may I come forth into the presence of Un-Nefer true of word. May I be a Follower of Horus in Ra-stau, and of Osiris in Tetu; and may I perform all the transformations which my heart may desire to make in every place wherein my Double (KA) wisheth to be…O thou who dwellest in thy circle, and who dwellest in my feet in Khert-Neter. I am he who sendeth forth light over the Thigh of heaven. I come forth in heaven. I sit down by the Light-god (Khu)...I the Osiris Ani, whose word is truth, in peace.”

—Egyptian Book of the Dead

Ritual of Light  
Igniting the Magick Lamp

In thine Magickal Retirement, perform seven days of Liber VIII followed by three days of dark retreat.

At sunrise, on the morning of the eleventh day, face the rising sun and perform the Hatha Yoga rite called the Sun Worship with the following invocation:

“First source of all sources. . .perfect my body. . .(so) that I may participate again in the immortal beginning. . .that I may be reborn in thought. . .and that the holy spirit may breathe in me.”

Then be seated in thine asana and inhale the first rays of the rising sun; entering into the Body of Light and rising up to the heavens, through this gate of light with this spell:
“For I am the Son (of the Sun), I surpass the limits of my souls, I am (magical symbol for Light).”

This seems as if bathing in the light of the morning Sun, so aptly fit for morning recitation of Resh and a meditation on the following lines from Liber AL:

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Above, the gemmed azure is
The naked splendour of Nuit;
She bends in ecstasy to kiss
The secret ardours of Hadit
The winged globe, the starry blue,
Are mine, O Ankh-af-na-khonsu!"

I adore thee in the song-
I am the Lord of Thebes, and I
The inspired forth-speaker of Mentu;
For me unveils the veiled sky,
The self-slain Ankh-af-na-khonsu
Whose words are truth. I invoke, I greet
Thy presence, O Ra-Hoor-Khuit!

Unity uttermost showed!
I adore the might of Thy breath,
Supreme and terrible God,
Who makest the gods and death
To tremble before Thee:--
I, I adore thee!

Appear on the throne of Ra!
Open the ways of the Khu!
Lighten the ways of the Ka!
The ways of the Khabs run through
To stir me or still me!
Aum! let it fill me!"

The light is mine; its rays consume
Me: I have made a secret door
Into the House of Ra and Tum,
Of Khephra and of Ahathoor.
I am thy Theban, O Mentu,
The prophet Ankh-af-na-khonsu!

By Bes-na-Maut my breast I beat;
By wise Ta-Nech I weave my spell.
Show thy star-splendour, O Nuit!
Bid me within thine House to dwell,
O winged snake of light, Hadit!
Abide with me, Ra-Hoor-Khuit!"

Theoricum
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181 One should have devised beforehand and through one’s ingenium, a symbol for Light.
Allah is the light of the heavens and the earth. A likeness of His light is as a pillar on which is a lamp—the lamp is in a glass, the glass is as it were a brightly shining star—lit from a blessed olive tree, neither eastern nor western, the oil whereof gives light, though fire touch is not—light upon light. Allah guides to His light whom He pleases. And Allah sets forth parables for men, and Allah is Knower of all things.

Koran: Sura 24; Verse 35

In a commentary to the preceding verse from the Koran, the following is written:

Nur (light) is that which manifests hidden things, and Allah is called here the light of the heavens and the earth, because He has manifested them and brought them into existence. Mishkat means a niche, but Mjd explains it as meaning ‘amud or pillar (LL).

In the parable that follows, Islam is represented as a likeness of the Divine light, a light placed high on a pillar so as to illuminate the whole world; a light guarded by being placed in a glass, so that no puff of wind can put it out; a light so resplendent that the glass itself in which it is placed is as a brilliant star. It should be noted that the religion of Islam is repeatedly spoken of as Divine light in the Holy Qur’an: “They desire to put out the light of Allah with their mouths, but Allah will allow nothing save the perfection of His light, though the disbelievers are averse”. Hence it is of Islam that the parable of Divine light speaks. The blessed olive, from which that light is lit, and which stands here for a symbol of Islam, as the fig stands for a symbol of Judaism, belongs neither to the East nor to the West. Even so is Islam, which must give light to both the East and the West, and which, therefore, does not specially belong to either of them. The reference seems to be to the welding together of the East and the West in Islam, a prophecy which is not approaching its fulfillment in the awakening of the West to the truth of the principles of Islam.

The parable becomes clearer if the word nur (light) be taken to refer to the Holy Prophet. The Prophet was by nature gifted with the highest qualifications. Even before he received Divine revelation, his life was a life of purity and devoted to the service of humanity. Light emanated from him even before the light from on High came to him in the form of Divine revelation, so that when revelation came to him it was light upon light.

In The Kundalini Experience by Lee Sanella, the onset of neural superconductivity is connected to the tantric Kundalini or serpent power, and described as a heat-producing experience connected to the psychology of love (a Bhakti-Yoga). Referring to “burning currents of fire inside” the individual, Ms. Sanella writes:

Evelyn Underhill (1961), in her widely acclaimed study, mentions the “heat” experience of Richard Rolle of Hampole, “the father of English mysticism” (p. 193). In his work Fire of Love (I.14), Rolle wrote: “Heat smoothly I call when the mind truly is kindled in Love Everlasting, and the heart on the same manner to burn not hopingly but verily is felt. The heart truly turned into fire, gives feeling of burning love.” Rolle himself was amazed at the intensity of this experience, which was not purely mental or imaginary, but had a strong physical manifestation. In the prologue to his work he remarked that “oft have I groped my breast, seeing whether this burning were of any bodily cause outwardly.”

Where there’s heat, there’s light; more than a symbolic adjective for attainment, illumination and enlightenment, even the lightening flash are all descriptors that can be used literally. Lee Sanella connects this to the experience of the heart when she writes:

In the ancient Chandogya-Upanishad, one of the earliest esoteric scriptures of Hinduism, the transcendental Self is said to reside as Buddhism, Gautama, the found of Buddhism, awakened to the enlightened condition as he, after another night of watchful mediation, raised his eyes to the sky where he perceived the morning star. The star symbolized the “Clear Light,” or the universal reality beyond all forms. It is this Clear Light that the Tibetan Buddhist masters admonish the faithful to keep in their attention during the death process. According to the Lalita-Vistara, a traditional biography of the Buddha, a ray of light would rise from the crown of Gautama’s head whenever he sat absorbed in deepest meditation. This reminds one of a verse in the fourteenth chapter of the Bhagavad-Gita, which states that when there is real knowledge, or wisdom, the body emanates light. The same claims is made by the Chinese sage Chuang Tzu.
In the famous eleventh chapter of the Bhagavad-Gita, there is a beautiful description of Prince Arjuna’s enlightenment experience. He was overwhelmed by a vision of the radiant glory of God Krishna, symbolizing the ultimate reality. Arjuna experienced the Divine as a “mass of brilliance, flaming all round…entirely a brilliant radiance of sun-fire (Feuerstein 1980, p. 118).

Keeping in mind what we have discovered about the ability of the DNA to absorb or emit light, as shown by the presence of the phosphorylation, discussed in Liber Vox Viva Voce vel Video, then we have shown the possibility of the physical body’s ability to absorb and translate the new influx of Light as a container within which the Soul is congealed; turned into a Star. This is further confirmed by modern science; in his article: Strange! Humans Glow in Visible Light, Charles Q. Choi writes:

Past research has shown that the body emits visible light, 1,000 times less intense than the levels to which our naked eyes are sensitive. In fact, virtually all living creatures emit very weak light, which is thought to be a byproduct of biochemical reactions involving free radicals… Since this faint light is linked with the body's metabolism, this finding suggests cameras that can spot the weak emissions could help spot medical conditions, said researcher Hitoshi Okamura, a circadian biologist at Kyoto University in Japan.

As Nuit, the Egyptian star goddess, declares in Liber AL vel Legis: “Every man and every women is a star.” When we remember that all the matter in our bodies originated in the heart of stars, and that our consciousness, liberated from its containment in matter, has the ability to return to the stars, then it is possible that Nuit is describing the literal truth. As Shakespeare said, we are such stuff as stars are made.

According to Egyptian tradition, the institution of kingship was received from the Hru Shemsu, the semi-divine Company of Horus, so that humanity might have a direct connection with the process of creation. One of the duties of the Pharaoh was to keep the Djed of Osiris properly aligned so that the world participated in the divine or stellar stability. This certainly implies the interdependence of the Above and the Below in a dualistic oscillation.

All of which points to DNA as the source of the imagery. The ten Sefirot on the Tree-of-Life and the Serpent entwining of the twenty-two paths, make for a total of 32 qualities and their reflection on the ‘nightside’ of the Tree, which of course then represents the 64 protein synthesis code words of t-RNA. The 22 letters of the paths correspond to the 20 amino acid pairs and the two punctuation marks formed by t-RNA. The 23 chromosomes that each individual passes on in reproduction can be seen as the 22 paths of the language, with the addition of the Malkuth, or earth element that creates both gender and individuality. The Tree Of Life is a sophisticated symbol detailing the patterns found in the DNA, as it is also the symbol of the Ladder in the Merkabic Tradition that is the Shamanic Gnosis of the West.

The projected Tree of Life pattern also gives us insight into the Pharaonic star-birth process. The projected Tree, whose Tiphareth point falls on the cusp of Taurus/Gemini and includes the Pleiades, contains the constellation of Orion with Netzach then positioned on Sirius, hence its connection to Isis and Venus, as outlined in The Eagle & the Temple. The path from Netzach to Tiphareth is attributed to the Hebrew letter Nun (fish) and the Tarot Trump Death. Significantly, it is also attributed to the zodiacal sign of Scorpio, a constellation adjacent to the center of the galaxy, where Ophiuchus is found.

The Pharaoh attained immortality in these formative star fields in the heart of Orion as he passed in death along the path of Nun, which is also the Egyptian word for the primeval ether soup out of which all of creation arose; and even the human species as taught in modern science and making the symbol of the fish significant. The Pharaoh’s star-birth is shown to be part of a larger process involving the star fields of Orion; themselves 70 light years away and the closest area of stellar creation to our own solar system.
The number 70 in the Greek Qabalah gives us the word δεῖνα, which means ‘anyone’ or more significantly ‘a certain one.’ And seventy (ἐβδομήκοντα) spelled in full equal 570, which gives us the word οἰκον, meaning ‘of the temple.’ This clearly suggests the attainment of the Master of the Temple. In order to achieve this, the Pharaoh must initiate the transformational and creative process within himself before or at the moment of death.

The spontaneous creation of matter and energy from the ether soup has been demonstrated to be the product of geometric alignments of energy, symbolized by the ancients in the pattern of the Ankh, the image of ‘universal life.’ The Ankh, as we have noted, is the only form of the cross to contain the entire Tree of Life pattern without disturbing its natural order. It is also symbolic of the Southern Cross, visible in the winter sky through most ancient Egypt’s history, and its use as an astral marker of the galactic alignment.

The constellation Crux, the Southern Cross is found on the galactic meridian with its vertical axis pointing to the South Celestial Pole and its horizontal axis is tilted and pointing directly at the galactic center. By drawing a vertical line from the South Celestial Pole through the Cross and on to Centaurus and Corvus and then to the cusp of Leo/Virgo (opposite Pisces in the North), we show it to be a perfect precessional marker; the age can be being read by its orientation. Noting that the current Astrological Age began at Pisces, its opposition to Virgo would be consistent with a cross working from the Southern Hemisphere.

The Pharaoh then built the Ankh within himself by aligning his subtle bodies or energy fields in this pattern shown by the Southern Cross as it forms its alignment the celestial and ecliptic poles with the galactic meridian. This is based on the Egyptian model of the five magical bodies that, when aligned properly, creates a super-sensible, meta-conceptual or divine consciousness. This is even more interesting when we remember that Sekhmet, as the Great Eye of Ra, is actually a metaphor for the eruption of the galactic core.

The five bodies to be aligned are the Aufu, the Ka, the Hadit, the Khu and the Sahu, or the physical body, the life force, the infinitesimally small point that is the bud-Will, the soul-spirit connected to the heart (Agape or Bhakti), and the faculty that perceives the transcendental gods and undergoes transformation (the cerebellum or brain used to access the Astral Plane), respectively.

When this alignment is achieved, there is a burst of spontaneous matter/energy creation, which if employed consciously, can be used to generate a ‘light body’ the Magickal Childe. When it occurs without conscious initiation and control, then a number of dire results can possibly occur, from illness and insanity to death by spontaneous combustion. Indeed, the numerous and well-documented examples of spontaneous human combustion are proof of the process’ reality. Modern physics has no answer for the mystery of such combustion, but if we see it as one end of a spectrum, the other being the creation of an immortal light body, then the mystery resolves itself.

To see this a little more clearly, we need to look once more at the Egyptian magical text mentioned in chapter three. From the Paris Papyrus, it is one of the gems discovered in Egypt by Napoleon’s savants. In papyrus IV, lines 475-830, we find a ritual to attain immortality through inhaling Light. (cf. Appendix)
Eleven is the number of Da’at on the Tree-of-Life, and Fulcanelli uses this mystical perspective in his explication of the 46th image in The Mystery of the Cathedrals (shown above). Whether Fulcanelli knew of the Paris Papyrus and its formula for inhaling light is unclear, but he certainly understood the process. And interestingly enough, 46 is a ThRShRQ of 64 and the components of the DNA, as discussed above.

The 46th image in Fulcanelli’s work is that of a false window, which can be seen to suggest the Egyptian false door used in the pyramids. This false door allows the ‘Ka’ or the spirit double that lies within all of us, access to the ‘Ka’ statue, the body’s immortal form, hidden in a chamber behind the door. This is the doorway to the Duat, or the astral realm of the light beings; stars.

The spirit, or light within us, lives in this realm after the death of the body; a concept echoed in the parable of the Gnostic ‘spark of light’ trying to find its way back to the great central light of the universe.

The pattern of the hexagrams in the I Ching exactly match the pattern in our DNA code, which may then be called a rebus, or word picture. In Hebrew, the letter Resh, was considered the pictogram of the Face, and was attributed to the Sun; hence the drawings of a face on the Sun in the Holy Tarot. This suggests Horus Or, the elder sun god, whose Egyptian name, Hru, is the same word as ‘face.’ Heru-Ra-Ha can then be said to be the face of the Sun and the innermost spark of the Sun (Ha-Had-Hadit). The letter E, in its aspirated consonant form, is Heh in Hebrew, or ‘the window.’ RE (an alternate spelling for Ra) then suggests ‘The Light of the Face of the Sun’ shining through a window; that ‘secret door,’ which may be interpreted as ‘The Light shines in.’

Once again, the letter ‘H’ is showing up, which here is not only indicative of the DNA sequence, but as the Ladder to Immortality & the Merkabah. In working on the letter/number symbols of the Greek alphabet, we come upon Eta; the letter H as it transliterates into English. And ‘H’ has been important to me since my first Tarot spread, wherein it was shown that the letter and the Atu were key to the process of invocation as a way of manufacturing one’s destiny.

It then turns up as a key to assist in an attempt to solve the ‘riddle of AL’, as found in a personal note for: The Riddle Solved. And so in the Greek alphabet, though we only have ten digits, it seems we must have once had twelve as the words eleven and twelve suggest something we’ve since forgotten. Eta as the number eight is also eight letters distant from Alpha, the Monad. That’s because of the obsolete sixth letter; also called the “remarkable letter.” With the eight principal Aeons emanating from the Bythos/Sige syssygy, this eight, Eta, represents the fullness that is the Pleroma.
The Greek word for Chariot comes to 719, which by the process of AIQ BKR or Pythmenes as the Greeks called it, reduces to 8, which is the number of the Atu! Interestingly enough, Helium is the first element with an atomic weight of one. This tenth sign holding the number 10, which reduces to 1 makes me wonder about the qualities of Helium, which we at least know is lighter than air and moves us towards the heavens. Helium’s initial is the letter ‘H’ with Eta then being a most significant letter, which transliterated as E, also connects with profundity in Liber 805 wherein we find:

\[E = 5 \text{ [The number of the Hierophant Atu]; This letter transliterates to Aleph in the Hebrew. Aleph is the first [as H is the first in AL & the English EQ], which follows the last (Tau or T) and which is before this letter in this order. E is energy in scientific formulae and since it has the same value as Heh in Hebrew, we have the H that is the first letter of this order. EQ on this formula: } E (5) = M (6/Beast) \times C^2 (4900/Babalon) \text{ or 29,400 or 15, Devil Atu. And interestingly enough, E=5 in the Greek Qabalah as well.}\]

Adding to this significance, Eta in Greek is equivalent to Cheth in Phoenician and hence in the Hebrew Qabalah. This is the Chariot Atu, which is both the Merkabah and the Great Work as Cheth enumerates to 418!

In Chapter 7 of Volume II of Blavatsky’s Isis Unveiled, I we come across more on the letter H.

IAO, in such a case, would -- etymologically considered -- mean the "Breath of Life," generated or springing forth between an upright male and an egg-shaped female principle of nature; for, in Sanscrit, as means "to be," "to live or exist"; and originally it meant "to breathe." "From it," says Max Muller, "in its original sense of breathing, the Hindus formed 'asu,' breath, and 'asura,' the name of God, whether it meant the breathing one or the giver of breath." It certainly meant the latter. In Hebrew, "Ah" and "Iah" mean life. Cornelius Agrippa, in his treatise on the Preeminence of Woman, shows that "the word Eve suggests comparison with the mystic symbols of the kabalists, the name of the woman having affinity with the ineffable Tetragrammaton, the most sacred name of the divinity." Ancient names were always consonant with the things they represented. In relation to the mysterious name of the Deity in question, the hitherto inexplicable hint of the kabalists as to the efficacy of the letter H, "which Abram took away from his wife Sarah" and "put into the middle of his own name," becomes clear.

Liber H is known to those of our lineage in the A.’.A.’ as Liber Reguli; the orienting of the Aspirant to the energies of the Aeon and the invocation of those energies, called down to this plane (linking the above of Orion to the below of Giza; the Obeah & the Wanga!). Indeed, HPB’s explanation of the letter H in the conversion of Abram to Abraham was the first significant understanding I had of the hidden history contained within the Bible; having read as a teenager, a book on this hidden history (Deceptions and Myths of the Bible by Lloyd M. Graham) and coming to realize that there was much being ignored by most readers of the Bible. The letter H has been a key for me from my earliest instruction. To quote Mr. Graham directly in what had such a profound affect on me, he writes:

"What does the 'seed of Abraham' mean? Abraham, formerly Abram, is but the Hindu Creator Brahma, formerly Brama, with the a as prefix instead of suffix. Therefore Abrah'a's seed is the Creator's seed."

Just a little bit more on this from my research of the Greek Qabalah:

The last letter in the Greek word for soul is eta or H. It is said to represent the procession of the Soul towards the cube (2x2x2), which could be interpreted as taking on 3-dimensional existence. The stars in the constellation of Serpentarius at the center of the Milky Way Galaxy form the letter V (Reguli or Liber V bringing down the energy of Horus); suggesting the Hyades of Taurus (the place of Horus, but also the ruler of the Hierophant Atu, from which the letter H begins its personal revelation for me.

Returning to Fulcanelli’s window and the rebus pattern, RER becomes the Light shining in and generating more light inside. This internal light is the double of the ‘Light of the Face of the Sun.’ It is ‘the light of the son of the Sun’ that is – the transmutational illumination that can be ignited inside of each
of us. RERE is then the light generated internally and now shining out from the skin itself; an ignition of the physical aura and what must be a melding of all the factured egos. The two words, RERE and RER, can then be read as: RERE: ‘Light shining in, light shining out’ and RER: ‘Light shining in to stimulate the internal light’…to light the Magick Lamp.

Per the I Ching, if we take the RER to be a yin line and the RERE to be a yang line, we get the 64th hexagram of the I Ching: ‘Before Completion.’ If we reverse the attribution so that RER is yang and RERE is yin, then we get the 63rd hexagram, ‘After Completion.’ These hexagrams are composed of two trigrams, Li, flame or light, and K‘ôan, water or the abyss. Therefore we have the image of ‘fire over water; the conditions before transition,’ and ‘water over fire, the conditions after transition,’ the interpretation of these hexagrams in the I-Ching. This image suggests the Silver Star of the Wise (the third and inner College of the A.’.A.’, being the College of the Silver Star), rising from the depths of space (the Great N.O.X.) to signal the completion of the Great Work.

Researchers, such as Rattemeyer, Popp and Ho, consider this bio-photon emission and absorption as a kind of “bio-communication between cells and organisms,” and their work over the last 15 years suggest that this language is used not merely on the cellular level but also as a communication and organization mechanism in macro-organisms such as plankton swarms. There is also evidence that certain shamanic states, such as those utilized in the Merkabah Tradition can function as an access way to this internal flow of information in the form of symbols and imagery that we know as Apocalypses.

The Mother of the Supramental Yogis deals with the natural breakdown of cellular mitosis at what she calls the subconscious level; that level of consciousness that is purely biological and yet, unavailable to normal, waking consciousness. We might call this the emotional level and that place where we deal with the knowledge that we will one day, die; the existential crisis. BTW: It is an exercise of Liber HHH; Section AAA for the Zelator. Noteworthy here is that the cells are on a long-term path to the ultimate destruction of the physical body; wherein it will no longer be capable of housing and congealing the Soul, which we know Magickally, must learn to congeal itself; independent of the physical body.

Mother first equates consciousness with the human body and describes taking herself "down into [this] place.” And there she finds the fractured nature of the individual, yet semi-aware nature of each of the cells; projecting an aggregate consciousness of fear.

I went down into a place...a place simply in the human consciousness, thus necessarily in my body...I have never seen anything more timorous, fearful, feeble and mean! It's...it must be a part of the cells, part of the consciousness, something that lives in apprehension, fear, dread, anxiety...It was truly, truly dreadful.

Mother then shows how this consciousness of fear leads to the disease or dysfunction of the body and theorizes that she can get to the root of its cause, which then would give her the power to not only heal herself, but to heal others. This power has always been linked to the idea of human immortality as portrayed by Jesus in the New Testament (really the legend of Apollonius of Tyana).

And we carry that within us! We aren't aware of it, it's almost subconscious--for you see, the consciousness is there to prevent us from yielding to that--it's cowardly, and it can make you fall sick IN A MINUTE. I saw it, I saw things that had been cured and overcome in myself (cured in the true manner, not in an outer way, and then they return! It's cured, but then it begins again.

This "true manner" certainly comes across as the manner in which the ancient shamans cured disease; getting to the spiritual source of the disease and uprooting whatever spiritual cause they find there.

So then I went in search of its origin. It's something in the subconscious--in the cells' subconscient. Its roots are there, and on the least occasion...And it's so very, very ingrained that...For example, you can be feeling very good, the body can be perfectly harmonious (and when the body is
perfectly harmonious, its motions are harmonious, things are in their true places, everything works exactly as it should without needing the least attention--a general harmony), when suddenly the clock strikes, for example, or someone utters a word and you have just the faint impression, 'Oh, it's late, I'm not going to be on time'--a second, a split second, and...the whole working of the body falls apart. You suddenly feel feeble, drained, uneasy. And you have to intervene. It's terrible. And we're at the mercy of such things!

Dealing with disease as a spiritual, rather than a distinctly physical issue; something that modern medicine is beginning to realize, necessarily implies emotionality as the emotions are the analysis of the stimuli affecting the body...the impressions on the Pantacle as one in the A.'.A.'. might say. And so with healing comes the bringing forth and purging of those negative emotions that ultimately are physically as well as psychically destructive.

To change it, you have to descend into it--which is what I'm in the midst of doing. But you know, it makes for painful moments. Anyway, once it's done, it will be something. When that is done, I'll explain it to you. And then I'll have the power to restore you to health.

The Sufis also recognize this as shown in the Light Sura of the Qu’ran. Sura 24, verse 35, which reads (in an Egyptianized version):

Re is the Light of the Heavens and the earth,
A light that is like unto a lamp within a niche.
The lamp shines within a crystal like a blazing Star,
Lit from the Tree of Life, the Djed, of neither east nor west,
Its fuel, translucent oil, radiating without the effect of fire
Light upon Light!

The pattern in Fulcanelli’s image uniquely parallels this Sufi verse.:

Re is the Light of the Heavens and the earth,
RE is the first line, the Light shines through everything.
(The luminous ‘sea’ of light generated by all the DNA on the planet.)

A light that is like unto a lamp within a niche.
RER (light) is the second line – The lighting of the inner lamp, the light within our souls, the light within the niche.
(The light coming from our DNA in its niche or vase of chromatin.)

The lamp shines within a crystal like a blazing Star,
ERRE is the third line; The inner light blazes out like a star, or a light body.
(The resonance or amplification of the DNA light generated by meditative focus or shamanic states of consciousness.)

For a recursion of this, just repeat the pattern for the second three lines of the Sufi verse:

Lit from the Tree of Life, the Djed, of neither east nor west,
RER is the fourth line; the miraculous light of the Djed, which is the galactic center axis, the third pillar of the Dragon axis. (A new stimulus to the DNA, perhaps designed to be received by the long strands of non-sense coding.)

Its fuel, translucent oil, radiating without the effect of fire
ERRE (light) is the fifth line; the oil of the inner light radiating without the effect of fire. This is the inner light that creates the translucent light body. (The new light stimulates the transformation of the DNA, possibly activating whole new sections of code.)
Light upon Light!

RER is the sixth line; Light upon light. The ultimate Gnostic ideal for the perfection of the universe – all will be one with the Light. (This new light, and its effect on the DNA, allow for a transformation into Light.)

The last ER begins the pattern over again in reverse order, just like the DNA itself. This creates an endless interweaving of meaning. (1)RE/(2)RE – R/(3)ER – RE/(4)RE – R/(5)ER – RE/(6)RE – R/(7)ER/(6) R – ER/(5)ER – RE, and so on to infinity.

‘Light upon Light’ indicates the method that can be summarized as the Light shining into the vessel, sparking an internal light fueled by the translucent oil of brain chemistry; the aethyric energy source; a conundrum in the instructions of Liber A.

"The Lamp."

Let the Dominus Liminis take pure lead, tin, and quicksilver, with platinum, and, if need be, glass.

let him by his understanding and ingenium devise a Magick Lamp that shall burn without wick or oil, being fed by the Aethyr.

This shall he accomplish secretly and apart, without asking the advice or approval of his Adeptus Minor.

Let the Dominus Liminis keep it when consecrated in the secret chamber of Art.

This then is that which is written: "Bring furnished with complete armour and armed, he is similar to the goddess."

And again, "I am armed, I am armed."

This internal light fills the entire body, converting it into light, which then radiates out as the shining light and crystallizes a star body or ‘asar un nefer.’ There is a recapitulation of the Alchemical formula that evokes the first chapter of Liber LXV, wherein we read:

18. So also the light that is absorbed. One absorbs little, and is called white and glistening; one absorbs all and is called black.
19. Therefore, O my darling, art thou black.
20. O my beautiful, I have likened thee to a jet Nubian slave, a boy of melancholy eyes.
21. O the filthy one! the dog! they cry against thee. Because thou art my beloved.
22. Happy are they that praise thee; for they see thee with Mine eyes.
23. Not aloud shall they praise thee; but in the night watch one shall steal close, and grip thee with the secret grip; another shall privily cast a crown of violets over thee; a third shall greatly dare, and press mad lips to thine.
24. Yea! the night shall cover all, the night shall cover all.

And in the second chapter of Liber LXV, we read:

7. Moreover I beheld a vision of a river. There was a little boat thereon; and in it under purple sails was a golden woman, an image of Asi wrought in finest gold. Also the river was of blood, and the boat of shining steel. Then I loved her; and, loosing my girdle, cast myself into the stream.
8. I gathered myself into the little boat, and for many days and nights did I love her, burning beautiful incense before her.
9. Yea! I gave her of the flower of my youth.
10. But she stirred not; only by my kisses I defiled her so that she turned to blackness before me.
11. Yet I worshipped her, and gave her of the flower of my youth.
12. Also it came to pass, that thereby she sickened, and corrupted before me. Almost I cast myself into the stream.
13. Then at the end appointed her body was whiter than the milk of the stars, and her lips red and warm as the sunset, and her life of a white heat like the heat of the midmost sun.
14. Then rose she up from the abyss of Ages of Sleep, and her body embraced me. Altogether I melted into her beauty and was glad.

Biologists have mapped the DNA into of a hologram, discussed by physicists and that guides it towards complexity, as discussed in Liber Vox Viva Voce vel Video. This document shows that the DNA has a consciousness and intelligence and has been on a constant course towards increasing complexity, from bacteria to one-celled creatures, from aquatic to land, from plants to flowers, from animal to human, from nature to culture.
Using its own inner photon emission as its way of transmitting the knowledge, DNA generates light, and therefore images and symbols; the products of its language appear to the mind. And as the enlightened being Being learns more from contact with the DNA, we see a scientific description of the process of communication with the Holy Guardian Angel.

The successful alchemist is in close communication with the DNA. This line of communication is dictated by the quality of light that is measured and predicted by the cube of space. As our planet and solar system pass through the galaxy the quality of light changes, sometimes dramatically. Changes, in the nature of light, causes changes in the nature of time, sometimes catastrophically. Once, all over the world, there was an initiatory tradition that understood this and much more.

“If a person has eyes that know how to see, he will look upward to the heavens and he will see the beautiful image of the serpent coiled there, at the place where the great sky begins. Then he will understand that no being in heaven, or on earth, or in hell was formed without the serpent.” — The Gnostics by Jaques Lacarriere

The human body naturally emits a visible light in the form of photons a thousand times under the threshold by which the naked eye can directly perceive it. It is thought to be a by-product of biochemical reactions of free-radicals and not to be confused with the invisible infrared light that comes from body heat.

Scientists conducting experiments on this, noticed that faces glowed stronger than the rest of the body as this part of the body has more regular exposure to sunlight. Indeed, melanin has fluorescent components that may enhance the body’s ability to produce light; all this being connected to the body’s metabolism.

Pneuma and Prana are the life-giving energies that Man integrates, "inhales", absorbs from without. Pneuma would correspond to the two "lower Ethers", the Chymic and Vital; Prana to the Luminous and Reflective Ethers. Together, called Akasha, they manifest as these four-fold qualities of Ether (Akasha), each quality linked to a specific function in Man, be it more physical or more spiritual. Yet their nature is both physical and spiritual, within whichever plane or sphere they are active.

Spirit and Soul are the inner qualities of Man. By integrating the energies "inhaled" and absorbed, Man transforms them according to his/her inner qualities. Thus the Spirit transforms Akasha and its four-fold Ethers, whereby it "exhales" and emanates the "products of Man's inner transformation". It is these qualities that Man "returns" towards the world without. And thus, by his or her emanations, the inherent qualities of each individual extends beyond Man's physical body. The higher the "inner vibrational rate", the stronger the emanations of each individual. The purer the "inner transformationary functions", the more beneficent and sublime the quality of each individuals' emanations.

What is called The Body of Light, the double-luminous essence of Man, the Spiritual Being, is the most inner transformative agent, which may be defined as "Soul-Mind". Spirit, Soul and Mind, though each reflective of a certain human quality, an aspect of Man's "Being", have largely become fused into one pervasive "meaning". Thus, Soul is sometimes equated with Mind, and Mind with Spirit. In the subsequent study, Soul is used in the sense of "eternal, individual Life", the "divine spark of God", undying, and passing from life to death to life. Spirit and Mind are used to qualify the inner transformative agents within Man. Thus, Mind - or Spirit - are employed to signify the quality of each Man's Being, of how he or she transmutes the energies of Pneuma and Prana and therefore changes their qualities when they leave the physical body, either through the sense-organs or through more subtle spiritual channels.
In this view, Spirit and Mind are "used" by the Soul to transform the qualities of the Life-Force, Shakti, and made to consciously integrate Pneuma and Prana in order to liberate the physical and psychic-astral limitations, inhibited by an impure transformation process. This "mind prison", in which so many human beings live, is therefore to be cracked by using the energies of Prana and Pneuma as stimuli, which can only function through the integration of the totality of Akasha, Ether. Thus, their four-fold qualities, as a first step to their total integration, are meant to be harmonised, equalised, evaluated, seen to be fluctually changing spiritual agents, whose integration depends wholly upon the inner equilibrium of each individual. Man, as an internally balanced and harmonious Being, reflecting the basic virtues of compassion and benevolence, can but transform the in-coming energies in just such an equilibrated way. And thus his/her emanations towards the without, which must be seen as the Universe at large, must be of beneficent nature. This, it is to be sincerely hoped, should constitute each individuals' inner aim, towards himself and towards life. So integration of Pneuma and Prana simply depends on the inner qualities of each individual, and the Soul may rest "with good conscience" if it has directed its "agents", Spirit and Mind, to apply the most benevolent and harmonious attitudes, for in this way each individual Soul, Man as such, interacts with the Universe, both as Microcosm and as Macrocosm, for these in reality are just the same.

This is precisely what Dr. Bucke (an American Transcendalist writer) has worked out in his book, Cosmic Consciousness. We already are emitters of light shown in the phosphorylation that is the strand of light connecting the two strands of DNA as discussed in my GCL article: Liber Vox Viva Voce vel Video. And I'll quote from that article:

For each cell, if you separate the two strands of DNA, you will discover a connecting link, a ‘phosphorylation’ or ‘fizz of light’ (Hadit) that is the connecting current of the two strands. We have modeled here in the actual cell structure of the human body, the Caduceus.

Let's connect this now, to Dr. Maurice Bucke, the American Transcendentalist writer and personal friend of Walt Whitman (whose poem, Song of Myself, I recently sent to this list) who is the author of that all important book, Cosmic Consciousness. Dr. Bucke noted that when reaching a certain state of consciousness, light was actually visibly emitted from the person and perceivable to anyone around him. To quote from this book, touted by fellow Transcendalist William James, author of The Varieties of Religious Experience, and P.D. Ouspensky, author if In Search of the Miraculous. Dr. Bucke writes:

There seems to the writer to be sufficient evidence that, with cosmic consciousness, while it is actually present, and lasting (gradually passing away) a short time thereafter, a change takes place in the appearance often subject of illumination. This change is similar to the caused in a person's appearance by great joy, but at times (that is, in pronounced cases) it seems to be much more marked than that. In these great cases in which illumination is intense the change in question is also intense and may amount to a veritable "transfiguration." Dante says that he was "transhumanized into a Gd." There seems to be a strong probability that could have been seen at the moment he would have exhibited what could only have been called "transfiguration."

We already know from science that the difference between sound, light and solid objects is one of vibration. And from that, mystics have built the awareness of what is called 'Shakti-Pat'; the vibration of the one with cosmic consciousness being transmitted from that person to others, often called disciples and creating a lineage of descent. It is with these ideas in mind that we should consider Mother's lecture, which I'm about to present. But before I do, we should note also that Castaneda also spoke of this light body; referring to it as a luminous egg.

AL II.49: "I am unique & conqueror. I am not of the slaves that perish. Be they damned & dead! Amen. [This is of the 4: there is a fifth who is invisible, & therein am I as a babe in an egg.]"
In the following, Mother relates how her vibrations are igniting Sat Prem's (her disciple) cells.

The physical vibration is important. The circumstances relating to the work of transformation make the physical vibration important. I feel it, for as soon as I want to do something with someone on the physical plane (physical, mind you), it all comes into the body. and the body is im hypersensitive...I see that absolutely physical vibrations are being used all the time. It's really so different. All the work which is done at a distance (gesture indicating action stemming from the mind)—it acts of course, but...

You know, even now, all this (Mother touches her body, her hands) feels so vibrant and alive that it's difficult to sense its limits...as if it extends beyond the body in all directions. It no longer has any limits.

But it's still not luminous in the dark. What is normally luminous in the dark is something else...I had that when I was working with Theon (after returning to France, we had group meditations—though he didn't call it 'meditation,' he called it 'repose,' and we used to do this in a darkened room), and there was...it was like phosphorescence, exactly the color of phosphorescent light, like certain fish in the water at night. It would come out [of the body], spread forth, move about. But that is the vital, it originates in the vital. it is a force from above, but what manifests is vital. Whereas now it is absolutely, clearly the golden supramental light in...an extraordinary pulsation, vibrant in intensity...But probably it still lacks a...what Theon used to call 'density,' an agent that enables it to be seen in the dark—and then it would be visibly gold, not phosphorescent. But it is very, very concrete, very material.

I wonder if at night...Sometimes it's so intense that I wonder if it doesn't radiate. But I can't see as my eyes are closed! Again last night, for a large part of the night, it was...the body has no more limits—it's only a great MASS of vibrations.

Overall, I think this is an essential understanding to adeptship that Crowley hints at this with his instructions for the Magick Lamp. He describes a similar experience to that of Mother's when he performed the Bornless Ritual in the Kings Chamber with his wife during their honeymoon. In Confessions, he describes a phosphorescent light which both he and rose could see and he said it was strong enough that he could read in such light.

Crowley did also exhibit this phenomenon of light at the successful completion of the Abra-melin Operation as described in Confessions. It’s found it on pages 532-533 of the autohagiography. In this, he notes: "For over three weeks I bore the stigmata of my Operation physically. I visibly radiated light. People used to turn in the street to look at me; they did know what it was, but the impression must have been irresistible."

Scientists have measured the weight of the soul in the body: showing that it has a material nature (discussed in my articles: Testing the Night of Pan & Scientific Proof for Levi's Aethyr). But for that blast of light associated with enlightenment, Dr. Bucke lists several interesting factors that he calls "the marks of the Cosmic Sense," which he lists with some explanation in his book:

a. The subjective light.
b. The moral elevation.
c. The intellectual illumination.
d. The sense of immortality.
e. The loss of the fear of death.
f. The loss of the sense of sin.
g. The suddenness, instantaneousness, of the awakening.
h. The previous character of the man—intellectual, moral and physical.
i. The age of illumination.
j. The added charm to the personality so that men and women are always (?) strongly attracted to the person.
k. The transfiguration of the subject of the change as seen by others when the cosmic sense is actually present.
I do think that this enlightenment can be spontaneous with all these marks happening simultaneously. But also akin to the graded system of the A.'A.'., each mark can be carefully cultivated. Yet, it may also be possible for a sudden awakening of the Kundalini by such things as the startled of a car crash; heard outside one's window...or even just lying around on a lazy afternoon; without having had the least interest in Magick or Mysticism before. And some manage to hold onto this (cf. William James Varieties of Religious Experience). And they've described this as 'everything remains exactly as before, yet it's completely different...a paradoxical conundrum for logic to apprehend.

Continuing with my comments on Mother's Agenda, today's theme follows-up on our discussion on light and has a particularly Qabalistic bend in that what Mother is describing in the following lecture seems to be a description of the Lightening Flash that is said to be the generating force of the Sefirot.

How strange it is! ... You have the feeling of ascending, of a progress in consciousness, and everything, all the events and circumstances of life follow one another with an unquestioning logic. You see the Divine Will unfolding with a wonderful logic. Then, from time to time, there appears a little 'set' of circumstances (either isolated or repeated), which are like snags on the way; you can't explain them, so you put them aside 'for later on.' Some such 'accidents' have been quite significant, but they don't seem to follow this ascending line of the present individuality. They're scattered along the way, sometimes repeated, sometimes only once, and then they vanish. And when you go through such an experience, you sense that they are things put aside for later on.

We might consider this akin to the ordeals that accompany the Grade Work. By invoking change in ourselves, we are immediately putting ourselves at odds with our ego in that the ego is quite happy to keep things as they are. For that matter, this is also echoed forth into the Universe as even the tiniest breath is felt by the most distant star. I've often seen Probationers especially, go through immediate convulsive reactions from the world around them; usually not noticing the correspondence to things going on inside themselves.

And then, all of a sudden (especially during these last two years when I have again descended to take all that up), all of a sudden, one after another, all these snags return. And they don't follow the same curve; rather, it's as if suddenly you reach a certain state and a certain impersonal breadth that far surpasses the individual, and this new state enters into contact with one of those old 'accidents' that had remained in the deepest part of the subconscious - and that makes it rise up again, the two meet ... in an explosion of light. Everything is explained, everything is understood, everything is clear! No explanation is needed: it has become OBVIOUS.

Like the sand in an oyster, it is these very ordeals that really create the pearl that is one's Initiation. And per Liber Librae, the greater thy trials, the greater thy victory.

This is entirely another way of understanding - it's not an ascent, not even a descent nor an inspiration ... it must be what Sri Aurobindo calls a 'revelation.' It's the meeting of this subconscious notation - this something which has remained buried within, held down so as not to manifest, but which suddenly surges forth to meet the light streaming down from above, this very vast state of consciousness that excludes nothing ... and from it springs forth a light - oh, a resplendence of light! - like a new explanation of the world, or of that part of the world not yet explained. And this is the true way of knowing.

What Mother relates here is even an allegory of the lightening flash in nature, as it actually surges from the ground up as much as from above. In this sense, Malkuth creates Kether as much as Kether creates Malkuth, which of course, would make one wonder, how far off was Achad really, in reversing the Tree-of-Life. This would be much akin to the Gnostic Sophia generating the Demiurge, Yaldabaoth and creating the material Universe that itself is on an ascendent climb to the spiritual. After all, it is the Divine Sophia that is the Daughter who ascends to the throne of the Mother and awakens the eld of the father.
Crowley does say in Liber 13: "Further, he lights the Magick Lamp." And the idea is that it is lit by the Aethyr. Well, the light that is the phosphorylation inside of every cell in our bodies is also that aethyric substance that from the Aethyr, composes our bodies as much as our minds and is indeed our Souls. The lighting of the lamp is that enlightenment. Though it is interesting to note other instructions in Golden Dawn documents easily available on the net. And we could make a discussion of this as it would be appropriate here. And I guess, whether the light is ignited by the presence or mingling with the Angel or of the experience of the Asar Un Nefer; well, I guess that's open for debate as well.

Nearing the end of the first volume of this fifteen volume set, Mother gets to what we in Thelema would call the formula of resurrection and note that it's a formula of natural law; much akin with how we view the Book of the Law. She starts out be referring to Sri Aurobindo...

He wrote this in a letter, I believe, and he spoke of this system of compensation - for example, those who take an illness on themselves in order to have the power to cure; and then there's the symbolic story of Christ dying on the cross to set men free. And Sri Aurobindo said, 'That's fine for a certain age, but we must now go beyond that.' As he told me (it's even one of the first things he told me), 'We are no longer at the time of Christ when, to be victorious, it was necessary to die.' I have always remembered this.

This is very important and pertinent to our discussion. As AL teaches us, the formulas of the old time are "black" or ineffective and leading to confusion; just as the conditions of the old time are no longer with us. We are now in the post-industrial era; all the myths that empowered the old formulary have become nothing more than fairy tales today. Yet there are those formulas that with a bit of tweaking, shall we say, can be brought into our emerging mythos.

But things are PULLING backwards - phew, how they pull! ... 'The Law, the Law, it's a Law. Don't you understand, it's a LAW, you can't change the Law.'
- 'But I CAME to change the Law.'
- 'Then pay the price.'
(silence)

Every action has an equal and opposite reaction. In establishing the new mythos, we are already swimming against the stream of the old times; the old aeon in Thelemic parlance. Though the master has removed himself from the old system, it's husk; it's eggregore is as a blind robot and it comes at us readily enough. Look at the majority of people in so-called Christendom; we are a scourge to them, just in who and what we are...and what we do is to disturb their sleep and work against their mindless automatism.

But this doesn't come about because we act directly on them; those individuals that comprise the collective citizenry. Not at all; as a matter of fact, should we attempt this, it can but recoil in our faces and strike directly back at us. Rather, we act subtly in the Aethyr itself; really, it's what Liber Reguli is all about...besides it being an hexagram ritual.

What can make them yield?
Divine Love.
It's the only thing.
Sri Aurobindo has explained it in Savitri. Only when Divine Love has manifested in all its purity will everything yield, will it all yield - it will then be done.
It's the only thing that can do it.
It will be the great Victory.
(silence)

Love is the law, love under will; the formula of Agape. The fact that on an essential level we are all ONE, we each individually, affect the whole. But when we act in direct defiance of another's will, rather than indirectly through the menstruum of the Aethyr, we contradict our own (natural) law and are really
conforming to the old ways. In the old ways, it was said: "Not mine, but thine be done." And this we would indeed be forcing upon others...much as the Inquisition and the Crusades did. Rather, we need to build the paradigm of the new and emergent ethos and act as lamps in this darkness; loving one another with burning hearts as we are taught in AL.

On a small scale, in very small details, I feel that of all the forces, this is the strongest. And it's the only one with a power over hostile wills. Only ... for the world to change, it must manifest here in all its fullness. We have to be up to it ...

Sri Aurobindo had also written to the effect, 'If Divine Love were to manifest now in all its fullness and totality, not a single material organism would but burst.' So we must learn to widen, widen, widen not only the inner consciousness (that is relatively easy - at least feasible), but even this conglomeration of cells. And I've experienced this: you have to be able to widen this sort of crystallization if you want to be able to hold this Force, I know. Two or three times, upstairs (in Mother's room), I felt the body about to burst. Actually, I was on the verge of saying, 'burst and be done with.' But Sri Aurobindo always intervened - all three times he intervened in an entirely tangible, living and concrete way ... and he arranged everything so that I was forced to wait.

To this affect, we cannot do anything but establish our own wills...it is enough. And the only White Magick is that Magick that leads us to the fulfillment of the Knowledge & Conversation. Conversion is the way of the old times; to convince and/or forcibly convince others of our "truth" is to be seduced and duped by the Black Lodge. To quote from Ben Hecht's, Child of the Century: "I know that a man who tries to convert me to any cause is actually at work on his own conversion, unless he is looking for funds under the mask of some fancied nobility." To continue with Mother...

Then weeks go by, sometimes even months, between one thing and another, so that some elasticity may come into these stupid cells.

So much time is wasted. We are ... oh! We are so hard! (Mother hits her body) As hard as a rock. But three times now, I've really felt that I was on the verge of ... falling apart. The first time it brought a fever, a fever so ... I don't know, as if I had at least 115¡! - I was roasting from head to toe; everything became red hot, and then ... it was over. That was the day when suddenly - I was ... You see, I had said to myself, 'All right, you must be peaceful, let's see what happens,' so then I brought down the Peace, and immediately I was able to pass into a 'second of unconsciousness - and I woke up in the subtle physical, in Sri Aurobindo's abode.' There he was. And then I spent some time with him, explaining the problem.

But that was really an experience, a decisive experience (it was many months ago, perhaps more than a year ago).

So I explained the problem to Sri Aurobindo, and he replied (by his expression, not with words, but it was clear), 'Patience, patience - patience, it will come.' And a few days after this experience, 'by chance' I came upon something he had written where precisely he explained that we are much too rigid, coagulated, clenched for these things to be able to manifest - we must widen, relax, become plastic.

But this takes time.

I don't really see what we can do ... I mean, it's you who does, of course, but I don't see what we can do to help change things.

Nor do I!

I have quite the feeling that I myself 'do' nothing at all, absolutely nothing. The only thing I do is this (gesture of offering upwards), constantly this, in everything - in thoughts, feelings, sensations, in the body's cells, all the time: 'You, You, You. It's You, It's You, it's You ...' That's all. And nothing else.

In other words, a more and more complete, a more and more integral assent, more and more like this (gesture of letting herself be carried). That's when you have the feeling that you must be ABSOLUTELY like a child.

Mother then goes on to continue with her work. As Sat Prem asserts and Mother concurs, we can really do nothing at all but this work. And I say, not only is that all, but that is enough. We must not assume that the wheels of time are so small as to cover only the limited time we have here on Earth in this life.
Nor should we make the mistake of pretending that by doing this work, there will be no affect on future generations. Crowley died thinking he had failed to bring Thelema to the world...and look how much influence he's actually had in these last hundred years!

And oh how Hadit can be found in Mother's remark that the feeling we develop "must be ABSOLUTELY like a child"...the Magickal Childe.

Indeed, the Magickal Childe may be that force of light that is also the force of Ra-Hoor-Khuit.

With a start, we have a referential quote on 'descending' into the cells from a prior lecture. But that's not where things really lead; as we shall see.

(Soon afterwards, concerning the conversation of November 5 on the subconscious roots in the cells that can make everything fall apart in a second: 'To change it, you have to descend into it ... it makes for painful moments ... Once it's done, I'll have the power ... ')

When was this? November 5? And now it's December 17 ...

Well, it's still continuing!

There should be machines to graph the curves, for it's so ...sometimes it goes like this (gesture of a very steep ascent) and at such moments you feel, 'Ah! now I've caught the thing.' And then back it falls - toil. Sometimes it even feels like you're falling in a hole, really a hole - and how are you ever going to get out? But that ALWAYS precedes a rapid ascent and a revelation or illumination: 'Ah, how wonderful! I've finally got it!

And that goes on for weeks and weeks.

The hint is already here; the descent being followed by an ascent in an overall cycle.

To have the exact curve or the REAL history, we'd have to note down everything at each minute, for it's a CONSTANT work that's taking place. You see, the outer activities are becoming almost automatic, whereas this goes on behind - I'm speaking, yet at the same time this is going on behind.

Like the Scientific Illuminists that we are, everything goes into the diary. And as I've found in my own experience, it's just so hard to get all the details when there's really so much that happens experientially in each moment of every day.

It's a sort of oscillation - really, it's so interesting - between two extremes, one of which is the all-powerfulness and capital or primordial importance of the Physical, and the other its utter unreality.

And it's constantly going back and forth between the two (seesaw motion). And both are equally false, equally true.

The use of the term oscillation really describes how dualities existentially manifest; reality manifesting with its opposite. This is an essential teaching of the White School in contrast with the all-negating Yellow and Black schools; who hold to some permanence in the maya. This permanence itself is an extreme or absolute.

It goes back and forth between the two all the time - a kind of curve like an electric arc between them; it goes up, it goes down, it falls and then climbs back up. In a flash comes the clear vision that the universal realization will be achieved along with the perfection of the material, TERRESTRIAL world. (I say 'terrestrial, for the earth is still something unique; the rest of the universe is different - so this blown up speck of dust becomes of capital importance!)

That the material Universe is as important as the spiritual Universe; indeed, they both being one Universe is an important ideology of the Integral Age, which espouses both; unlike the ideologies of the Spiritual Age and the Material Age. Yet each operate in a cycle; each oscillate in turn in both larger and smaller cycles.
Then, at another moment, eternity - for which all the universes are simply ... the expression of a second, and in which all this is a sort of - not even an interesting game, but rather ... a breathing in and out, in and out ... And at such a moment, all the importance we give to material things seems so fantastically idiotic! And it goes in and out ... In this state, everything is obvious and indisputable. And in the other state, everything is obvious and indisputable. But between the two there is EVERY combination and every possibility.

Mother literally describes these three ideologies here and then goes on to show that the Supramental School is of the Integral Age where "EVERY combination and every possibility" is manifest.

The two quotes come from two different days in the book, but both deal with the cells. In the first, she's talking about the effects of her jaba (the chanting of her mantra) while walking...

Quite interestingly, all kinds of mental formations come like arrows while I'm walking for my japa upstairs. (Mother makes a gesture of little arrows in the air coming into her mental atmosphere from every direction); and yet, I'm entirely in what I could call the joy and happiness of my japa, full of the energy of walking (the purpose of walking is to give a material energy to the experience, in all the body's cells)

The idea is that the spiritual energy is fusing with the physical/material basis in much the same way as the astral body is said to be an exact duplicate of the physical body; right down to the clothes one is wearing at the moment. This I think readily allows an inductive conclusion regarding the importance of the physical body. This body affects how the world perceives us and how we perceive the world. It is of integral import to the nature of our experience, which shape the psyche. If all this should be but illusion or maya as the Yellow and Black schools assert, then the Supramental Yoga is a delusion. Yet the White School in this Integral Age (at least) asserts the importance of the physical and material along with the spiritual. They are inseparable as Malkuth is in Kether and Kether in Malkuth; but only a different manner for each.

And when I sat down here, the consciousness of the column of Light started coming. There was no more personality, no more individuality: there was only a column of Light descending right into the very cells of the body - and that's all.

Then it gradually became conscious of itself, conscious of BEING this column of Light. And then the ordinary consciousness slowly returned.

So what of this light?...descending down...the L.V.X. Mother seems to be describing at least an Atmadarshana here. And I here also, a reflection of the Gnostic Mass: "Let thy light crystallize itself in our blood, fulfilling us of resurrection." Indeed it is as if she is making her physical body the eucharist. A brief quote from Crowley on this Alchemy is a fitting conclusion to these comments on this volume:

The magician becomes filled with God, fed upon God, intoxicated with God. Little by little his body will become purified by the internal lustration of God; day by day his mortal frame, shedding its earthly elements, will become in very truth the Temple of the Holy Ghost. Day by day matter is replaced by Spirit, the human by the divine; ultimately the change will be complete; God manifest in flesh will be his name.

The Great Pyramid complex at Khufu, which became occupied by the sarcophagus of the semi-mythical King Khufu was already built before his dynasty began. It was referred to at that time as the “enclosure of Tehuti” with its hidden chambers called the “shrines of the secret chambers.” Khufu translates as “[he] protects us” as if an allusion to the secret of reincarnation and the key to the secret number of these chambers was said to be found in the city of ON; also called Sakhbu, which translates as “soul star place.” Of course, the pyramid complex is modeled on the constellation of Osiris/Orion as discussed in Sacred Space, as the constellation where the soul of the dead king was translated in obtaining his immortality.
At the heart of the figure drawn over the constellation, there appears to be an empty region, devoid of stars, called the *Bardo Field*. In this region of space, radio and x-ray astronomy have found this to be the location of collapsing stellar material, indicating that stars are being born in the heart of Orion. This is not the only place in the galaxy where stars are being created, but this seems to have an intimate connection with the interests of the ancient Egyptians; perhaps being connected with our own particular race. In Thelema, the Master of the Temple, having arrived in the ‘City of the Pyramids’ is said to cast his star into the heavens, while simultaneously translating back down into the Ruach.

The Pyramid Texts are the oldest (probably before 3300 BCE) known religious writings and are the record of an ancient star religion that proposes a technology theoretically expressed in the Pyramid documents of the A.’.A.’. (Liber Pyramididos, Liber Cadaveris and Liber Mysteriorum), involving the translation of the dead king into a star in the constellation of Orion. This is the inverse operation of the Got that translates itself into the archetypal image of humanity, as discussed in the translation of the Holy Table of Practice; it’s promise being found in the following from the Pyramid Texts:

"Behold he has come as Orion, behold Osiris has come as Orion. . . O king, the sky conceives you with Orion, the dawn-light bears you with Orion. . . you will regularly ascend with Orion from the eastern regions of the sky, you will regularly descend with Orion in the western region of the sky." (Pyramid Texts, line 820-2)

"O king, you are this Great Star, the Companion of Orion, who traverses the sky with Orion, who Navigates the (Duat) Netherworld with Osiris; you ascend from the east of the sky, being renewed in your due season, and rejuvenated in your due time. The sky has born you with Orion. . ." (Pyramid Texts, line 882-3)

"I am a soul. . . I (am) a star of gold. . ." (Pyramid Texts, Line 886-9)

In several places in the Pyramid Texts, the dead king's sister is said to be Sothis (Sirius), who follows Orion in the sky; his offspring being the Morning Star."

In line 357 (Utterance 265) we read:

My sister is Sothis, my offspring is the Morning Star,
I am on the under-side of the sky with Ra,
I am vindicated;
Rejoice over me, rejoice over my double!

Might this also indicate Sothis as his double or twin as the Gnostic Jesus says of us all in the *Gospel of Thomas*? The “under-side of the sky” would be reached by descending into the Pyramid and underground, where one is tested with the weighing of the heart (for vindication). In line 929 (Utterance 473), the king states: “I am vindicated and my double is vindicated.” This is again echoed in line 935; however, in line 1707 (Utterance 609) we read: “Your sister is Sothis, your offspring is the Morning Star, and you shall sit between them on the great throne which is in the presence of the Two Enneads (sets of nine gods), suggesting the nine Sephiroth on both sides of the Tree-of-Life.

Osiris offspring being the Morning Star is an allusion to his offspring being humanity as Venus has five points of rising on the Zodiac; forming a Pentagram—the symbol of Man. Horus, the son of Osiris, was the archetype of the earthly king, as the Adam Kadmon to the Hebrews and Jesus to the Gnostics. He represents the idea of transcendence represented by the technology of stellar evolution.
For a more articulate expression of this stellar technology, note again, line 886-889: "...I am a soul... I (am) a star of gold..." And to better understand what this alludes to, we need an understanding of the Egyptian parts of the Soul. The ‘Ka’ was the astral ‘double’ of the individual that had two components; the first being the higher, *guardian angel aspect* of the individual and the lower being formed by the knowledge of life on Earth; not unlike the higher and lower ego discussed in spiritual literature. The ‘Ba’ was the personality; the ‘Ab’ was the heart\(^{182}\) and the moral integrity of the individual. The ‘Khat’ or ‘Kha’ was the physical form of the body, that decayed after death. The ‘Sah’ was the incorruptible spiritual body that could dwell in the heavens. The ‘Khu’ was the radiant and shining, divine light-essence, being the intellect, intentions and Will of the individual that dwelled in the ‘Sah.’ The ‘Khabs’ was the star and/or god that would then dwell within the Khu (as taught in AL:I.8— "The Khabs is in the Khu, not the Khu in the Khabs.").

These parts of the Soul being bound together in life, had this bond loosened upon the physical death of the body. In this situation, only the Khabs was considered inherently immortal with the Sah strengthened by ceremonial Magick of the ‘Great Word’ or Logos to form the incorruptible body, which made it the result of the utterance of the Khu. So that when the king declares himself to be a soul, he is asserting that he has manifested in his astral body, the Khu in order to utter the ‘Great Word’ by which the Sah and hence his immortality is developed.

The king then further declares himself to be a star of gold, which alludes to the fixation of the ‘Nuit Star,’ which is both the symbol worn on the head of Horus and the graphic of fives lines extending from the center of a circle into an interlocked pentagram. Indeed, in Liber AL:I.60, Nuit says that to her is "...The Five Pointed Star, with a Circle in the Middle, & the circle is Red..." The center of the circle is the center of the circle of stars called the Zodiac and the five lines drawn there from, reach to the five points on the ecliptic where Venus is found to rise throughout the year.

The Nuit Star, the Pentagram, a central figure in modern Magick, is found everywhere in nature from the petals of a flower to the extensions from the human torso, extending to the five fingers and toes; even the five senses of the human body. The Pentagram is a nestled array of Phi Ratios that was claimed by the ancient Pythagoreans to be the symbol of humanity. And when extended or translated to the heavens

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\(^{182}\) This was considered the center of consciousness (and not the brain, as considered by Europeans); interestingly enough differing from the native aboriginal culture of North America that considered the seat of consciousness to be in the stomach.
(Khabs Am Pekt/Light in Extension) it becomes also for them, the symbol of spirit; the five (pentagram) becoming ten (dodecahedron; particularly formulated as the most sacred Tetraktys, which was displayed as as set of points into a four-tiered triangle—not unlike the shape of the pyramids).

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Elemental gold also holds a nestled array of phi ratios in its atomic geometry. Its outer electrons show a five (number of Man) to seven (number of Venus) symmetric pairing that suggests the Dodecahedron (5 x 2); a symbol of the Aethyr, and the Icosahedron (double the Dodecahedron with twenty equilateral triangular ‘faces’); a symbol for water—such as the waters separated in Genesis.

Contemporary Alchemists, especially those experimenting with Ormus claim that when gold is made soluble in the blood, it creates an implosive connectivity that makes immune systems permanently viable and incorruptible. Vincent Bridges, in his article on this subject then states:

So the newly dead king’s statement can now be read as: "I am a self-sustaining, self-aware being, whose fractality is as infinite as the perfect shape of gold." Suddenly, we are on a different level of understanding. With a flash, we see that the Egyptians were not just superstitious priests worshipping the sky out of ignorance, they were spiritual scientists with deep insight into the nature of reality and the physics of immortality.

A further hint on this is found in the declaration of the Priest in the Gnostic Mass:

Thou that art One, our Lord in the Universe the Sun, our Lord in ourselves whose name is Mystery of Mystery, uttermost being whose radiance enlightening the worlds is also the breath that maketh every God even and Death to tremble before Thee. By the Sign of Light appear Thou glorious upon the throne of the Sun. Make open the path of creation and of intelligence between us and our minds. Enlighten our understanding. Encourage our hearts. Let thy light crystallize itself in our blood, fulfilling us of Resurrection.

The Alchemists seem to assert that through an external or artificial means, though traditionally, the Alchemist was said to have an intimate connection with his laboratory; both being ‘one.’ This means that external changes in any Alchemical process could only be brought about by internal changes in the Alchemist himself. The internal process is then connected to the heart (remember the heart of Orion is the place in the heavens where new stars are being made) and the development of compassion; shown by the medicinal practices of the Alchemist. Paracelsus was said to show up when people were ill, healing them and quickly disappearing without charging a fee. Nostradamus set out to a healing ministry during the Plague.

The internal process of building a container for the outburst of transformative energies in the body can only be accomplished by the realization of a potent Bhakti or passionate love…Agape. It was this compassion (expressing love) that was said to affect the DNA in the same way that Alchemical gold did; the affect being an onset of neural conductivity, spontaneously explosive in the same way as described in the Kundalini experience. This is why Nuit says that “Love is the law, love under will.” This fractality or implosive connectivity embeds recursion into the blood and into the DNA, which is the key to immortality brought about by love. Indeed, modern ECG experiments point to such fractality is a solution to chronic illness, so that we can then deduce that a perfect fractality corresponds with a perfect
clarity of the mind and a perfect self-awareness (asar-un-nefer) leads to the body creating a perfect immunity and/or at least a near immortality of the body; but certainly a cohesion of the parts of the soul in order to survive they ultimate and necessary physical death of the body. Vincent Bridges then ultimately concludes:

By meditating on compassion, feeling the feelings of all beings, DNA is braided into more complex and coherent patterns. These complex patterns can then contain the superconductive neural charge of kundalini onset and use this higher charge energy flow to braid a new being, the state of inhabiting a soul. This soul charge can then be used to open the magnetic wormhole to the star fields in Orion. Or, it can be used to create a diamond imperishable body for use as a teaching vehicle down here on earth.
Phosphorescence
& the Magick Lamp

Encapsulating these phosphorescent particles keeps them oxygen-free, so that their phosphorescence is bright and long-lasting, even in biochemical solutions. The image is false-colored green.—David L. Shenkenberg

Phosphorus derives its from the Greek: φώς (meaning "light") and φόρος (meaning "bearer"), which in Latin would be Lucifer (referring to the Morning Star; the planet Venus); akin to the Greek god Prometheus, who stole fire from the gods to give to humanity.

Appearing as an inorganic phosphate (PO₄³⁻), phosphorus is a key element in all known forms of life. It plays a major role in the DNA and RNA and ATP as well as the phospholipids that form all cell membranes in the human body; the phosphate forming part of the structural framework of the DNA and RNA. The living cells of the body use phosphate with adenosine triphosphate (ATP) to transport cellular energy: ATP being important for phosphorylation, as discussed in the GCL document, Liber Vox Viva Voce vel Video. According to Wikipedia:

An average adult human contains a little less than 1 kg of phosphorus, about 85% of which is present in bones and teeth in the form of apatite, and the remainder inside cells in soft tissues. A well-fed adult in the industrialized world consumes and excretes about 1-3 g of phosphorus per day, with consumption in the form of inorganic phosphate and phosphorus-containing biomolecules such as nucleic acids and phospholipids; and excretion almost exclusively in the form of urine phosphate ion. Only about 0.1% of body phosphate circulates in the blood, but this amount reflects the amount of phosphate available to soft tissue cells.

183 Note that in the GCL document: Liber Vox Viva Voce vel Video we read: “Remember that DNA is but a protein and it is this light or phosphorylation that regulates its activity by attaching it to a phosphate group, such as ATP, which causes a structural change in the protein to enable it to bind or release itself to or from some other molecule. This is important when considering the cell’s need for oxygen. The cell is either reduced or negatively charged (reduction), being in need of oxygen or it is oxidized and positively charged (oxidation).”
Lightening is an archetypal symbol of great import; a key to the Formula of ON. It’s electromagnetic function is as much integral to the biology of the human organism as it is to the psyche. In Dr. Bucke’s investigation into Cosmic Consciousness, the evolutionary process is ignited with what clearly seems to be some sort of phosphorescence that would be seen by observers as a transfiguration. And he identifies historical figures from Jesus to his friend, Walt Whitman. It is indeed, he says, the reason why the halo is depicted in portraits of holy people. And it may be that this is the true lighting of the Magick Lamp; the portraits themselves being depictions of the Saints as candles. Symbolically, their bodies would be the candlestick and their heads, the wick for the flame that surrounds it.

Phosphorescence is a type of photoluminescence in which a substance absorbs electromagnetic radiation (photons) and then releases them by re-radiation. Bioluminescence is then the production and emission of light by a living organism that is a naturally occurring form of chemiluminescence where energy is released by a chemical reaction in the form of light emission. Adenosine triphosphate (ATP) is involved in most instances with the chemical reaction occurring either inside or outside the cell. In bacteria, the fluorescent emission of light in the genes related to bioluminescence is controlled by an operon called the Lux operon that has independently appeared as much as thirty times throughout evolution.

Symbiotic organisms carried within larger organisms have also been known to bioluminesce. And we would not be pushing any barriers to consider the symbiotic eukaryotes and prokaryotes of the mitochondria in the human cell. Setting up a precedent for us to consider this possibility, we read in Wikipedia:

Chemiluminescence takes place in numerous living organisms, the American firefly being a widely studied case of bioluminescence. The firefly reaction has the highest known quantum efficiency, $Q_e$ of 88%, for chemiluminescence reactions. ATP (adenosine tri-phosphate), the ubiquitous biological energy source, reacts with luciferin with the aid of the enzyme luciferase to yield an intermediate complex. This complex combines with oxygen to produce a highly chemiluminescent compound.

The firefly and its larvae, glow-worms and of the phylum Arthropoda reminds us of the initial endpoint for the evolving Tensegrity exercises by Laughan Productions—a spin-off organization developing Carlos Casteneda’s system of becoming. Their Magnum Opus involves eight complete Magickal Passes that they claim are capable of:

…transporting their awareness across the lines of our own phylum—Chordata—into an entirely different phylum: Arthropoda. …The members of what modern man calls the phylum Arthropoda, like the butterfly, for instance, were believed…to see the world as if through a contained of crystalline gelatin. They affirmed that for such creatures, the world consisted of hues, and that each hue had a particular scent…This journey of consciousness was taken by those shamans as the means to accentuate their general awareness, and the prowess of their senses.

This seems to imply that the visualization process is important in enervating the cellular metabolism in our bodies. P.D. Ouspensky curiously enough, uses the symbol of the butterfly to describe a part of the process for the transfiguration:

If this is the way of the transformation (evolution) of man, it means that man is a strange biological type, whose sex period, the period of propagation, belongs to the lower (or middle) phase of transformation. If we imagine a butterfly whose function of propagation, instead of belonging to the butterfly, belonged to the caterpillar, then the butterfly in relation to the caterpillar would be sura-sex. This means that the function of propagation and consequently the function of sex would be unnecessary in the butterfly and would cease to act. This would be the biological scheme of man’s stages in evolution.

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184 Bioluminescence is a hybrid word that originates from the Greek word bios (living) and the Latin word lumen (light).
Genetic science defines an operon, described above as controller of fluorescent light emission as a functioning unit of genomic material containing a cluster of genes under the control of a single regulatory signal or promoter that is a region of DNA and that facilitates the transcription of a particular gene. The genes are transcribed together into a mRNA strand in the cytoplasm, or they are trans-spliced to create monocistronic mRNAs that are then translated separately resulting in several strands of mRNA that each encode a single gene product.

Originally operons were thought to exist solely in prokaryotes but since the discovery of the first operons in eukaryotes in the early 1990s, more evidence has arisen to suggest they are more common than previously assumed. The operon is then a function of the human genetic system and an apparent part of the phosphorylation process discussed in the GCL document: Liber Immortalitas vel Luciform and of the Miller’s holographic projection theory described in the GCL document: Liber Vox Viva Voce vel Video; as well, the significance of the mitochondria (prokaryotes & eukaryotes) in the GCL document: Liber LH.

Indeed, without doing anything, we can show that the human body already emits light and that only this process needs to be exaggerated to produce the ‘halo effect.’ In his experiment for Live Science, Strange! Humans Glow in Visible Light, Charles Q. Choi notes:

The human body literally glows, emitting a visible light in extremely small quantities at levels that rise and fall with the day, scientists now reveal.
Past research has shown that the body emits visible light, 1,000 times less intense than the levels to which our naked eyes are sensitive. In fact, virtually all living creatures emit very weak light, which is thought to be a byproduct of biochemical reactions involving free radicals.
(This visible light differs from the infrared radiation — an invisible form of light — that comes from body heat.)
To learn more about this faint visible light, scientists in Japan employed extraordinarily sensitive cameras capable of detecting single photons. Five healthy male volunteers in their 20s were placed bare-chested in front of the cameras in complete darkness in light-tight rooms for 20 minutes every three hours from 10 a.m. to 10 p.m. for three days.
Schematic illustration of experimental setup that found the human body, especially the face, emits visible light in small quantities that vary during the day. B is one of the test subjects. The other images show the weak emissions of visible light during totally dark conditions. The chart corresponds to the images and shows how the emissions varied during the day. The last image (I) is an infrared image of the subject showing heat emissions.

Considering the phenomena of transfiguration as a photoluminescent event Crowley writes about his body generating light, a photoluminescent event, at the completion of the Abra-Melin Operation:

"For over three weeks I bore the stigmata of my Operation physically. I visibly radiated light. People used to turn in the street to look at me; they did know what it was, but the impression must have been irresistible."

In Wikipedia’s description on photoluminescent events we read:

Most photoluminescent events, in which a chemical substrate absorbs and then re-emits a photon of light, are fast, on the order of 10 nanoseconds. However, for light to be absorbed and emitted at these fast time scales, the energy of the photons involved (i.e. the wavelength of the light) must be carefully tuned according to the rules of quantum mechanics to match the available energy states and allowed transitions of the substrate. In the special case of phosphorescence, the absorbed photon energy undergoes an unusual intersystem crossing into an energy state of higher spin multiplicity.

The substrate must speak to a certain concealed consciousness that is the aggregate of cellular consciousness ignited by a mitochondrial symbiosis. The ‘intersystem crossing’ is the particulate aethyr of the mind with the particulate aethyr of the cells. This assumes the cells are even capable of producing the right wavelength from the phosphorylation and its ‘cross’ to the mitochondria. And most interesting here is that the mentation required must produce excitation. Here, Motta’s description of the work of the Initiate is worth note:

"Certain people have a greater developed astral body than the norm, either due to deliberate training, genetic inheritance, magnetic influences of where they live or the people with which they enter into contact with. For example, trained Initiates, are themselves, developed to a high degree, but not of a degree raised enough to have overwhelmed the Ego, possess intensely magnetic, disturbing personalities for sensible people who are not accustomed to the existing presence of psychic force in high tension."

Accepting the Universe ‘as it is’ comes from noting that all of existence is the product of the collective thoughts of all that exists. There is the real of human affairs that is but the collective thoughts of the human race with all that we may consider to be good or evil within it. And there is the seemingly indifferent ways of nature with all its beauty and all its horror. In acceptance, one has to come to the realization that everything is exactly as it should be. The complete intellectual and emotional understanding (pun intended) of this leads to the electromagnetic connection with the circle of stars that is the Universe itself.

Yet in this world of duality, it becomes taboo for us to accept many things, such as evil or perversion, et al. This is the tension that it seems the Philosophus must ultimately resolve or dissolve into a pure and fervent aspiration for the Holy Guardian Angel. But what is the nature of that tension, if not love? Liber VIII is ultimately, a Bhakti-Yoga with an intense devotional yearning as the key operative; the appeal for knowledge & conversation. And does the passionate tension require a deeply felt love to spur the phosphorescence demonstrate the cells as coming to consciousness (per the Mother/Sri Aurobindo teaching)?
The Universe is the product of all our thoughts, NUIT, with each thought being even a star in this fabric. The aethyric array of thoughts that comprise any one single human being are developed up from the mitochondria and its interaction with the DNA culminating ultimately into pituitary secretions. To connect this to the larger array of the Universe is that formula of Universal Love: AGAPE, which expresses the nature of the Will that must be love. The Priest states this clearly in the Gnostic Mass:

**O circle of Stars whereof our Father is but the younger brother, marvel beyond imagination, soul of infinite space, before whom Time is Ashamed, the mind bewildered, and the understanding dark, not unto Thee may we attain, unless Thine image be Love.**

The formula of Αγάπη is barely described in *Magick in Theory and Practice* that then requires the use of the Greek Qabalah to begin to work out to a practical method or at least the description of a process in the attainment of this Universal Love or Love of God.

- **Dionysus (Δ)** ---
  
  Alpha as one is connected with the Monad (MONΑΣ); a word that equals 361, which was considered to represent 360 coming back to the first degree (or even the appending of the colel) represents not only the spiral, but also the Ouroboros, a snake eating it’s own tail. In borrowing from an idea more clearly delineated in the Hebrew Qabalah, the Ain, NOT or nothing and zero, desiring to know itself, cast a reflection of itself; the Monad or one. Therefore, 1 is zero as zero is one; zero being the complete cycle and 1 being the All or unity.
  
  361=Flesh, body (Revelations 19:18) (sarx), a monad (μοιάς), Lamb (ανυνχ), The child (ο παιδ), Distant (παπός)

In the Vision and the Voice, we read on Babalon and Atu VII (The Chariot):

And this is the comedy of Pan, that is played at night in the thick forest. And this is the mystery of Dionysus Zagreus, that is celebrated upon the holy mountain of Kithairon. And this is the secret of the brothers of the Rosy Cross; and this is the heart of the ritual that is accomplished in the Vault of the Adepts that is hidden in the Mountain of the Caverns, even the Holy Mountain Abiegnus.

The ‘Comedy of Pan’ is the ‘Passion-Play’ that is the solar intoxication of Dionysus/Bacchus—a hint to its origin in Tiphareth—or Tiphareth, even unto the Abyss, where Pan is a guardian. And of course, Pan is Nuit. It is the Initiaion of Tiphareth where the individuality, Monad, is fully realized as Asar un Nefer. The fire of the Sun is ‘flaming serpent’ at the core of our Hadit-nature.

360=Letter name of the Greek omicron (omicron/O), which is the depiction of the circle that contains 360 degrees; also of Mithras (Μθρας), Vengeneance (οπις) and “The victory of truth (η νικη αληθειας).

AL III.3: “Now let it be first understood that I am a god of War and of Vengeance. I shall deal hardly with them.”

AL III.46: “I am the warrior Lord of the Forties: the Eighties cower before me, & are abased. I will bring you to victory & joy: I will be at your arms in battle & ye shall delight to slay. Success is your proof; courage is your armour; go on, go on, in my strength; & ye shall turn not back for any!”

Crowley writes in his commentary to this last verse that “Forty is Mem, Water, the Hanged Man; and Eighty is Pe, Mars, the blasted Tower.” The Hanged Man represents Tiphareth, but is depicted as hanging upside down, which represents the darkness that must be made averse unto the light. This shows the personal ambition for attainment that needs to give way to the Universal ambition and that is then blasted by the Tower in order to receive the light descending from Kether.

- **The Virgin Earth γ** ---
  
  Gamma as the number three is connected with the Moon in that the Greeks saw it having three phases; full, dark or new and the two quarters, waxing and waning being considered identical. It is interesting that as a female symbol, today, we refer to a particular place in the woman’s vagina as the ‘G-Spot.’
Crowley writes quite eloquently on the Moon and the *Dark Night of the Soul* that must ensue in this passion, which is a technical description that tension we’ve spoken of, in the *Book of Thoth*:

> This is the threshold of life; this is the threshold of death. All is doubtful, all is mysterious, all is intoxicating. Not the benign, solar intoxication of Dionysus, but the dreadful madness of pernicious drugs; this is a drunkenness of sense, after the mind has been abolished by the venom of this Moon. This is that which is written of Abraham in the *Book of the Beginning*: "An horror of great darkness came upon him." One is reminded of the mental echo of subconscious realization, of that supreme iniquity which mystics have constantly celebrated in their accounts of the Dark Night of the Soul. But the best men, the true men, do not consider the matter in such terms at all. Whatever horrors may afflict the soul, whatever abominations may excite the loathing of the heart, whatever terrors may assail the mind, the answer is the same at every stage: "How splendid is the Adventure!"

We read of this also in Liber Cordis Cincti Serpente:

LXV:II.7 Moreover I beheld a vision of a river. There was a little boat thereon; and in it under purple sails was a golden woman, an image of Asi wrought in finest gold. Also the river was of blood, and the boat of shining steel. Then I loved her; and, loosing my girdle, cast myself into the stream.

Crowley writes in his commentary that the “purple sails are the passions that direct its course,” which shows again this tension that he then connects to the woman “of gold” or of the Tiphareth Initiation as the “guiding principle of one’s conscious life;” again, the *Asar un Nefer* …the moral culmination of one’s being.

LXV:II.8. I gathered myself into the little boat, and for many days and nights did I love her, burning beautiful incense before her.

LXV:II.9. Yea! I gave her of the flower of my youth.

Crowley comments that “He consecrates his creative energy to the Ideal.” But we also see here an allusion to sexual energy. Such utter devotion to the woman of gold is then hinted at here as the ultimate Samadhi that is Atmandarshana and task of the Exempt Adept as aptly detailed in Liber Cheth vel Vallum Agiegni. This is the ‘Wall of Abiegnus’ that is the Sacred Mountain of the Rosicrucians. It gives the formula of Attainment by devotion to our Lady Babalon and shows how to dissolve the personality into the Universal Life.

LXV:II.10. But she stirred not; only by my kisses I defiled her so that she turned to blackness before me.

This is the Dark Night of the Soul that we should carry on though are ideal seems worthless and our attainment, hopeless. It is an inevitable part of that ultimate attainment that is for us, the Knowledge and Conversation of Thine Holy Guardian Angel.

LXV:II.11. Yet I worshipped her, and gave her of the flower of my youth.

LXV:II.12. Also it came to pass, that thereby she sickened, and corrupted before me. Almost I cast myself into the stream.

LXV:II.13. Then at the end appointed her body was whiter than the milk of the stars, and her lips red and warm as the sunset, and her life of a white heat like the heat of the midmost sun.

This then is the transfiguration that ultimately culminates, though not at this stage in the formula of *Agape*.

- The Babe in the Egg (α --- the image of the Father) ---

Crowley writes in the *Book of Thoth*:
This babe is in an egg of blue, which is evidently the symbol of the Mother. This child has, in a way, not been born; the blue is the blue of space; the egg is sitting upon a lotus, and this lotus grows on the Nile. Now, the lotus is another symbol of the Mother, and the Nile is also a symbol of the Father, fertilizing Egypt, the Yoni.

The Yoni as a symbol to represent the Universe shows the new or re-birth of the individual consciousness as initiated into the Universal consciousness. The ‘babe’ is in the ‘blue’ of NUIT that is ‘seen of the seeing’ or one who has attained to the vision of the circle of the stars; the Starry Gnosis.

* The Massacre of the Innocents, π (winepress) ---
  P=80 (attributed to the element of fire in the Greek Qabalah) the Tower Atu and Peh; also: War Cry, Voice, Prayer, Battle, Ox-hide and Shield (Bot), Athena & Athens (Athena), IO Priestess of Hera & and the rapture cry of the Greeks. With the coel, it is 81 or IAO, the Gnostic name of God and also the Greek word for shot or wound.

LXV:I.32 Further Adonai spake unto V.V.V.V. and said:

33. Let us take our delight in the multitude of men! Let us shape unto ourselves a boat of mother-of-pearl from them, that we may ride upon the river of Amrit!

This addresses the Congealing of the Soul; the uniting of the many consciousnesses that are the symbiotic mitochondria living in the cells of the human body.

LXV:I.34 Thou seest yon petal of amaranth, blown by the wind from the low sweet brows of Hathor?
LXV:I.35 (The Magister saw it and rejoiced in the beauty of it.) Listen!
LXV:I.36 (From a certain world came an infinite wail.) That falling petal seemed to the little ones a wave to engulp their continent.
LXV:I.37 So they will reproach thy servant, saying: Who hath set thee to save us?

Like the many lesser egos in the psyche, these “little ones” are accustomed to each, their own autonomy, which results in the dysfunctionality of the body-mind complex. And so their dismay is an obvious knee-jerk reaction.

LXV:I.38 He will be sore distressed.

Crowley writes in his commentary to this verse:

*He in his human mind, is distressed at this.*

The “servant”is, of course, the “scribe”, that is, the initiated instrument of flesh.

It is almost as if he is foreshadowing the working theory of the mind-body complex. The distress is the tension that now becomes the push for labor in the birthing process. The mind reacts to the congealing of the soul with distress.

* The Draught of Ecstasy, Ε.

Epsilon represents Justice as it graphically depicts a beam-scale; but as the number five, it also represents the fifth element; ether with its initial letter being ‘E’ in one of its variant spellings (the other letter being ‘A’). As five is also indicative of the Pentagram, the ‘A’ is particularly poignant in that it graphically depicts the Pentagram. And we could say the Aethyr as Spirit is then equivalent to the Monad.

LXV:I.57 Then was the Adept glad, and lifted his arm. Lo! an earthquake, and plague, and terror on the earth! A casting down of them that sate in high places; a famine upon the multitude!
LXV:I.58 And the grape fell ripe and rich into his mouth.

Crowley writes quite aptly in his commentary: “The truth of the matter is that he has ‘eaten a grape’ i.e. begun to enjoy the banquet with his Angel…”

LXV:I.59 Stained is the purple of thy mouth, O brilliant one, with the white glory of the lips of Adonai.

*Every act of the Adept is really the kiss of his Angel.*

Not exactly what is meant here; for the purple of the grape juice on the Adept’s lips is stained with the white glory of the lips of the Angel. Better say that every magickally creative act of the Adept is energized or guided or aided by the spiritual energy of his Angel.

LXV:I.60 The foam of the grape is like the storm upon the sea; the ships tremble and shudder; the shipmaster is afraid.
LXV:I.61 That is thy drunkenness, O holy one, and the winds whirl away the soul of the scribe into the happy haven.
LXV:I.62 O Lord God! let the haven be cast down by the fury of the storm! Let the foam of the grape tincture my soul with Thy light!
LXV:I.63 Bacchus grew old, and was Silenus; Pan was ever Pan for ever and ever more throughout the eons.
LXV:I.64 Intoxicate the inmost, O my lover, not the outermost!

For the ancient Greeks, one title for Isis, the goddess of Initiation was ‘Agapeh Theon,’ which means ‘beloved/darling of the gods.’ She becomes the object of fertility and life and thus of sexual union. This brings to the force of love to the psyche that when nourished by astral symbols designed to tap into the archetypal plane of one’s Soul renews the vitality of the body. This fosters the congealing process that is a complete integration of mind and body as discussed in the A.’A.’ article: Congealing the Soul. P.D. Ouspensky writes:

> Normal sex, being the complete opposite of infra-sex, is first of all entirely coordinated with other sides of man’s life and with his highest manifestations. It does not stand in their way and does not take energy from them; the energy used in the functioning of normal sex is immediately replaced owing to the richness of the sensations and impressions which are received by the intellect, the consciousness and the feeling.

The impressions upon the mind are also impressions upon the pantacle that is the human body. Those visions and auditory and oracular expressions are generated in conjunction with our endocrinial system as examined in GCL literature and the work of Kenneth Grant. But yet a greater understanding is needed as this all falls more easily to art than to science. P.D. Ouspensky alludes to the need for a more complete mapping of the nature and function of the endocrine system in various types of people.

Until quite recently the old division into “four temperaments” with certain modifications was admitted. Some time ago there were established different “types of memory” such as “auditory,” “Visual,” “narrative,” and so on; at present there are established four types of blood; in endocrinology there are attempts to divide men into types according to their ‘formulae’ or according to their “constellations,” that is, according to the combination of inner secretions working in them. But all this is as yet very far from the recognition of the radical and essential difference between various types of people, and from the actual establishing of these types. Exact and complete knowledge of types exists only in esoteric doctrines…”

The starting-point of internal secretions was the work of Claude Bernard on the glycogenic function (1848-57) and Addison’s account, in 1849, of the suprarenal capsules. This led to experiments by Brown-Sequard, who, in 1891, introduced the notion of “specific substances” secreted into the blood by the various organs, and also the concept of functional humoral correlation. Two theories were advanced to explain the mechanism of correlation. The first was the theory of “hormones,” the presence of which was established experimentally in 1902. The second was the theory connecting the endocrine secretions with the autonomic nervous system. Experiments, both surgical and by injection of gland extracts, were carried out on the adrenals, thyroid, parathyroid, and other glands, although, in the last thirty years, attention has been centered more on the pituitary body, which was visualized as leader of the endocrine system. That the internal secretions control the configuration of the body and are the activators of emotion is emphasized by many writers. The psychological aspect of endocrinology, from the point of view of the psychological make-up of the
individual, appeared later. It should be noted that, at present, opinion is divided as to whether endocrinology should include all parts of the body, on the ground that all organs give off chemical substances to the blood and lymph, or whether it should include only the ductless glands together with certain other glands of internal as well as external secretion.

...The internal secretion of the sex glands is the transmutation already recognized by science. The normal life of the organism and the conservation of secondary characters depend on this transmutation. Every weakening of the secondary characters points to the weakening of the transmutation; a considerable weakening or a cessation of transmutation produces infra-sex. The esoteric idea differs from the modern scientific view only in the admission of the possibility of the transmutation being increased and brought to a degree of totally incomprehensible and unknown intensity, which creates a new type of man. If this is transmutation, if this is supra-sex, does it not indicate the course our thought must take in endeavoring to understand the enigma of the evolution of man? And does it not mean that in the process of evolution sex energy, as it were, turn inward within the organism and creates in it a new life, capable of ever new, of eternal regeneration?

...the psychological picture of man’s approach to supra-sex is a little clearer for us. There are in life strange emotions and strange sensations, inexplicable from an ordinary point of view, and in love and all sex sensations there is a strange melancholy and a strange sadness. The more a man feels, the stronger in him is this sensation of farewell, this sensation of parting. This sensation of parting arises from the fact that in a man (or woman) of strong feeling sex sensations awaken certain new states of consciousness, new emotions. And these new emotions change emotions of se, cause them to fade and disappear. In this lies the secret of the deep melancholy of the most vivid sex sensations; there is a certain autumnal taste in them, the taste of something that must pass, must die, must cede its place to something else. This “something else” is the new consciousness, for the definitions and description of which there are no words, but which of all we know, only sex sensations approach. Mystical states possible to men show a very strange relationship between mystical experiences and experiences of sex. Mystical sensations undoubtedly and incontestably have a taste of sex. To put it more correctly, of all ordinary human experiences only sex sensations approach those which we may call “mystical.” Of all we know in life only in love is there a taste of the mystical, a taste of the ecstasy. Nothing else in our life brings us so near to the limit of human possibilities, beyond which begins the unknown. And in this lies without doubt the chief cause of the terrible power of sex over human souls. But at the same time sex sensations disappear in the light of mystical experiences. The first sensations of mystical experiences intensify sex sensations, but the further waves of the light that a man begins to see completely absorb and cause to disappear those small sparks of sensations which before seemed to him a blaze of love and passion. Consequently, in true mysticism there is no sacrifice of feeling. Mystical sensations are sensations of the same category as the sensations of love, only infinitely higher and more complex. Love, “sex,” these are but a foretaste of mystical sensations. It is clear that the foretaste must disappear when there comes that which has been anticipated. But it is equally clear that struggle with the foretaste, the sacrifice of the foretaste, the giving up of the foretaste, cannot bring nearer or hasten anything.

A passage from the 2nd Aethyr marks an interesting summary of all the foregoing ideas:

All this while the Stone is more inert than ever yet; a thousand times more lifeless than when it is not invoked. Now, when it kindles, it only kindles into its physical beauty. And now upon the face of it is a great black Rose, each of whose petals, though it be featureless, is yet a devil-face. And all the stalks are the black snakes of hell. It is alive, this Rose; a single thought informs it. It comes to clutch, to murder. Yet, because a single thought alone informs it, I have hope therein. I think the Rose has a hundred and fifty-six petals, and though it be black, it has the luminous blush. There it is, in the midst of the Stone, and I cannot see anyone who wears it. Aha! Aha! Aha! Shut out the sight!

Holy, Holy, Holy art thou!

Light, Life and Love are like three glow-worms at thy feet: the whole universe of stars, the dewdrops on the grass whereon thou walkest!

I am quite blind.

Thou art Nuit! Strain, strain, strain my whole soul!

A ka dua
Tuf ur biu
Bi a a chefu
Dudu ner af an nuteru.
Falutli! Falutli!
I cling unto the burning Aethyr like Lucifer that fell through the Abyss, and by the fury of his flight kindled the air.
And I am Belial, for having seen the Rose upon thy breast, I have denied God.
And I am Satan! I am Satan! I am cast out upon a burning crag! And the sea boils about the desolation thereof. And already the vultures gather, and feast upon my flesh.
Yea! Before thee all the most holy is profane, O thou desolator of shrines! O thou falsifier of the oracles of truth! Ever as I went, hath it been thus. The truth of the profane was the falsehood of the Neophyte, and the truth of the Neophyte was the falsehood of the Zelator! Again and again the the fortress mut be battered down! pylon must be overthrown! Again and again must the gods be desecrated!
And now I lie supine before thee, in terror and abasement. O Purity! O Truth! What shall I say? My tongue cleaveth to my jaws, O thou Medusa that hast turned me to stone! Yet is that stone the stone of the philosophers. Yet is that tongue Hadit.

Aha! Aha!
Yea! Let me take the form of Hadit before thee, and sing:
A ka dua
Tuf ur biu
Bi a’ a chefu
Dudu ner af an nuteru.
Nuit! Nuit! Nuit! How art thou manifested in this place! This is a Mystery ineffable. And it is mine, and I can never reveal it either to God or to man. It is for thee and me!

Aha! Aha!
A ka dua
Tuf ur biu
Bi a’ a chefu
Dudu ner af an nuteru.

. . . My spirit is no more; my soul is no more. My life leaps out into annihilation!
A ka dua
Tuf ur biu
Bi a’ a chefu
Dudu ner af an nuteru.

It is the cry of my body! Save me! I have come too close. I have come too close to that which may not be endured. It must awake, the body; it must assert itself.
It must shut out the Aethyr, or else it is dead.

Every pulse aches, and beats furiously. Every nerve stings like a serpent. And my skin is icy cold.
Neither God nor man can penetrate the Mystery of the Aethyr.
(Here the Seer mutters unintelligibly.)

And even that which understandeth cannot hear its voice. For to the profane the voice of the Neophyte is called silence, and to the Neophyte the voice of the Zelator is called silence. And so ever is it.
Sight is fire, and is the first angle of the Tablet; spirit is hearing, and is the centre thereof; thou, therefore, who art all spirit and fire, and hast no duller elements in thy star; thou art come to sight at the end of thy will. And if thou wilt hear the voice of the Aethyr, do thou invoke it in the night, having no other light but the light of the half moon. Then mayest thou hear the voice, though it may be that thou understandest it not. Yet shall it be a potent spell, whereby thou mayest lay bare the womb of thy understanding to the violence of CHAOS.
Now, therefore, for the last time, let the veil of the Aethyr be torn.
Aha! Aha! Aha! Aha! Aha! Aha!

A ka dua
Tuf ur biu
Bi a’ a chefu
Dudu ner af an nuteru.
Appendices
Achad’s Physics

Traditional Thelemic circles recognize the fact that Frater Achad found the ‘Key’ to Liber AL vel Legis, though much discussion does not exist that examines its import. Nor has much use been made of this key with the exception of the formula of LAShTAL in Liber Reguli. One additional work exists that uses this key and its an English Qabalah (Cf. Liber 805) that relies on this key in its authentication arguments. But this Qabalah holds no recognition nor any acceptance in traditional Thelemic circles. And for most, Crowley’s later rejection of Frater Achad as his ‘Magickal Son’ has led to an overall rejection of Frater Achad’s contributions to Thelemic science; if only because his writings have been generally ignored. In effect, the baby has been thrown out with the bathwater.

Fortunately, two forward thinking theorists have found value in Frater Achad’s work. They are the physicist, Richard Miller and the psychologist, Iona Miller. Their writings on Bio-holography found easily on the Internet, provide for us, a marvelous second look at the work of a man that though his later personal failure has become a tragic footnote in Thelemic history, proves an important step in the reunification of science and religion. Of particular significance is the essay by Iona Miller entitled: The Dodecahedral Universe and the Qabalistic Tree-of-Life. In this essay, Iona Miller notes that Frater Achad’s 3-D projection of the Tree-of-Life “…is a key provided initiates to unlock the more comprehensive geometry of creation.”

Let’s start with Geometry and Frater Achad’s work, The Anatomy of the Body of God. Sharing the process by which he came to build his 3-D projection, he first instructs us to draw a vertical line as if running through the center of the Tree-of-Life and to overlay four concentric circles on it so that the diameters intersect with the central points of the other circles, producing three Vesica Piscis as shown in Figure I below. The four circles would be consistent with the four worlds of the Qabalah and the three Vesica Piscis would be consistent with the three veils on the Tree-of-Life.

![Figure 1](image)

However, the consistency of the veils as pertaining to the placement of the three Vesica Pisces is not precise and not consistent with Frater Achad’s model. This is simply an alternate extraction that we can draw from this figure at this point. As shown in Figure II below, the center of the
top circle corresponds with Kether; the diameter of the top and subsequent descending circle corresponds with Chokman and Binah; the center of the third circle corresponds with Tiphareth; the intersecting diameters of the second and third circles gives us Chesed and Geburah; the intersecting diameters of the third and fourth circles gives us Netzach and Hod with the center of the bottom circle corresponding with Yesod and the bottom point of its diameter corresponding with Malkuth.

In order to make this figure work, Frater Achad had to pull Malkuth, which normally hangs pendant to the other Sephiroth, up to a more equidistant relation to the rest of the Tree-of-Life as does Malkuth on the opposite end. This is consistent with the idea that matter does not represent a ‘fall from grace,’ which is not only a Christist viewpoint, but allows us to see now, the divine nature of matter. This would make more resonant the Qabalistic statement that ‘Kether is in Malkuth as Malkuth is in Kether, but in a different manner.’ And we also then can more clearly see the importance of the work of Mother and Sri Aurobindo (Cf. Liber Immortalitas and Liber Vox Viva Voce vel Video) as well as the work of Richard and Iona Miller along with Dr. Harold Aspden.

In examining the Vesica Pisces as formed in Sacred Geometry by two intersecting concentric circles, we find that we can fit two equilateral triangles perfectly in its midst, as shown in Figure III below. The equilateral triangle is of course, the strongest solid shape in architecture as wonderfully demonstrated by R. Buckminster Fuller’s geodesic dome; a real practical use of Sacred Geometry.

When laid out horizontally, the Vesica Pisces’ length and breath also forms a rectangle that may be cut into three equal parts by drawing straight lines parallel to its shorter sides as shown in
Figure V as shown below. The rectangles formed from these additional lines also contain each, a Vesica Piscis and two equilateral triangles, replicating the greater whole and clearly suggesting the idea of the Millers’ hologram theory, which holds that all parts of any organism are an exact replica of the whole organism; working of course, at the cellular level.

And of course, we can embed these rectangles, triangles and Vesica Piscis to both infinitely small and infinitely large dimensions as per Figure VII below.

The profundity of this clearly seen by Frater Achad as he then writes:

Imagine my overwhelming joy when I discovered that the ancient Qabalistic Tree of Life, with all it wonderful possibilities as a means of mental classification of every idea in the Universe—Natural, Human and Divine—was in its entirety based upon the same fundamental principle of the Vesica Piscis, and was therefore not a fixed design but capable of indefinite progression towards the Infinitely Small or the Infinitely Great. For it can be so drawn that it appears with all its details and properties, repeating themselves indefinitely in every direction of Space to Infinity.

The Vesica Piscis is of course, an important shape in the Sacred Geometry of Thelema (Cf. Sacred Geometry in AL). It also comes to us by way of the East as the Vesica Piscis symbolized the womb, the importance of which can be found in the Sexual Alchemy of Thelema. This is hinted at in Frater Achad’s book in the several pages leading to Figures XVII and XVIII shown below. And it significantly, further validates his bringing Malkuth into a balanced geometrical relation to Kether, giving us a “true proportion” when drawing the Vesica Piscis.
Frater Achad then redraws the Tree-of-Life, removing the traditional interconnecting paths with exception of those lines that directly connect to Tiphareth and through Yesod, down to Malkuth as shown in Figure XX. Tiphareth of course, figures prominently in the Sexual Alchemy of Thelema as per the formula of ON (Cf. Liber Laiad and Liber LH). Liber LH is important in this regard as it hints at the idea of the ‘Golden Child’ for those interested in evolutionary Eugenics, which also seems a closely guarded secret in Thelemic circles.
He then swings this Sephiroth around, maintaining the line lengths, upon the axis of Tiphareth, giving us Figure XXI shown below.

The significance of this seems almost like a prediction in light of recent discoveries on phosphorylation in the DNA as per Liber Vox Viva Voce vel Video and Liber Immortalitas vel Lucifuge. Frater Achad writes:

This suggested to my mind, the idea of One Cell; first in process of Division, and then Divided except for a ray of Influence between the two. In other Words the Supreme Light one with Matter, dividing through Wisdom and Understanding, and becoming the Moon (Yesod) and Sun (Tiphereth). Or, The Sun and Moon uniting and producing the other symbolic ideas—who can say?

"For I am divided for love's sake, for the chance of union." AL I.29

Frater Achad is clearly implying the process of mitosis, which is the division of cells involved in both the creation of a fetus and the maintenance of the body. The work of Mother and Sri Aurbindo was in getting all these separate cells to act in unison with full awareness that Immortality might be achieved. But if one thinks about this very carefully, there is also a further validation of Kenneth Grant’s connecting of Yesod with Da’ath and the subsequently evolving ‘Tunnels of Set’ (Cf. Howling of Liber CCXXXI).

As Frater Achad considered the intersecting Vesica Piscis as shown in Figure XXI, formed by Yesod and Malkuth, he noticed that this then created the Foundation for another Tree-of-Life as he surmised that this “…would exactly extend from the Centre of Yesod (as its Kether) to the lowest point of the Circumference of Malkuth (as its Malkuth)…” And from this, he further extends his hologram idea to drawing the Tree-of-Life in infinitely small and large repetitions as shown in Figure XXII below. This pre-figures what would eventually become known as Fractal...
And if we consider the subtle variations that we find inherent in any measurement, despite Frater Achad’s “true proportion,” that is the main idea in Chaos Theory, we have the foundation for understanding (pun intended) the lush variety of expression that is the known Universe.

As stated at above, Richard and Iona Miller show us that the bio-hologram that is the basic organizational component of human anatomy contains the identical appearance at the cellular level as it does at the anatomic level and especially even atomic level. We can find other validation for this when we consider the free radicals that operate in the mitochondria at the cellular level and the beta decay on the atomic level, which are equivocated in Liber Immortalitas vel Lucifuge. Frater Achad anticipates the Millers’ theories by embedding smaller and larger Trees, built on combinations of Sephiroth in perfect harmonic relation. This also anticipates the Schumann’s Resonance theory that the Millers’ build their ideas upon (Cf. Liber Vox Viva Voce vel Video and Plate A below).

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One should note the Alchemical idea of the ‘Babe in the Egg’ as shown in so many Alchemical drawings and also Cf. Crowley’s on the homunculus as well as other hints in his IXth Degree literature.
Frater Achad would then develop this out in all directions about Tiphareth—giving us what he calls the ‘Macrocosmic Snowflake’ shown in Plate B below. And he notes that the snowflake clearly shows us the infinite nature of all numbers.

"Every number is infinite; there is no difference." AL I.4
Though Chaos Theory may at first seem to throw a wrench in Frater Achad’s idea of “true proportion” as discussed above, we can get around this easily enough by recognizing that Frater Achad more than likely meant ‘true relation.’ In fact, Chaos Theory holds much in common with Achad’s ideas. We may also say that he also anticipated Chaos Theory along with its cousin Fractal Theory and the Koch Curve, a well-known fractal used to explain Fractal Theory and integrates that all-important and powerful triangle into organic matter! The Koch Curve in Chaos Theory uses a triangle, placed as a hexagram and repeated exponentially, ultimately creates a snowflake as shown in Figure 4 below. And it may also be made into other organic figures, such as a twig or a fern.
Gregory Rae’s website\(^{186}\) provides a strong introduction for fractals and Chaos Theory as well as an interesting insight into the dynamic nature of this particular fractal as shown in the following quote:

One mathematician, Helge von Koch, captured this idea in a mathematical construction called the Koch curve. To create a Koch curve, imagine an equilateral triangle. To the middle third of each side, add another equilateral triangle. Keep on adding new triangles to the middle part of each side, and the result is a Koch curve. (See figure 4) A magnification of the Koch curve looks exactly the same as the original. It is another self-similar figure.

The Koch curve brings up an interesting paradox. Each time new triangles are added to the figure, the length of the line gets longer. However, the inner area of the Koch curve remains less than the area of a circle drawn around the original triangle. Essentially, it is a line of infinite length surrounding a finite area.

We can say with some confidence that Frater Achad has provided for us, the Qabalistic Key to Fractal and Chaos Theory as he also anticipates the ideas in Schumann’s Resonance and the Bio-holographic Theory of Richard and Iona Miller. But he doesn’t stop there. So far, we have only considered the 2-D expression of the Tree-of-Life. He would then go on to model it as the 3-D object as shown in Plate D below and recognized in its import by Israel Regardie in his magnum opus: The Complete Golden Dawn System of Magick. Only Regardie makes it seem as this was a part of Golden Dawn teachings, though he only includes a graphic as a plate at the beginning of the book. Research will show the investigating student that this 3-D expression originates with Frater Achad and not MacGregor Mathers and clan.

\(^{186}\) http://www.imho.com/graec/chaos/chaos.html
As mentioned above, Frater Achad’s idea about cellular mitosis corroborates Kenneth Grant’s ‘Tunnels of Set.’ The following quote by Achad on the nature of this 3-D Tree-of-Life provides for us yet, another validation. Indeed, the third pillar not normally depicted in 2-D renderings, would be the other end of those connections that formulate the tunnels and which is shown below in Plate C.

In reality we have been looking at the front surface of a Triangular Crystal Pism\textsuperscript{187}, and what we saw was not all in \textit{one plane}. The “sides” of the Tree are but two angles of an equilateral solid; the third angle at the back, is invisible, being completely hidden by the Paths of the Central Pillar.

\textsuperscript{187} Frater Achad includes this footnote here: Chaos or Matter is potentially a prism which refracts the great Light-Source, splitting up the Supernal Light into stars, or the Supreme Consciousness into Ideas. As matter or substance becomes organized and develops mind, its power as a prism grows. As we clarify our minds they become as living, organic prisms which
Frater Achad then gives us the complete 3-D solid, which extends in every direction, “completely filling all known space.” This is shown in Figure XXXI below.
He then builds this into twenty prismatic Trees as shown in Plate E below, and notes that twenty is the number of Yod, upon which the letters of the Hebrew alphabet are constructed. He then arranges the points of the twenty Kethers from the solid extended Tree to form twelve perfectly regular pentagrams and which then would clearly represent the twelve constellations of the Zodiac.

**Figure xxxi**

**Plate E**

*The Garden of Eden*

This represents the *First* of simple prismatic "Tree" branching out in 20 directions from its Central Malkuth. It should be observed that if the *Second* progression of the solid be taken as far as Tiphereth, it would exactly enclose this in a perfect Dodecahedron comprising 20 solid angles forming 12 equilateral Pentagons, while the *Fifth* progression of the original Malkuth would exactly enclose all this in a perfect Sphere.
In conclusion, considering Frater Achad as a physicist or a physical theorist is more suppositional and relational than actual. But his work embodies a unique juncture point that harmonizes the world of Magick, Religion and Mysticism with the world of modern Science and especially Physics. And these two worlds are beginning to talk to each other and almost right from the start of this Aeon of Horus. It now seems so very important that one begin to learn the other’s language that they may each speak to each other with perfect clarity.
"And Enoch walked with the Elohim, and the Elohim took him." Genesis

For, unlike some of the anthropomorphic creeds, Occultism offers to its votaries no eternally permanent heaven of material pleasure, to be gained at once by one quick dash through the grave. As has, in fact, often been the case many would be prepared willingly to die now for the sake of paradise hereafter. But Occultism gives no such prospect of cheaply and immediately gained infinitude of pleasure, wisdom and existence. It only promises extensions of these, stretching in successive arches obscured by successive veils, in an unbroken series up the long vista which leads to Nirvana. And this too, qualified by the necessity that new powers entail new responsibilities, and that the capacity of increased pleasure entails the capacity of increased sensibility to pain. To this, the only answer that can be given is twofold: (1st) the consciousness of Power is itself the most exquisite of pleasures, and is unceasingly gratified in the progress onwards with new means for its exercise; and (secondly) as has been already said - This is the only road by which there is the faintest scientific likelihood that "Death" can be avoided, perpetual memory secured, infinite wisdom attained, and hence an immense helping of mankind made possible, once that the adept has safely crossed the turning-point. –Madame Helena Petrovna Blavatsky

Paramatman is the higher Atman or Spirit as taught in the Vedanta philosophical system; equivalent to Kether on the Tree-of-Life. Paramatman is the manvantaric or expanding aspect of Brahman; the contracting aspect being the pralaya with both these aspects represented by modern science and the expanding and contracting forces of the Universe. Thelemites also know the Paramatman as the Silent Self, situated in the heart of the Atman. This Silent Self is unchanging and is the Augoeides upon which the acting Self (Atman) consults in order to determine the course of action (karma) in this life. Liber LXV:II.17-26 describes the relationship between these:

17. Also the Holy One came upon me, and I beheld a white swan floating in the blue.

The "Holy One" is Paramatman; the consciousness of the Angel or Augoeides resonating with the Atman, which in this case is symbolized by the white swan. The white swan is Hadit; “floating in the blue” of Nuit.

18. Between its wings I sate, and the aeons fled away.

There are three I’s here; Paramatman, Atman and the ego related to mind, which is the consciousness that retains memory (Jivatman). This lower ego is a complex of energies directly connected to the body, having arisen from the body, and which must be congealed into one unified force as dealt with in the Supramental Yoga of Sri Aurobindo and Mother. It’s union is a fusion with the Atman is what Thelemites call the attainment of Hadit. Cf. Liber DLV

19. Then the swan flew and dived and soared, yet no whither we went.

This is Hadit in his relation with Nuit. The Union provokes an ecstasy of consciousness. And as suggested by Dr. Maurice Bucke, there is a corresponding flaring of light about the individual where the Soul becomes outwardly illuminated for a brief moment; before contracting itself within.
20. A little crazy boy that rode with me spake unto the swan, and said:

Crowley’s comment is worth noting here: The boy is the human reason, which demands measurement as the first condition of intelligible consciousness. Aware of time, he cannot understand why all this motion has not brought the swan nearer to some fixed point, or how the relation of the point of origin to its present position is not an ever-present anxiety. He cannot conceive of motion without reference to fixed axes.

Motta’s appending to this comment is also worth noting: The most interesting point in this is the description of the human reason as “a little crazy boy”. We have, therefore, a faculty that is very young and which has not yet become fully harmonized.

21. Who art thou that dost float and fly and dive and soar in the inane? Behold, these many aeons have passed; whence camest thou? Whither wilt thou go?

Immortality is a condition of consciousness expressed in infinite terms; that the human mind is incapable of comprehending this shows the finite nature of the mind in its immature state. With education and its maturing principle, the mind can be trained to conceive that which is outside its initial apprehension. To this end, human culture has contrived visionary systems and prophetic trances.

22. And laughing I chid him, saying: No whence! No whither!

The infinite remains an absurdity of the mind; the “inane”. The only reasonable apprehension of it is brought indirectly through symbols and the archetypes of the mind that are energetically triggered by them. Understanding becomes an act of intuition; two attributes of Binah, which is a knowledge from beyond the Abyss and is the highest of the seven heavens of the visionary experiences of the Merkabah.

23. The swan being silent, he answered: Then, if with no goal, why this eternal journey?

Motta notes: The swan has always been, in the Orient, a symbol of samadhi. Hence the mystical title Paramahanse—the Transcendental Swan, that is, the mystic who has conquered Samadhi perfectly.

Crowley wrote these holy books of Thelema in a state of Samadhi and the visionary nature of the archetypes in these works show the nature of the journey; if no goal is to be connected to it. And so it is the path we travel, not the destination that is important as in the infinite, there is no beginning and no end.

24. And I laid my head against the Head of the Swan, and laughed, saying: Is there not joy ineffable in this aimless winging? Is there not weariness and impatience for who would attain to some goal?

For the Mage, it is the exploration of worlds and the Sea of Possibilities that is the quest for life and that produces the tales of wonder. The ego-loser despises this and seeks to find a place of rest from the weariness of the quest that presses hard upon such a one. And in order to move along the path of the quest, the Mage understands the importance of holding a line of memory through the countless lives that will manifest sequentially in
the enduring nature of this quest. Both dissolution into the infinite and the dispersion of the Soul; both ends in themselves represent failures to the Mage.

25. And the swan was ever silent. Ah! but we floated in the infinite Abyss. Joy! Joy! White swan, bear thou ever me up between thy wings!

The exploration of all these worlds in the Sea of Possibilities is an ecstasy unto itself; a celebration of life in the manvantaric and pralayic aspects of the Universe. It is a mistake to conceive of these two states of the Universe as being linear in nature and connected hence to time. They are together the outer and inner movements of the journey. The manvantaric moves through the Abyss to the lower manifestation of the Tree and the pralayic moves through the Abyss towards the Supernals.

26. O silence! O rapture! O end of things visible and invisible! This is all mine, who am Not.

Jivatman (Self or Soul) and Paramatman (Not Self, but Spirit) are two sides of the same coin (Atman). Paramatman would be the Augoeides of the ancient Greeks. It is the Silent Self that is each our individual godhood. It's invocation and projection onto Aethyric substance is the completion of the work of Magick in the Outer College (GD of the A.'.A.'.). The Jivatman, being karmically oriented, is of the body; that set of egos that must be congealed to one perfected whole (asar un nefer; being "myself made perfect") and brought to focus on the Paramatman in order to induce an intimate relationship between the two. If the Jivatman remains fixed on the body from which it arises, its karma (action) remains with the body and remains as transient and impermanent; disintegrating with the body upon the death of the body. But if it connects with the Paramatman (crossing the Abyss), it can carry its karma to its next incarnation as a whole being and continue an evolutionary development; rather than starting again with whatever chance-oriented incarnation it takes on. The assumption here is that Paramatman, being merely an observer and not of the world of karma, cannot make such a choice, or it would be acting (karmically-oriented).

Also, this is why it is said, he who would save his life will lose it and he that would lose his life will save it. We must fix ourselves to that which is above ourselves. To remain fixated on the body, which is temporal and transient is a grave error. But once fixed upon that spark of Spirit that dwells above and beyond this temporal trancience is to gain possession and control over of all that is below. Spirit alone has the vision of infinity, but it is still a differentiation from non-differentiated being or else the quote “This is all mine” would be a contradiction in phraseology for that which is “Not.” ‘I am Not’ is the supreme mystery of Kether.

Paramatman is the individual star that the MT, upon reaching Binah (the successful traversing of the Abyss) is said to cast into the heavens, while simultaneously projecting back down into the Ruach. It is in the Ruach where our individuality is seated and this individuality must be real and not an illusion, or the entire Universe is one big cosmic absurdity; the notion of the ego-losing nihilists. Those who preach and take such a position, indeed actually hold their Atman in its trance within and upon the body, which is why they seek so ardently to escape it as it feels a prison to them. And these ego-losers think their one god
(Paratman) is the same god over all, which in the West has a greater distortion when mixing ideas of god with the ideas of royalty and kinghood. The anthropomorphization of this idea has proven a provocative and superstitious fairy tale that creates perpetual war on this planet. Each of us that falls into this trap becomes convinced that he has the corner on the highest truth and is the only one that can truly determine right from wrong; in a Manichaean frenzy of self-righteousness. Though they preach humility (ego-loss), it is more for others to listen to them than to really practice themselves. Their self-interest is not enlightened at all; but desperate and maddening. They insist on the blindness of those that disagree with them, saying: "I can't believe you can't see how obvious this all is to me." And so they are blinded by their belief (superstition) and hold their focus on the body; obsessed with health and wealth and the general pretense to care for nature herself. All of this helps them to tell themselves they are the good guys and hold in place the Manichaean idea of absolutes in morality. “Make love not war” they cry, as if their thoughts are not a part of the collective consciousness that has kept the world in a state of perpetual war.

There can be no evolution if the personality cannot survive the death. In such a state, one simply lives meaningless lives over and over again with the unchanging Spirit unaffected by these. But to hold the Ruach together and to consciously choose one’s next incarnation and avoid that ‘return’ to the 'Intimate Fire' of which the Spirit is but a spark is the immortality sought after by the ancients and again, taught in such texts as the Tibetan and Egyptian books of the dead. The idea of immortality includes a certain congealing of the soul (the blue ascending force) that prevents the disintegration of the Ruach at some point after death. This very grand and central secret is as much subtly as it is overtly detailed in the Egyptian pyramid rituals. As a formula for living, it is a method for getting to the true Material & Elemental Universe (spoken of by Sri Aurobindo and Mother) and no longer be caught up in this world of shells that is often mistaken as being represented by Malkuth on the Tree. Malkuth is actually the true Material & Elemental Universe, most of us are asleep in this world of shells that we mistake for Malkuth. And yet there is nothing certain here, which is why Sri Aurobindo says that in the true Material Universe, accidents are not possible.

Despite Crowley’s attributing the Atmandarshana trance to line 1 in Liber 777 and with the ‘Unity with Brahma’ (noting that he also omits Brahmadarshana), it truly remains equivalent to the H.G.A. experience, with this H.G.A. experience remaining the principal experience of Tiphareth; where and at such a point, the Angel acting without the lower egos that remain affixed to the physical body, does itself ultimately commit to some form of Brahmadarshana in Kether. What I’m attempting to connect is the notion of the lower egos congealed to one physically conscious being and its responsibility to turn itself around and become affixed to, or transfixed with the influx of the ‘Divine Descent;’ this descent being the solar-phallic archetypal force that creates the various avatars/egregores that have reigned as saviors over various cultures. In us as individuals, it perfects our humanity by infusing the highest with the lowest and with the four quarters. The Angel alone has the awesome task of connecting with and operating through the mystery of Kether, wherein it is said: Selflessness is Self.

Visionary experience is the key to Dyana in contrast with Samadhi, which is a projection of consciousness from subject to object. It is these that both inaugurate initiation and confirm one along the path; as NUIT says: “certainty, not faith, while in life...” All the observed symptoms are consistent with the creative experience of the artist and musical improvisor; the sense of being outside time or time moving in a non-linear fashion and the single-minded concentration that is Dharana. To quote Crowley from his Adeptus Major tome: Magick:

THIS word has two quite distinct and mutually exclusive meanings. The first refers to the result itself. Dhyana is the same word as the Pali “Jhana.” The Buddha counted eight Jhanas, which are evidently different degrees and kinds of trance. The Hindu also speaks of Dhyana as a lesser form of Samadhi. Others, however, treat it as if it were merely an intensification of Dharana. Patanjali says: “Dharana is holding the mind on to some particular object. An unbroken flow of knowledge in that subject is Dhyana. When that, giving up all forms, reflects only the meaning, it is Samadhi.” He combines these three into Samyama.

Per my earlier assertion, these trances are of the Jhanas, which again, are described as being of the four realms below Nirodha-Samapatti. Referring to my Comments on Samapatti and Initiation:
The final Jhana is the perfection of one’s journey through the samsara, the perfection of one’s relation with the present incarnation. The ‘I am’ of the preceding Jhana gives way or yields to the higher self, initially beset with this new corrected relation with the world. It is the stage of the Adeptus Minor (Without) that comes with Sasmita-samapatti. The eighth and final stage of meditation, Nirasmita-samapatti corrects all the erroneous self-identifications and is that stage of Atmandharshana that corresponds with the Adeptus Minor (Within).

Note that I say "that stage of Atmadarshana" that is consistent with the Adeptus Minor (Within) part of the Tiphareth experience. The Adept sees clearly the divine spark within and gains the perspective of this spark as captured into the Ruach. There is something of a cycle that then starts as this is where the Magister Templi will ultimately find him or herself returned, while simultaneously casting a star into the heavens. This flowery-seeming description is highly technical and yet has not really been explained. I believe Thelemic Doctrine offers us the opportunity to gain a clearer insight into this.

In "The Psychology of Hashish" Crowley writes:

"Of this vision what can one say, save that the Universe, as previously known through Atmadarshana, is annihilated? Yet the negation of this phrase is only apparent...it is only an illusion that goes. Yet there is indeed Nothing in its place - and the only way to express the matter is to spell that Nothing with a capital N."

There is certainly a clear inference to suggest that Atmadarshana is not that highest of trances that is the experience of Kether as it is said to be something less than the highest of the Samadhi trances. Further, it is worth noting that Crowley is speaking here from his observations from the point of view of the Ruach; having smoked hashish, which is not the negative or passive state of Eastern meditation, but the positive and proactive approach of the Western dance.

The "consciousness of the continuity of existence" is certainly the NOT and it is proper to assert that it is not the nihilistic conception proffered by the ego-loser philosophies of the slave mindset that is integral to most in the spiritual community today. This is also not the continuity that implies a succession through time, but the continuity that is the interconnected nature of each individual with every other individual. The mis-application of the doctrine that has been built upon this and installed into the conditioning of the dead religions cursed in AL lead most to eschew this life for that supposed ever-blissful state of non-being. And yet, there can obviously be no bliss in this, or the Ain Soph would not have sought to focus a center and create the path to incarnation. So the yearning that the Buddha promises escape from is a false promise. To list this as the sole or the highest aspiration of the spiritual journeyman creates the ego-loser mentality that is so easily and consistently exploited by the various gurus and priests of these religions. They create the slave-mind that holds one more deeply into the herd-consciousness that is the nature of the deep sleep we as a race are currently indwelling.

That which is called the ‘Second Death’ is a part of the dying process where the Ruach ultimately disintegrates and the Spirit moves on to take on a new personality. Some initiated into the Western Mystery Tradition, at first, even think that the ultimate result of their initiation will perhaps be exemption from that dissolution which is called the common lot of mankind. This is a result of the Christist conditioning that installs the idea that the Soul is also immortal and can receive an eternal reward or punishment. The ‘Elixir of Life’ is a central concern for Thelemic Magick. The ancient mythologizing of the Water of Life has been strong and even brought Ponce de Leon to Florida from Europe, is search of this magickal fountain. HPB notes:

The "pungent and fiery Essence," by which Zanoni renewed his existence, still fires the imagination of modern visionaries as a possible scientific discovery of the future. [ed.note cf. The Golden Chain of Homer for a more sensible allusion to this idea.]

But in actuality, no such substance exists; fooling even still modern Alchemists. But then what of the Philosopher’s Stone? What is it? For the present discussion, let’s just say that it’s not a pill you take or a water you drink that will cure the body of its natural decay. Rather, it is something that informs the Soul
(Ruach) and if in this enlightenment, some of these features then radiate down to the animal body, we can trace the course of the Will. As HPB notes:

All is subject to Change. Reflection, therefore, will easily suggest to the reader the further logical inference that in a Universe which is essentially impermanent in its conditions, nothing can confer permanency. Therefore, no possible substance, even if drawn from the depths of Infinity; no imaginable combination of drugs, whether of our earth or any other, though compounded by even the Highest Intelligence; no system of life or discipline though directed by the sternest determination and skill, could possibly produce Immutability. For in the universe of solar systems, wherever and however investigated, Immutability necessitates “Non-Being” in the physical sense given by the Theists - Non-Being which is nothing in the narrow conception of Western Religionists - a reductio ad absurdum. This is a gratuitous insult even when applied to the pseudo-Christian or ecclesiastical Jehovah idea of God.

Consequently, it will be seen that the common ideal conception of “Immortality” is not only essentially wrong, but a physical and metaphysical impossibility. The idea, whether cherished by Theosophists or non-Theosophists, by Christians or Spiritualists, by Materialists or Idealists, is a chimérical illusion. But the actual prolongation of human life is possible for a time so long as to appear miraculous and incredible to those who regard our span of existence as necessarily limited to at most a couple of hundred years. We may break, as it were, the shock of Death, and instead of dying, change a sudden plunge into darkness to a transition into a bright light. And this may be made so gradual that the passage from one state of existence to another shall have its friction minimized, so as to be practically imperceptible. This is a very different matter, and quite within the reach of Occult Science. In this, as in all other cases, means properly directed will gain their ends, and causes produce effects. Of course, the only question is, what are these causes, and how, in their turn, are they to be produced.

Of this transition, a certain allusion has been given to us through a modern myth; Star Wars, wherein we find the Jedi able to re-materialize after death into an etheric form that still finds a presence in the material Universe. In this same myth, we also find the myriad of life forms loosely cloaked, that form the human body. HPB gives a marvelous description of this:

In the actual man reflected in your mirror are really several men, or several parts of one composite man; each the exact counterpart of the other, but the “atomic conditions” (for want of a better word) of each of which are so arranged that its atoms interpenetrate those of the next “grosser” form. It does not, for our present purpose, matter how the Theosophists, Spiritualists, Buddhists, Kabalists, or Vedantists, count, separate, classify, arrange or name these, as that war of terms may be postponed to another occasion. Neither does it matter what relation each of these men has to various “elements” of the Kosmos of which he forms a part.

This whole model shows the involving nature of Spirit as it ‘concentrates its center’, Qabalistically speaking. But there is also to be considered that which is evolving. For the composer of the Myth (George Lukas and his spiritual instructor, Joseph Campbell), we learn of a symbiotic life form, called the Mitochlorians, which we actually know as the Mitochondria (themselves a symbiotic life form composed of Eukeryotes and Prokeryotes); cf. Liber VVVV of the GCL. And knowing that the human being’s emotional fabric is derived from the body, it is safe to assume that these living entities are somehow involved in the process.

The idea of ‘original sin’ has been put on with a misinterpretation. The sin or Shame of Khem, as described so aptly in Liber LXV, is Universal and represents the involution. Every action has an equal and opposite reaction. Therefore, there is an evolution from the matter that also takes place in this central point on the evolutionary chain that we call humanity...as I talk about in my commentary to the Gospel of Thomas. The Alchemy is to unite both of these life currents. I am not talking about capitulating to an anthropomorphic and vengeful god.

Crowley describes a process of the spiritualization of matter in the Gnostic Mass, when the Priest prays: “Let thy light crystallize itself in our blood; fulfilling us of Resurrection.” It clearly suggests that Resurrection is this process of transference; Transformation. Therefore, an important component of Western Magick is the secret of the Sacrament; whereon Crowley also writes in Magick Without Tears:

“To us, every phenomenon is an Act of Love, every experience is necessary, is a Sacrament, is a means of Growth. Hence, ‟...existence is pure joy...’” (AL II, 9) ‟A feast every day in your hearts in the joy of my rapture! A feast every night unto Nu, and the pleasure of uttermost delight!” (AL II, 42-43).”

Crowley in addressing the spiritualization of matter, notes the alchemical process of the Eucharist as a consumed sacrament in Magick:
And from this, HPBs note further elucidates:

We see, moreover, that in process of time any cut or lesion upon the body, however deep, has a tendency to repair the loss and reunite; a piece of lost skin is very soon replaced by another. Hence, if a man, partially flayed alive, may sometimes survive and be covered with a new skin, so our astral, vital body - the fourth of the seven (having attracted and assimilated to itself the second) and which is so much more ethereal than the physical one - may be made to harden its particles to the atmospheric changes. The whole secret is to succeed in evolving it out, and separating it from the visible; and while its generally invisible atoms proceed to concrete themselves into a compact mass, to gradually get rid of the old particles of our visible frame so as to make them die and disappear before the new set has had time to evolve and replace them.

We get here our first hint that this red powder of the Alchemists has much to do with the blood, in which the light of spirit is crystallized (per the Gnostic Mass). And for that matter, there is also the white powder, which may be either or both the semen and the lubricant of the Yoni. Would not such an essential part of our makeup be intimately that Sulphur that is between the Mercury of Spirit (aethyric and particulate light, which emanates from the Fifth Dimension; cf. Testing the Dark Night of Pan) and the physical Earth that is also the clay and ash that are our bodies.

As an aside, it is interesting to note that the blood sugar level should be maintained at 93 as 93MM is the distance of the Sun from the Earth. Further, scientists are beginning to speculate that red wine has something to do with longevity; red wine being one component of the Eucharist in the Gnostic Mass. This is but one line in a long line of Alchemical investigations that is yet, well beyond the scope of this essay. The Earth is alive and has its own three compounds (metals, rock, clay, dirt, et al. as well as the plant kingdom). All are composed in some manifest of these three elements and we need to understand life in terms of this matrix in order to comprehend the totality of our nature.

The Devas had whispered into every man's ear - Thou only - if thou wilt - art "immortal." Combine with this the saying of a Western author that if any man could just realize for an instant, that he had to die some day, he would die that instant. The Illuminated will perceive that between these two sayings, rightly understood, stands revealed the whole secret of Longevity. We only die when our will ceases to be strong enough to make us live. In the majority of cases, death comes when the torture and vital exhaustion accompanying a rapid change in our physical condition becomes so intense as to weaken, for one single instant, our "clutch on life," or the tenacity of the will to exist. Till then, however severe may be the disease, however sharp the pang, we are only sick or wounded, as the case may be. This explains the cases of sudden deaths from joy, fright, pain, grief, or such other causes. The sense of a life-task consummated, of the worthlessness of one's existence, if strongly realized, produced death as surely as poison or a rifle-bullet. On the other hand, a stern determination to continue to live, has, in fact, carried many through the crises of the most severe diseases, in perfect safety. -HPB

Plenty of families have stories of how a near-death family member held on to say good-bye to a loved one before finally giving up the ghost (Sulphur, which houses the Spirit). For those who have lost blood, it seems that the Will leaves as the blood seeps away, which may show its direct connection to the Will. Certainly there are plenty of life's mysteries to be found through all sorts of circumstances. HPB quotes Colonel Olcott to further her explanation. But we find some curious ideas to consider:

Col. Olcott has epigrammatically explained the creative or rather the recreative power of the Will, in his "Buddhist Catechism." He there shows - of course, speaking on behalf of the Southern Buddhists - that this Will to live, if not extinguished in the present life, leaps over the chasm of bodily death, and recombines the Skandhas, or groups of qualities that made up the individual into a new personality. Man is, therefore, reborn as the result of his own unsatisfied yearning for objective existence. Col. Olcott puts it in this way:

Q. 123. .... What is that, in man, which gives him the impression of having a permanent individuality?
A. Tanha, or the unsatisfied desire for existence. The being having done that for which he must be rewarded or punished in future, and having Tanha, will have a rebirth through the influence of Karma.

Q. 124. What is it that is reborn?
A. A new aggregation of Skandhas, or individuality, caused by the last yearning of the dying person.
Q. 128. To what cause must we attribute the difference in the combination of the Five Skandhas which makes every individual differ from every other individual?
A. To the Karma of the individual in the next preceding birth.
Q. 129. What is the force or energy that is at work, under the guidance of Karma, to produce the new being?
A. Tanha - the "Will to Live."
But what of this Will? Some have placed it above what is called the ‘lower ego,’ which is itself a misnomer. We have many small egos; considering that the perfected ego (Asar un Nefer) is the only true ego about which “all” the other petty egos orbit or cluster to exalt; each in their turn, usurping the throne on sometimes a moment-to-moment basis. So, is it that Tanya is an obvious illusion or a form of Maya? Though Colonel Olcott overtly implies this, we should be careful to so readily take the inference. Is the higher self really fooling itself to have the impression of a permanent reality? Is it that this impression is an accurate impression?—I think at least half so.

The Maya is egoic...the ego sees everything in its seemingly fixed state and cannot see the continual process of change inherent in the Universe. The Western axiom: Change equals Stability says it all. We as gods, have but to rectify our egos with this truth; a far more difficult process than it seems.

I maintain that the H.G.A. as a created consciousness; a by-product of aethyric manipulation represents the third emanation of the union between the Paratman or Neschama, descended or incarnated into the Ruach and the soul of the Nephesch that requires a congealing, which produces the symptom called Transfiguration. The Transfiguration is the result of the transformation that comes when the Atman and Nephesch have their intercourse in full ecstatic rapture. The Atman here is expressed in Thelma by the symbol of the BEAST as the Nephesch becomes symbolized by BABALON; and from these the Magickal Childe or praeter-human intelligence is manifested. This is the egregore (Augoeiades) that is the third point in the Trinity (not to be confused with the Roman trinity, but on the much more ancient knowledge).

Immortality is a loaded figure; it is not the absolute immortality of the material body as the ‘Dark Side’ forces seek after; but that incorporation into the ‘ideal’ body of the etheric/material plane, wherein we see represented by Yoda and company taking on this body after their deaths. The physical body must die as there is no 'outside' to nature. There is certainly a clear inference to suggest that Atmadarshana is not that highest of trances that is the experience of Kether as it is said to be something less than the highest of the Samadhi trances.

Quoting HPB:

Even if there were to be a personal God with anything like a material upadhī (physical basis of whatever form), from the standpoint of an Adwaitee there will be as much reason to doubt his noumenal existence, as there would be in the case of any other object. In their opinion, a conscious God cannot be the origin of the Universe, as his Ego would be the effect of a previous cause, if the word conscious conveys but its ordinary meaning. They cannot admit that the grand total of all the states of consciousness in the Universe is their deity, as these states are constantly changing, and as cosmic ideation ceases during Pralaya. There is only one permanent condition in the Universe, which is the state of perfect unconsciousness, bare Chidakasam (the field of consciousness) in fact. When my readers once realize the fact that this grand universe is in reality but a huge aggregation of various states of consciousness, they will not be surprised to find that the ultimate state of unconsciousness is considered as Parabrahmam by the Adwaitees.

There is no return to godhead as most religions teach...there is no final resting place...there is no rest...we remain in a perpetual state of manifestation. Immortality is a loaded term. If we are already immortal, what is its import? And why then even bother with spiritual practices when we can simply watch TV and participate in the mundane human hunt for sensorial gratification? Well, because though immortality is already a part of our nature...it is only in the unconscious that it is established. And thus, the aggregate of consciousness produced by these Mitochondria without the proper work, will dissipate and disperse with the death of the body that had held the cells to a unity. In becoming conscious and gaining a unity of purpose in the cells; making them consciously aware of the larger organism, we congeal or fuse the Ruach that we might consciously pursue reincarnation. This is so aptly described in Sri Aurobindo's Supramental Yoga.

AL II.9: "Remember all ye that existence is pure joy; that all the sorrows are but as shadows; they pass & are done; but there is that which remains."
AL II.20: "Beauty and strength, leaping laughter and delicious languor, force and fire, are of us."

The individuality of the person is his or her innermost self, Hadit is an independent Star; one of many elements and many gods. Whether the aggregate of elements that compose the human being are of the
Five Skandas or described in any other way, and we certainly need to consider the matrix of consciousness composed of the mitochondria in all the cells of our bodies, all this must be effectively translated into the Etheric body that comes by way of the Astral Visualization process that is developed through the Grade Work of the A.'A.'. and of other Western systems; at least this is our way, with what I'm sure has its complement in the East.

AL II.6: "I am the flame that burns in every heart of man, and in the core of every star. I am Life, and the giver of Life, yet therefore is the knowledge of me the knowledge of death."

But if this matrix is not congealed and transferred/transformed, the sacrament is broken and left for desecration in the dispersion of these life forces. Taking on a new set of Skandas and other forces, creates a new personality. Certainly the core element that is Hadit, continues on, but these other temporal elements remain locked in time and no evolution is attained; even for Hadit; which is why he admonishes us when he tells us:

AL II.22: "I am the Snake that giveth Knowledge & Delight and bright glory, and stir the hearts of men with drunkenness. To worship me take wine and strange drugs whereof I will tell my prophet, & be drunk thereof! They shall not harm ye at all. It is a lie, this folly against self. The exposure of innocence is a lie. Be strong, o man! lust, enjoy all things of sense and rapture: fear not that any God shall deny thee for this."

AL II.24: "Behold! these be grave mysteries; for there are also of my friends who be hermits. Now think not to find them in the forest or in beds of purple, caressed by magnificent beasts of women with large limbs, and fire and light in their eyes, and masses of flaming hair about them; there shall ye find them. Ye shall see them at rule, at victorious armies, at all the joy; and there shall be in them a joy a million times greater than this. Beware lest any force another, King against King! Love one another with burning hearts; on the low men trample in the fierce lust of your pride, in the day of your wrath."

AL II.52: "There is a veil: that veil is black. It is the veil of the modest woman; it is the veil of sorrow, & the pall of death: this is none of me. Tear down that lying spectre of the centuries: veil not your vices in virtuous words: these vices are my service; ye do well, & I will reward you here and hereafter."

HPB translates biblical sayings of Jesus, when he refers to "the Father" or "his father in heaven", he is talking about his personal god (Paratman) and intends for those who 'hear' him, that they each have their own personal 'father'. After all, the Elohim that created man are not one god, which means that there are many elements, each quite individual as Crowley mentions. And also, as HPB clearly shows, the Universe is still being created all the time...so yes, there are plenty of new souls. Again, without all this, the Universe is but a solipsistic and nihilistic nightmare.

...the word "Elohim" is Kabalistically analysed, show conclusively enough that the Elohim are not one, nor two, nor even a trinity, but a Host - the army of the creative powers.

The Christian Church, in making of Jehovah - one of these very Elohim - the one Supreme God, has introduced hopeless confusion into the celestial hierarchy, in spite of the volumes written by Thomas Aquinas and his school on the subject. The only explanation to be found in all their treatises on the nature and essence of the numberless classes of celestial beings mentioned in the Bible - Archangels, Thrones, Seraphim, Cherubim, Messengers, etc. - is that "The angelic host is God's militia." They are "Gods the creatures," while he is "God the Creator," but of their true functions - of their actual place in the economy of Nature - not one word is said. They are More brilliant than the flames, more rapid than the wind, and they live in love and harmony, mutually enlightening each other, feeding on bread and a mystic beverage - the communion wine and water? - surrounding as with a river of fire the throne of the Lamb, and veiling their faces with their wings. This throne of love and glory they leave only to carry to the stars, the earth, the kingdoms and all the sons of God, their brothers and pupils, in short, to all creatures like themselves the divine influence. . . . As to their number, it is that of the great army of Heaven (Sabaoth), more numerous than the stars . . . . Theology shows us these rational luminaries, each constituting a species, and containing in their natures such or another position of Nature covering immense space, though of a determined area; residing - incorporeal though they are - within circumscribed limits; . . . more rapid than light or thunderbolt, disposing of all the elements of Nature, providing at will inexplicable mirages [illusions?]; objective and subjective in turn, speaking to men a language at one time articulate, at another purely spiritual. [ De Mirville, ii. 296.]

We learn farther on in the same work that it is these Angels and their hosts who are referred to in the sentence of verse 1, chapter ii. of Genesis: Ignitor perfecti sunt coeli et terra et omnis omatus eorum:" and that the Vulgate has peremptorily substituted for the Hebrew word "tsaba." (host) that of "ornament;" Munck shows the mistake of substitution and the derivation of the compound title, "Tsabaoth-Elohim," from "tsaba." Moreover, Cornelius a Lapide, "the master of all Biblical commentators," says de Mirville, shows us that such was the real meaning. Those Angels are stars.

The symbolism in thelemic Doctrine of the MT casting one's star into the heavens while reflecting back down into the Ruach, then begins to seem as though there is a literal value as well as a symbolic one. Those who are of full consciousness; having attained Gnosis are truly alive. 'They cannot die what is called the 'Second Death'. That death is the destruction of the soul that goes through time. Those who live this life in the unconscious state and cling to that, they will not have the capacity to hold their soul together, when the physical body undergoes its inevitable change, death. And their soul will disperse into its many aethyric components upon death. So the Soul does not have to disperse with the elements of the body; only it must move from its identification with the body and transfer that to the Spirit (Ra-Hoor-Khuit: 
Al. III.17: “Fear not at all; fear neither men nor Fates, nor gods, nor anything. Money fear not, nor laughter of the folk folly, nor any other power in heaven or upon the earth or under the earth. Nu is your refuge as Hadit your light; and I am the strength, force, vigour, of your arms.” Ra-Hoor-Khuit being the Sun behind the Sun or the Spirit of the Sun, which is Hadit.

Al. III.1: “Abrahadabra! the reward of Ra Hoor Khut.”

Al. III.2: “There is division hither homeward; there is a word not known. Spelling is defunct; all is not aught. Beware! Hold! Raise the spell of Ra-Hoor-Khuit!”

Note that the letter ’I’ is inserted into Ra Hoor Khut in the second verse. This is the symbol of the upright and erect man. The infusion of Spirit into the Ruach is described in AL as Abrahadabra, of which we are told is a reward; creating the perfected man standing upright in order to manifest (symbolized by the raising of the spell). Additionally, it is proclaimed, “all is not aught”. In other words, the ALL is not to be equivocated with NOT, as aught in its usage as an object in the sentence is the noun that means zero or nothing. The ONE becomes the ALL as declared in Liber LXV, but is itself, NOT and cannot contain or hold the memories of incarnation.

Blavatsky talks about this difference specifically addressing the ONE that cannot hold or contain memories:

The One is infinite and unconditioned. It cannot create, for it can have no relation to the finite and conditioned. If everything we see, from the glorious suns and planets down to the blades of grass and the specks of dust, had been created by the Absolute Perfection and were the direct work of even the First Energy that proceeded from It, [ To the Occultists and Chela the difference made between Energy and Emanation need not be explained. The Sanskrit word “Sakti” is untranslatable. It may be Energy, but it is one that proceeds through itself, not being due to the active or conscious will of the one that produces it. The “First-Born,” or Logos, is not an Emanation, but an Energy inherent in and co-eternal with Parabrahman, the One. The Zohar speaks of emanations, but reserves the word for the seven Sephiroth emanated from the first three - which form one triad - Kether, Chokmah, and Binah. As for these three, it explains the difference by calling them “immanations,” something inherent to and coeval with the subject postulated, or in other words, “Energies.” It is these “Auxiliaries,” the Auphanim, the half human Prajâpatis, the Angels, the Architects under the leadership of the “Angel of the Great Council,” with the rest of the Kosmos-Builders of other nations, that can alone explain the imperfection of the Universe. This imperfection is one of the arguments of the Secret Science in favour of the existence and activity of these “Powers.” And who know better than the few philosophers of our civilised lands how near the truth Philo was in ascribing the origin of evil to the admixture of inferior beings due to the active or conscious will of the one that produces it. The “First-Born,” or Logos, is not an Emanation, but an Energy inherent in and co-eternal with Parabrahman, the One. The Zohar speaks of emanations, but reserves the word for the seven Sephiroth emanated from the first three - which form one triad - Kether, Chokmah, and Binah. As for these three, it explains the difference by calling them “immanations,” something inherent to and coeval with the subject postulated, or in other words, “Energies.”

Abrahadabra is then the life force that is infused into the Ruach and attenuated by Hadit, which itself is worshipped by the Nepesch (Mitochondria) in the only (sensual) way that it knows how—by the “taking of strange drugs,” which are themselves the sensual pleasures (and not drugs as used in the criminal sense, only since the days of prohibition, as we’ve yet to take that ground back that was lost to the Christians and their misanthropic Yellow Press). It becomes important here, to take note of the following commentaries of both Crowley and Motta (in italics) in Liber AL:

AL II.44: “Aye! Feast! Rejoice! There is no dread hereafter. There is the dissolution, and eternal ecstasy in the kisses of Nu.”

In Crowley’s original commentary to this verse, he writes:

Without fear rejoice; death is only a dissolution, a uniting of Hadit with Nu, the Ego with the All. Yod with Aleph. (Note Yod, 10 + Aleph, 1 = 11. Abrahadabra, the Word of Uniting the 5 and the 6.) We should distinguish between the use of the term “dissolution” in this context and the same term in the context of the doctrine of the ‘second death’ that is really a dispersion. Here, the term is used to show a transformation by way of union; the temporal into the eternal and the eternal into the temporal. Or as Crowley says: “...a uniting of Hadit with Nu.” In other words, Hadit, the essence and center of your being is as AL proclaims, limited and infinitesimal; therefore, not ubiquitous and infinite, as is Nu. This is why Hadit calls for our participation in opulence and vice; that karma may carry him to the next incarnation be-re-concentrating the elements of his being, congealing the Ruach and reconstituting them into a new vehicle in which to gather yet more karma; creating the evolutionary process.

And in a later comment, Crowley writes:

The body is itself a restriction as well as an instrument. When death is as complete as it should be, the individual expands and fulfils himself in all directions; it is an omnipotent Samadhi. This is of course eternal ecstasy in the sense already explained. But in the time-world Karma re-concentrates the elements, and a new incarnation occurs.

Nuit is the Moon and it is her wedding with Hadit, the Sun that is at the heart of Alchemy in the Animal Kingdom. Her daughter Babalon is here adored and into her Cup as well, that the life-force (these many lesser egos) must ultimately be passed; that the spiritual force then completes the circuit; raining down into the Cup as well. Abrahadabra: This ‘Word of the Aeon’ has a proactive force in generating the sympathetic vibration for the establishment of this current. The congelation is the mingling of all these lesser egos of the Jivatman into the Cup of Babalon that not one particle be held back (as it would then attempt to lord over all these other lesser egos and destroy the psychic organism).
Paratman is of the AUR and its Magick is based on polarity; Levi's OB and OD. It is the Logos when the AUR/Aethyr is coagulated in the body; the body/Nephesch being Alchemically conjoined to the Ruach. I would add to this that musicians and other artists learn how to "move soul", which is like exercising your muscles; giving them strength, form and development. Therefore, artists often-enough find mystical truths and begin their own type of Magick. But often enough, they do have certain limitations and can't "cultivate", control or collect & collate these gems into anything that could provide an empirical trajectory for their spiritual development, as they often enough, don't supplement their art with the development of their Magickal & Mystical faculties.

I have often thought that dispersion can occur in the splintering off of a diversity of aggregate structures that the better developed, but not necessarily perfected Ruachs of various beings might then give us part of a great man's soul into the souls of two or more newly formed Atmans. Really, all we have to do is but to look around us and we see a hierarchy of developed souls; with most souls being obviously young and recently formed. The Universe is eternally becoming.

In other words, the Jivatman must move to the Paratman or its ego (collection of memories) will dissolve away; those elements (sub-atomic particles) dispersing...to collect again (and not necessarily with the same particles) into another Atman combination, which means the new situation can have only happenstance or chance components that may or may not identify with the previous matrix. Therefore all evolutionary opportunity for the old situation is lost permanently.

The 'One' is of substance; being a reflection of that which has no substance (NOT), which gives us a definite distinction. This substance has been called the Aethyr and the Logos. It is equivalent (to a point) of composing the Atman in substance-ful manifestation with the Brahman being the NOT or Ain. This essence, is to be distinguished from the Ain Soph. In his commentary to LXV:1.39-40, Motta writes: “The supposed process of “salvation” of mankind is therefore a magickal process of immortalization, or perpetuation, of that complex of energies which we call the Adept.” And which I refer to as the one who has congealed his or her Soul. Crowley also writes in Chapter 37 of Magick Without Tears:

You ask me, very naturally, for details of the promise of Nuit (AL I, 58)
"...certainty, not faith, while in life, upon death: ...

I insist of putting forth the immediately useful point of view: "devotion to Nuit" must mean the eager pursuit of the fulfillment of all possibilities, however unpleasant.

Good: now see how logical this is. For how else could one have reasonable "certainty," as contrary with "faith" (=interior conviction), otherwise than by the acquisition of the "Magical Memory" --- the memory of former lives. And this must evidently include that of former deaths. Indeed "Freudian forgetfulness" is very pertinacious on such themes; the shock of death makes it a matter of displaying the most formidable courage to go over in one's mind the incidents of previous deaths. You recall the Buddhist "Ten Impurities;" --- The Drowned Corpse, the Gnawed-by-wild-beasts-Corpses, and the rest.

Magick (though I say it as shouldn't) gives a very full and elaborate account of this Memory, and Liber CMXIII (Thisarb) a sound Official Instruction on the two main methods of acquiring this faculty.

There are, however, as I find on reading over what I have written elsewhere, quite a few lacunae in the exposition; and I may as well now do my best to stop one or two obvious gaps.

"But what about the intervals?" you ask, Shabash! Rem acu tetigisti.

It strikes me with immense and poignant power a right shrewd blow --- what of the other side? What of the periods between successive incarnations?

Let us look back for a moment to Little Essays Toward Truth and see what it says about the Fabric of a man. ... Nothing to our purpose, as your smiling shake of the head advises me. And yet --- The theory is that the Supernal Triad constitutes (or, rather, is an image of) the "eternal" Essence of a man; that is, it is the positive expression of that ultimate "Point of View" which is and is not and neither is nor is not etc. Quite indestructible.

Now when a man spends his life (a) building up and developing the six Sephiroth of the Ruach so that they cohere closely in proper balance and relation, (b) in forging, developing and maintaining a link of steel between this solid Ruach and that Triad, Death merely means the dropping off of the Nephesch (Malkuth) so that the man takes over his instrument of Mind (Ruach) with him to his next suitably chosen vehicle. The tendency of the Ruach is of course to disintegrate more or less rapidly under the impact of its new experiences of after-death conditions.
This last sentence says it all; quite succinctly.

(Hence the supposed Messages from the Mighty Dead, usually Wish-phantasms or outbreaks of the during-life-suppressed Subconscious, often very nasty. The "Medium" gets into communication with the "Shells of the Dead" --- Qlipoth, the Qabalah calls them. A month or so, perhaps a year or so in the case of minds very solidly constructed or very passionately attached, and the Shells' "Messages" begin to be less and less coherent, more and more fragmentary, more murderously modified by the experiences it has met in its aimless wanderings. Soon it is altogether broken up, and no more is heard of it.)

This is the dispersion connected with the Second Death!

It is therefore of the very first importance to train the mind in every possible way, and to bind it to the Higher Principles by steady, by constant, by flaming Aspiration, fortified by the sternest discipline, and by continuously reformulated Oaths.

The formula for congealing the Soul/Ruach. The Oath speaks to the integrity of the mind and becomes its truth; all that act against it have an immediately negative effect on its structure.

Such a man will be fully occupied after his death with the unrelenting search for his new instrument; he will brush aside --- as he has made a habit of doing during life --- the innumerable lures of "Reward" and the like. (I am not going to ask you to waste any time on the fantastic fairy tales of Devachan, Kama Loka and the rest; this must come up if you want to know about Paccheka-Buddhas, Skooshoks, the Brahma-lokas and so on --- but not now, please!)

...just one point to go to sleep on: suppose two or more people claim simultaneously to have been Julius Caesar, or Shakespeare, or --- oh! always one very great gun! Well, fifty or sixty years ago or more there was a regular vogue for this sort of thing, especially among women. It was usually Cleopatra or Mary Queen of Scots or Marie Antoinette: something regal and tragic preferred, but unsurpassable beauty the prime essential as one would expect.

Well, that was a big laugh, of course; it tended to discredit the whole theory of Reincarnation.

Quite unnecessarily, if one looks a little deeper.

What do I mean when I say that I think I was Eliphas Levi? No more than that I possess some of his most essential characteristics, and that some of the incidents in his life are remembered by me as my own. There doesn't seem any impossibility about these bundles of Sankhara being shared by two or more persons. We certainly do not know enough of what actually takes place to speak positively on any such point. Don't lose any sleep over it.

Blavatsky equates the Will to "the conviction of certainty, to survive and continue: which has a parallel to the promise of Nuit (AL. I.58: I give unimaginable joys on earth: certainty, not faith, while in life, upon death: peace unutterable, rest, ecstasy; nor do I demand aught in sacrifice.). To this ability to continue, whether simply in this life or through death, we can add that it may also be possible to move to immutable worlds and alternate universes as taught by Castaneda. Blavatsky continues with her description of the nature of the work of the Will:

In a word, the would-be "Immortal" must be on his watch night and day, guarding self against - himself. To live - to live - to live - must be his unswerving resolve. He must as little as possible allow himself to be turned aside from it. It may be said that this is the most concentrated form of selfishness, - that it is utterly opposed to our Theosophic professions of benevolence, and disinterestedness, and regard for the good of humanity. Well, viewed in a short-sighted way, it is so. But to do good, as in everything else, a man must have time and materials to work with, and this is a necessary means to the acquisition of powers by which infinitely more good can be done than without them. When these are once mastered, the opportunities to use them will arrive, for there comes a moment when further watch and exertion are no longer needed: - the moment when the turning-point is safely passed.

This turning point it seems is that moment of the lightening flash of unification or the congealing of the three elements; the light of Spirit, the Sulphur of the Ruach and the mitochondrial matrix that is infused with the life-energy that comes from the blood; the Red Powder being the Salt of the body.

Now we turn to what others have to say about this. From Wikipedia:

In 1872, while in London, England, Bucke had the pivotal experience of his life, a fleeting mystical or cognitive experience that he regarded as a few moments of "cosmic consciousness." Bucke described the characteristics and effects of this "faculty" as follows: sudden appearance; subjective experience of light (inner light); moral elevation; intellectual illumination; sense of immortality; loss of fear of death; loss of a sense of sin. However, the term "cosmic consciousness" more closely derives from yet another feature: the vivid sense of the universe as a living presence, rather than as basically lifeless, inert matter. This direct perception, which Bucke took great pains to try to explain, vivifies Johann Wolfgang von Goethe's theory of Nature.
Bucke developed a theory involving three stages in the development of consciousness: the simple consciousness of animals; the self-consciousness of the mass of humanity (encompassing reason, imagination, etc.); and cosmic consciousness — an emerging faculty and the next stage of human development. Among the effects of this progression, he believed he detected a lengthy historical trend in which religious conceptions and theologies had become less and less fearful.

For Bucke, illumination is the catalyst which triggers the eventual dominant form of consciousness. A single revelation is all that is necessary and the change which ensues during that few seconds, is permanent.

Bucke defined Cosmic Consciousness to be a higher form of consciousness than that possessed by the ordinary man and a consciousness of the cosmos...of the life and order in the universe.

For Bucke, Cosmic Consciousness arose only after revelation.

He listed 11 characteristics that indicate a "genuine experience. Among these were:

1. The person loses his fear of death and his sense of sin.
2. The illumination is instantaneous, as a flash of lightning.
3. The moral character figures in the illumination, i.e. only someone of high moral character may experience illumination.
4. The age of the person is important, i.e. one should be about thirty or older.
5. The illumination adds "charm" to the personality.
6. One is somehow physically "transfigured", or what Dante calls "transhumanized".

He investigated the development of the human mind and analyzed 14 major and 36 minor cases of what he believed to be cosmic consciousness. Among these were Buddha, Jesus, St. Paul, Plotinus, Mohammed, Dante, William Blake, Balzac, and Walt Whitman.

He described cosmic consciousness in these words:

Along with the consciousness of the cosmos there occurs an intellectual enlightenment of illumination which alone would place the individual on a new plane of existence... With these come, what may be called, a sense of immortality, a consciousness of eternal life, not a conviction that he shall have this, but the consciousness that he has it already.

Cosmic consciousness is the concept that the universe is a living superorganism with which animals, including humans, interconnect, and form a collective consciousness which spans the cosmos. The idea bears similarity to Teilhard de Chardin's conception of the noosphere. James Lovelock's Gaia theory, to Hegel's Absolute idealism, and to Satori in Zen. It is reminiscent of Carl Jung's collective unconscious.

Cosmos refers to the universe as a whole, which is conceived to be an orderly, harmonious system; a complex orderly self-inclusive system; inconceivably extended in space or time.

Consciousness refers to the complete alert state of the mind, and its sensory systems. Often considered the upper state of existences, in which self-awareness and individuality originate within the brain.

Various religions and concepts of existence accept the idea that a cosmic consciousness exists, and through various forms of conditioning of the body, it is possible to interconnect with this cosmic consciousness and interact with it.

Noosphere

In the thought of Vladimir Vernadsky and Teilhard de Chardin, the noosphere can be seen as the "sphere of human thought" being derived from the Greek νους ("nous") meaning "mind" + σφαίρα ("sfaira") meaning "sphere", in the style of "atmosphere" and "biosphere". In the original theory of Vernadsky, the noosphere is the third in a succession of phases of development of the Earth, after the geosphere (inanimate matter) and the biosphere (biological life). Just as the emergence of life fundamentally transformed the geosphere, the emergence of human cognition fundamentally transforms the biosphere. In contrast to the conceptions of the Gaia theorists, or the promoters of cyberspace, Vernadsky's noosphere emerges at the point where humankind, through the mastery of nuclear processes, begins to create resources through the transmutation of elements.

For Teilhard, the noosphere is best described as a sort of 'collective consciousness' of human-beings. It emerges from the interaction of human minds. The noosphere has grown in step with the organization of the human mass in relation to itself as it populates the earth. As mankind organizes itself in more complex social networks, the higher the noosphere will grow in awareness. This is an extension of Teilhard's Law of Complexity/Consciousness, the law describing the nature of evolution in the universe. Pierre Teilhard de Chardin, added that the noosphere is growing towards an even greater integration and unification, culminating in the Omega Point—which he saw as the goal of history.

The noosphere concept of 'unification' was elaborated in popular science fiction by Julian May in the Galactic Milieu Series. It is also the reason Teilhard is often called the patron saint of the Internet.

The Gaia hypothesis is an ecological hypothesis that proposes that living and nonliving parts of the earth are a complex interacting system that can be thought of as a single organism. Named after the Greek earth goddess, this hypothesis postulates that all living things have a regulatory effect on the Earth's environment that promotes life overall.
**Absolute idealism** is an ontologically monistic philosophy attributed to G.W.F. Hegel. It is Hegel’s account of how being is ultimately comprehensible as an all-inclusive whole. Hegel asserted that in order for the thinking subject (human reason or consciousness) to be able to know its object (the world) at all, there must be some sense of identity of thought and being. Otherwise, the subject would never have access to the object and we would have no certainty about any of our knowledge of the world. To account for the differences between thought and being, however, as well as the richness and diversity of each, the unity of thought and being cannot be expressed as the abstract identity “A=A.” Absolute idealism is the attempt to demonstrate this unity using a new “speculative” philosophical method, which requires new concepts and rules of logic. According to Hegel, the absolute ground of being is essentially a dynamic, historical process of necessity that unfolds by itself in the form of increasingly complex forms of being and of consciousness, ultimately giving rise to all the diversity in the world and in the concepts with which we think and make sense of the world.

For Hegel, the interaction of opposites generates in dialectical fashion all concepts we use in order to understand the world. Moreover, this development occurs not only in the individual mind, but also through history. In the *Phenomenology of Spirit*, for example, Hegel presents a history of human consciousness as a journey through stages of explanations of the world. Each successive explanation creates problems and oppositions within itself, leading to tensions which could only be overcome by adopting a view that could accommodate these oppositions in a higher unity. At the base of spirit lies a rational development. This means that the absolute itself is exactly that rational development. The assertion that “All reality is spirit” means that all of reality rationally orders itself and while doing so creates the oppositions we find in it. Even nature is not different from the spirit since it itself is ordered by the determinations given to us by spirit. Nature, as that which is not spirit is so determined by spirit, therefore it follows that nature is not absolutely other, but understood as other and therefore not essentially alien.

The aim of Hegel was to show that we do not relate to the world as if it is other from us, but that we continue to find ourselves back into that world. With the realisation that both my mind and the world are ordered according to the same rational principles, our access to the world has been made secure, a security which was lost after Kant proclaimed the ‘Ding an sich’ to be ultimately inaccessible.

The Absolute Idealist position should be distinguished from Berkeleyan Idealism (Berkeley), Transcendental Idealism (Kant), subjective idealism (Fichte), and Objective idealism (Schelling).

For me, I would say that I feel and have been working in my own way towards gaining a link with the conscious level of my being wherein the energy of the mitochondria express themselves. Simultaneously I attempt to feel the center that is the Hadit, that is watching the many streams of my thoughts, dispassionately and burning up all the streams of consciousness that emanate from the cells in one giant Alchemical transformation.

My magickal work at this point, then is to begin to learn the process of projecting my Hadit (the particle in modern physics) to link with the larger aggregate of consciousness that is the wave (per modern physics) or fabric of Nuit. This again, is the Grand Sacrament and performed through the formulation, utilizing aetheric substance (the Aur or Logos), of the H.G.A. And it is why Liber LXV:1.12-22 says:

12. Then was there silence. Speech had done with us awhile. There is a light so strenuous that it is not perceived as light.
13. Wolf’s bane is not so sharp as steel; yet it pierceth the body more subtly.
14. Even as evil kisses corrupt the blood, so do my words devour the spirit of man.
15. I breathe, and there is infinite dis-ease in the spirit.
16. As an acid eats into steel, as a cancer that utterly corrupts the body; so am I unto the spirit of man.
17. I shall not rest until I have dissolved it all.
18. So also the light that is absorbed. One absorbs little, and is called white and glistening; one absorbs all and is called black.
19. Therefore, O my darling, art thou black.
20. O my beautiful, I have likened thee to a jet Nubian slave, a boy of melancholy eyes.
21. O the filthy one! the dog! they cry against thee. Because thou art my beloved.
22. Happy are they that praise thee; for they see thee with Mine eyes.

This congealing of the Soul is absolutely vital; that without such, the individual being will lose its vitality and succumb to destruction; the dissolution of the Second Death. HPB writes eloquently on this:
But, given the will to live, however powerful, we have seen that, in the ordinary course of mundane life, the throes of dissolution cannot be checked. The desperate, and again and again renewed struggle of the Kosmic elements to proceed with a career of change despite the will that is checking them, like a pair of runaway horses struggling against the determined driver holding them in, are so cumulatively powerful, that the utmost efforts of the untrained human will acting within an unprepared body become ultimately useless. The highest intrepidity of the bravest soldier; the intensest desire of the yearning lover; the hungry greed of the unsatisfied miser; the most undoubting faith of the sternest fanatic; the practiced insensibility to pain of the hardest red Indian brave or half-trained Hindu Yogi; the most deliberate philosophy of the calmest thinker - all alike fail at last. Indeed, skeptics will allege in opposition to the verities of this article that, as a matter of experience, it is often observed that the mildest and most irresolute of minds and the weakest of physical frames are often seen to resist "Death" longer than the powerful will of the high-spirited and obstinately-egotistic man, and the iron frame of the labourer, the warrior and the athlete. In reality, however, the key to the secret of these apparently contradictory phenomena is the true conception of the very thing we have already said. If the physical development of the gross "outer shell" proceeds on parallel lines and at an equal rate with that of the will, it stands to reason that no advantage for the purpose of overcoming it, is attained by the latter. The acquisition of improved breechloaders by one modern army confers no absolute superiority if the enemy also becomes possessed of them. Consequently it will be at once apparent, to those who think on the subject, that much of the training by which what is known as "a powerful and determined nature," perfects itself for its own purpose on the stage of the visible world, necessitating and being useless without a parallel development of the "gross" and so-called animal frame, is, in short, neutralized, for the purpose at present treated of, by the fact that its own action has armed the enemy with weapons equal to its own. The force of the impulse to dissolution is rendered equal to the will to oppose it; and being cumulative, subdues the will-power and triumphs at last. On the other hand, it may happen that an apparently weak and vacillating will-power residing in a weak and undeveloped physical frame, may be so reinforced by some unsatisfied desire - the Ichcha (wish) - as it is called by the Indian Occultists (for instance, a mother's heart-yeaming to remain and support her fatherless children) - as to keep down and vanquish, for a short time, the physical throes of a body to which it has become temporarily superior.

The whole rationale then, of the first condition of continued existence in this world, is (a) the development of a Will so powerful as to overcome the hereditary (in a Darwinian sense) tendencies of the atoms composing the "gross" and palpable animal frame, to hurry on at a particular period in a certain course of Kosmic change; and (b) to so weaken the concrete action of that animal frame as to make it more amenable to the power of the Will. To defeat an army, you must demoralize and throw it into disorder.

They are real in an archetypal sense as they represent currents of the mind (soul) and everthing that is of Yetzirah is very real indeed. These are ideal forms and energies that coalesce into symbols that then ultimately manifest in human endeavor and become actualized. It's all in the doing; the spontaneous sacrament of the 'now.' Ankh-f-n-khonsu would be Crowley as 'asar-un-nefer ('myself' made perfect); that higher self that in its pure expression is granted contact by the Angel. The Angel (existing in the praeter-human or mythical netherworld or in the waters of the Nephilim) is the bridge between the particular (I or 'myself') and the universal (Not-I).

Indeed, every particle of matter is consciousness; and as we've already discussed two types of consciousness (differentiated and undifferentiated), we have shown consciousness to be qualitative. Certainly, there is a different type of consciousness between a rock and a human being. And in the human, there is that part of the consciousness, the personality that will die. Considering the Aethyr as all these sub-atomic particles that move in and out of that Fifth Dimension, Light, they become assembled in various forms and densities to create all things; cf. my article; Scientific Proof of Levi's Aethyr.

The practice of Magick shows us that this Aethyr substance can be manipulated and built up to house one's projection of consciousness. It is this same Aethyr substance that comprises the human Soul in which the Spirit is seated. And it is the Soul that is the source of personality. The integrity of the structure of the Soul is not innately strong and for most, this astral body disintegrates after death and all elements of the individuated conscious is destroyed with only the Spirit in its undifferentiated nature, to remain; though departed from the structure and probably returning to the plane of Light.

And so it is also the task of Magick to strengthen the animated Soul that it can of its own volition hold onto both its nature, despite the disintegration of the material body, and the Spirit-spark that it has housed in conjunction with the physical body that was capable of fixing it into the material plane.

But without this effort as the ancient mystery schools once taught openly, one will then die that second death and any Gnosis gained in this incarnation is lost with the undifferentiated Spirit returning only to perchance, re-travel or re-created the proverbial wheel. The Soul needs to be moved and exercised; strengthened that it might congeal and bind to the Spirit. But innately, most of us as we are born, work at uniting the Soul to the temporal body; causing its disintegration upon death. In the latter, the Soul is not
congealed and not exercised and one lives a life, satiated with a false sensuality interpreted in the exoteric religions as sin.

There seems to be a walling up of the ego into its own solitary station; as it seems to rail against the other elements of my personality and self-awareness. I seem to be working against myself and am my own worst enemy in several imprudent ways; as if an emotional restriction that the collective consciousness of my body is unable to interrupt. This is for the Zelator (and higher) in the outer college of the A.'.A.'., called the Ordeal of Choronzon. And it is not altogether that much different from the obsession with one’s egoic limitations, which can lead one to believe one is inadequate for the task.

We tend to think of ourselves as single coherent personalities, but in reality each of us is more like an unruly mob of semi-autonomous personality aspects that are constantly struggling for supremacy. Unifying this mob under the rule of one king is, in a sense, the task of the Dominus Liminis. The struggle is almost like a wrestling match at times - there are aspects of the mind that refuse to cooperate and must be subdued by brute force. Failure results in being ‘torn limb from limb;’ a metaphorical description of a mental state that lacks cohesion and unity, becoming scatterbrained or schizophrenic. Valid spiritual practices are techniques for yoking the attention to the will instead of letting it run free; channeling the force of attention instead of letting it dissipate in pursuit of frivolous whims.

The Mystical approach is but half the work. The other half is Magickal and has to do with the formulation of the Angel and the projection of one’s psyche into this construct. And so in myself, I contemplate the courage to examine of these elements and forces around me; but I cannot yet summon this courage. Still I feel a more articulate map will present itself, rather than that one that I assimilated in my skryings of Liber 231. That it will offer me a pragmatic opportunity to reign in and control these forces more ably in myself is generating a backlash from this ego and I am seized into a dynamic churning that only an appeal to my Angel may seem to be able to help pull me from this maelstrom.

Here is the difference between Spirit and Soul; the Soul is as Blavatsky calls it, the “temporary ego”...what I would call the temporal ego. This is what holds memory, the Spirit is unalterable as it is the unmanifest part of self. As it is NOT it holds nothing. At whatever hierarchical level it might take the swim of life, it gives and takes nothing from this. But the Soul does not have to dissolve with the body; only it must move from its identification with the body and transfer that to the Spirit. In other words, the Jivatman must move to the Paratman or its ego (collection of memories) will dissolve away; those elements (sub-atomic particles) dispersing...to collect again (and not necessarily with the same particles) into another Atman. The word, Samsara merely labels the changing nature of the material Universe. But the connotations over the term bring a negative interpretation by connecting it negatively, with Maya and positioning the material world as being inferior to the spiritual world. The Western Occult Tradition teaches that “Change is Stability”; the material universe being equivalent in stature.

The changing nature of the universe fools the many lower egos that hold a collective trance over the consciousness; as if the mitochondrial consciousnesses of all these cells have not yet perfectly come into functional relation. Gnosis is a movement of consciousness from this dysfunctional fixation as it tunes itself instead to a higher vibrational force that then has a sympathetic affect on the lower ego; realigning the psyche to a place of ‘Understanding’. In the original trance, the person is certainly asleep or dead; dead or dying...the symbols work in the same way.

With the lower ego in its original state, the soul is also fragmented. We might say this is a state of decay or dying; and we can all say that we’ve seen walking zombies in our travels. Human life begins completely unconscious in the womb and only slowly opens to becoming semi-conscious in its first few years; with really, so few becoming any more awake than that.

AL II.17: “Hear me, ye people of sighing!
The sorrows of pain and regret
Are left to the dead and the dying,
The folk that not know me as yet.”
Hadit defines dead and dying as a state of being that can be overcome and will then subsequently lead to a certain Gnosis.

AL II.18: "These are dead, these fellows; they feel not. We are not for the poor and sad: the lords of the earth are our kinsfolk."
AL II.26: "I am the secret Serpent coiled about to spring; in my coiling there is joy. If I lift up my head, I and my Nuit are one. If I droop down mine head, and shoot forth venom, then is rapture of the earth, and I and the earth are one."

Hadit seems to assert here that there is an upper and lower nature to this state of being that is the knowing of him...the Gnosis.

AL II.27: "There is great danger in me; for who doth not understand these runes shall make a great miss. He shall fall down into the pit called Because, and there he shall perish with the dogs of Reason."

The subconscious then becomes the pit. The dead and dying are those unconscious beings (with no real "attention") that are the victims of their unconscious emotions and desires; having no awareness of nor any control over them. They don't choose the course of their lives but are simply pushed along with these blind forces.

AL II.45: "There is death for the dogs."

And yet, this verse seems to point to another kind of death; the one that the Egyptians called the 'second death,' which has to do with the death of the egoic/mind structure as there was no yoking or congealing of these now, subconscious elements and their lack of integrity fails to uphold their chaotic structure. Enlightenment or immortality becomes the alignment or congealing of these elements under the yoke of a superior ego (the higher self) that will then have enough integrity (strength and internal cohesion of structure) to hold fast past the death of the body and then evolve without losing all this in the NOT.

This also asserts that the stream of time is as eternal as the eternal NOT and both simultaneously exist. It is why in this same section of Liber AL, Hadit goes on to tell us about all the feasts and holy days...and directs us to celebrate them with joy and beauty...and to enjoy each other and all things that are sensory and sensual. The ego-loser philosophy says that these are stimulants that distract one with desire, which causes the urge to stay on this plane. Hadit says these are the elements on this plane that bring ecstasy to all planes. We build our house from the bottom up and evolve. We take in the light of Spirit and fortify our beings that in rapture, we can take on even more joy.

AL II.46: "Dost thou fail? Art thou sorry? Is fear in thine heart?"
AL II.47: "Where I am these are not."

But of course! It is in this state that one becomes seduced by the consoler god; who will either take away your problems for you, or will show you the path to escape this prison of the soul. Hadit says I am the snake that shows you to be a king...you are that snake; it is the two parts of your nature. You may either come to know yourself or die...the ego-loser philosophy warns you against coming to know yourself; rather, it beseeches you to forsake yourself...for the NOT. As the world has seen over and over again; altruism leads to ignorance and self-destruction...self-ism has led to great works and glory in the human drama.

Blavatsky discusses the effort of strengthening the Will that not only shows the practical use of Yama and Niyama, but also produces a curiosity:

To do this then, is the real object of all the rites, ceremonies, fasts, "prayers," meditations, initiations and procedures of self-discipline enjoined by various esoteric Eastern sects, from that course of pure and elevated aspiration which leads to the higher phases of Adeptism Real, down to the fearful and disgusting ordeals which the adherent of the "Left-hand-Road" has to pass through, all the time maintaining his equilibrium. The procedures have their merits and demerits, their separate uses and abuses, their essential and nonessential parts, their various veils, mummeries, and labyrinths. But in all, the result aimed at is reached, if by different processes. The Will is strengthened, encouraged and directed, and the elements opposing its action are demoralized. Now, to any one who has thought out and connected the various evolution theories, as taken, not from any occult source, but from the ordinary scientific manual accessible to all - from the hypothesis of the latest variation in the habits of species - say, the acquisition
of carnivorous habit by the New Zealand parrot, for instance - to the farthest glimpses backwards into Space and Eternity afforded by the "Fire Mist" doctrine, it will be apparent that they all rest on one basis. That basis is, that the impulse once given to a hypothetical Unit has a tendency to continue; and consequently, that anything "done" by something at a certain time and certain place tends to repeat itself at other times and places.

Such is the admitted rationale of heredity and atavism. That the same things apply to our ordinary conduct is apparent from the notorious ease with which "habits," - bad or good, as the case may be - are acquired, and it will not be questioned that this applies, as a rule, as much to the moral and intellectual, as to the physical world.

Furthermore, History and Science teach us plainly that certain physical habits conduce to certain moral and intellectual results. There never yet was a conquering nation of vegetarians. Even in the old Aryan times, we do not learn that the very Rishis, from whose lore and practice we gain the knowledge of Occultism, ever interdicted the Kshetriya (military) caste from hunting or a carnivorous diet. Filling, as they did, a certain place in the body politic in the actual condition of the world, the Rishis as little thought of interfering with them, as of restraining the tigers of the jungle from their habits. That did not affect what the Rishis did themselves.

The aspirant to longevity then must be on his guard against two dangers. He must beware especially of impure and animal thoughts.[In other words, the thought tends to provoke the deed. - G.M. ]For Science shows that thought is dynamic, and the thought-force evolved by nervous action expanding outwardly, must affect the molecular relations of the physical man. The inner man, [We use the word in the plural, reminding the reader that, according to our doctrine, man is septenary. - G. M. ] however sublimated their organism may be, are still composed of actual, not hypothetical, particles, and are still subject to the law that an "action" has a tendency to repeat itself; a tendency to set up analogous action in the grosser "shell" they are in contact with, and concealed within.

And, on the other hand, certain actions have a tendency to produce actual physical conditions unfavourable to pure thoughts, hence to the state required for developing the supremacy of the inner man.

To return to the practical process. A normally healthy mind, in a normally healthy body, is a good starting-point. Though exceptionally powerful and self-devoted natures may sometimes recover the ground lost by mental degradation or physical misuse, by employing proper means, under the direction of unswerving resolution, yet often things may have gone so far that there is no longer stamina enough to sustain the conflict sufficiently long to perpetuate this life; though what in Eastern parlance is called the "merit" of the effort will help to ameliorate conditions and improve matters in another.

However this may be, the prescribed course of self-discipline commences here. It may be stated briefly that its essence is a course of moral, mental, and physical development, carried on in parallel lines - one being useless without the other. The physical man must be rendered more ethereal and sensitive; the mental man more penetrating and profound; the moral man more self-denying and philosophical. And it may be mentioned that all sense of restraint - even if self-imposed - is useless. Not only is all "goodness" that results from the compulsion of physical force, threats, or bribes (whether of physical or so-called "spiritual" nature) absolutely useless to the person who exhibits it, its hypocrisy tending to poison moral atmosphere of the world, but the desire to be "good" or "pure," to be efficacious must be spontaneous. It must be a self-impulse from within, a real preference for something higher, not an abstention from vice because of fear of the law: not a chastity enforced by the dread of Public Opinion; not a benevolence exercised through love of praise or dread of consequences in a hypothetical Future Life. [Col. Olcott clearly and succinctly explains the Buddhist doctrine of Merit or Karma, in his "Buddhist Catechism" (Question 83). - G.M. ]

Yet Hadit tells us that partaking of 'vices' are in service to him, which forces us to re-focus the practical value of morality; the first conditioning principles at the outset of the Spiritual Journey. Crowley responds to this by separating sensual enjoyment from the visceral desires that such enjoyment can produce in weaker minds. As Crowley writes, if one attaches oneself to one's wish-phantoms; the shells of one's desires (Nephesch) one will become absorbed in these upon death, and they will ultimately deteriorate and disintegrate. But if one congeals the Ruach and attaches it to the Supernal, one can retain one's consciousness, that death will provide an opportunity to find a new and even better suited vehicle for one's evolutionary development.

I find it interesting that once the ego is broken-down (as a start to spiritual attainment) it must then again, be re-built (to a supposedly more virtuous state) or otherwise, schizophrenic problems develop. It is this last step that the ego-losers seem never to consider and part of the reason why I like to talk about the East's problem with differentiating between authentic spiritual experience and psychosis.

This is where integrity in the moralistic sense, is directly connected with integrity in the structural sense of the soul...the foundation of Magickal theory. As has been said in the scriptures, the wages of sin is death; so for example, lying is speaking falsely and obfuscating truth both to oneself and the person one is
deceiving. Every action brings about instant karma and the truth or structural integrity of the soul is attacked with the telling of the lie. Motta writes eloquently on this:

The petty man is not ashamed of what is not benevolent, nor fears doing what is not right. Without prospect of profit, he does not dedicate himself to what is good, and without pressure from others; he does not redress his errors. However, self-correction in small things would make him chary in things of greater consequence. If good deeds are not accumulated, they will not be sufficient to create character in us; if bad deeds are not accumulated, they will not be sufficient to disrupt our lives. The petty man thinks that small good deeds are unimportant and does not do them; he thinks that small bad deeds are unimportant and does not abstain from them. Thus his evil accumulates until it can no longer be disguised, and his guilt grows until it becomes intolerable.

If it is so, that our memories are all fully retained and that we need do nothing...then all spiritual work is a vanity and not much more. We are not born immortal; it is something that must be earned and attained. Otherwise there is no dynamism in the Universe and the ALL is nothing more than a solipsistic and nihilistic nightmare. Rather, life itself has set a goal towards pleasure and away from pain and sorrow.

AL I.61: "But to love me is better than all things: if under the night-stars in the desert thou presently burnest mine incense before me, invoking me with a pure heart, and the Serpent flame therein, thou shalt come a little to lie in my bosom. For one kiss wilt thou then be willing to give all; but whoso gives one particle of dust shall lose all in that hour. Ye shall gather goods and store of women and spices; ye shall wear rich jewels; ye shall exceed the nations of the earth in splendour & pride; but always in the love of me, and so shall ye come to my joy. I charge you earnestly to come before me in a single robe, and covered with a rich headdress. I love you! I yearn to you! Pale or purple, veiled or voluptuous, I who am all pleasure and purple, and drunkenness of the innermost sense, desire you. Put on the wings, and arouse the coiled splendour within you: come unto me!"

There is relatively nothing new in Thelemic Doctrine that has not been an important part of Occult Doctrine. Rather, Thelema is a correction to the corrupted doctrine that most Eastern and Western Occult lines have adopted. The idea of celibate austerity is the antithesis of the natural design of the human being. Rather, we are creatures that do nothing else but seek pleasure. It is the Black Lodge that has made it a common virtue in the Occult community of self-denial. This is nothing more than a twisting of the symbols. HPB echoes this ancient call:

It will be seen now in connection with the doctrine of the tendency to the renewal of action, before discussed, that the course of self-discipline recommended as the only road to Longevity by Occultism is not a "visionary" theory dealing with vague "ideas," but actually a scientifically devised system of drill. It is a system by which each particle of the several men composing the septenary individual receives an impulse, and a habit of doing what is necessary for certain purposes of its own freewill and with "pleasure." Every one must be practiced and perfect in a thing to do it with pleasure. This rule especially applies to the case of the development of Man. "Virtue" may be very good in its way - it may lead to the grandest results. But to become efficacious it has to be practiced cheerfully not with reluctance or pain.

AL II.22: "I am the Snake that giveth Knowledge & Delight and bright glory, and stir the hearts of men with drunkenness. To worship me take wine and strange drugs whereof I will tell my prophet, & be drunk thereof! They shall not harm ye at all. It is a lie, this folly against self. The exposure of innocence is a lie. Be strong, o man! lust, enjoy all things of sense and rapture: fear not that any God shall deny thee for this."

And let's look at the harm to oneself that all these sensual pleasures are said to bring; the mind is a complex thing and many of the things that humans enjoy are at some level, self-destructive. For that matter, what one may describe as a good work or a good thought, another may find to be completely abhorrent. Crowley writes on this in MITP:

In the Buddhist system, "Sila," "Virtue," is similarly enjoined. The qualities are, for the layman, these five: Thou shalt not kill. Thou shalt not steal. Thou shalt not lie. Thou shalt not commit adultery. Thou shalt drink no intoxicating drink. For the monk many others are added. The commandments of Moses are familiar to all; they are rather similar; and so are those given by Christ footnote: Not, however, original. The whole sermon is to be found in the Talmud, in the "Sermon on the Mount." Some of these are only the "virtues" of a slave, invented by his master to keep him in order. The real point of the Hindu "Yama" is that breaking any of these would tend to excite the mind. Subsequent theologians have tried to improve upon the teachings of the Masters, have given a sort of mystical importance to these virtues; they have insisted upon them for their own sake, and turned them into puritanism and formalism. Thus "non-killing," which originally meant "do not excite yourself by stalking tigers," has been interpreted to mean that it is a crime to drink water that has not been strained, lest you should kill the animalcula. But this constant worry, this fear of killing anything by mischance is, on the whole, worse than a hand-to-hand conflict with a grizzly bear. If the barking of a dog disturbs your meditation, it is simplest to shoot the dog, and think no more about it. A similar difficulty with wives has caused some masters to recommend celibacy. In all these questions common sense must be the guide. No fixed rule can be laid down. The "non-receiving of gifts," for instance, is rather important for a Hindu, who would be thoroughly upset for weeks if any one gave him a coconut: but the average European takes things as they come by the time that he has been put into long trousers.
The only difficult question is that of continence, which is complicated by many considerations, such as that of energy; but everybody's mind is hopelessly muddled on this subject, which some people confuse with erotology, and others with sociology. There will be no clear thinking on this matter until it is understood as being solely a branch of athletics. We may then dismiss Yama and Niyama with this advice: let the student decide for himself what form of life, what moral code, will least tend to excite his mind; but once he has formulated it, let him stick to it, avoiding opportunism; and let him be very careful to take no credit for what he does or refrains from doing – it is a purely practical code, of no value in itself.

As Crowley says, these are forms of spiritual athletics (a description Regardie also later, used). They therefore really present no form of 'personal growth', which in itself would be quite egoic. Moving then, to 'truthfulness' we would have the same problem. However, truthfulness holds a structural integrity for the building of the Soul. Cf. my article: Morals & Magickal Integrity.

I don't see anything inferior in the Earth incarnation; one simply has to awake to the true nature of who and what one is and one's true relationship with creation. The unreal phantasms are phantasms of the mind in its sleeping dream state. Once the mind wakes up (Gnosis) true perception of the very real Universe is encountered. These phantasms are not in the Universe; they are not objective. The material Universe is objective. This is where I diverge from the ego-loser philosophy. There's no reason at all to leave this Universe and reincarnation is not a curse or a wheel to escape from...but "pure joy" for the wake-up person.

Our memory is not somehow mystically wiped clean as we pursue our next incarnation. It is more apt to say that memory is somehow detached as the new aggregate personality has no immediate way to access it. This is why the work of the Magickal Memory for the Adept is an important one. But this can only be of value to the Adept that has already congealed the Soul. Then, once the memory is made accessible, its pathway remains open to the mind.

HPB's Theory on Brahman & Atman

Reading HPB’s Secret Doctrine Vol. V, Section 5, I came upon a pertinent essay by Blavatsky entitled: Some Reasons for Secrecy, and that is worth inserting here, along with my own comments:

The fact that the Occult Sciences have been withheld from the world at large, and denied by the Initiates to Humanity, has often been made matter of complaint. It has been alleged that the Guardians of the Secret Lore were selfish in withholding the "treasures" of Archaic Wisdom; that it was positively criminal to keep back such knowledge - "if any" - from the men of Science, etc.

Yet there must have been some very good reasons for it, since from the very dawn of History such has been the policy of every Hierophant and "Master." Pythagoras, the first Adept and real Scientist in pre-Christian Europe, is accused of having taught in public the immobility of the earth, and the rotary motion of the stars around it, while he was declaring to his privileged Adept's his belief in the motion of the Earth as a planet, and in the heliocentric system. The reasons for such secrecy, however, are many and were never made a mystery of. The chief cause as given in Isis Unveiled. It may now be repeated.

From the very day when the first mystic, taught by the first Instructor of the “divine Dynasties” of the early races, was taught the means of communication between this world and the worlds of the invisible host, between the sphere of matter and that of pure spirit, he concluded that to abandon this mysterious science to the desecration, willing or unwilling, of the profane rabble - was to lose it. An abuse of it might lead mankind to speedy destruction; it was like surrounding a group of children with explosive substances, and furnishing them with matches. The first divine Instructor initiated but a select few, and these kept silence with the multitudes. They recognised their “God” and each Adept felt the great "SELF" within himself. The Atman, the Self, the mighty Lord and Protector, once that man knew him as the "I am," the "Ego Sum," the "Asmi," showed his full power to him who could recognise the "still small voice." From the days of the primitive man described by the first Vedic poet, down to our modern age, there has not been a philosopher worthy of that name, who did not carry in the silent sanctuary of his heart the grand and mysterious truth. If initiated, he learnt it as a sacred science; if otherwise then, like Socrates, repeating to himself as well as his fellow-men, the noble injunction, "O man, know thyself," he succeeded in recognising his God within himself.

And this would be one individual god for each; the Atman being a name for this individualized Augoeiades.

“Ye are Gods,” the king-psalmist tells us, and we find Jesus reminding the scribes that this expression was addressed to other mortal men, claiming for themselves the same privilege without any blasphemy. And as a faithful echo, Paul, while asserting that we are all "the temple of the living God," cautiously remarked elsewhere that after all these things are only for the "wise," and it is
"unlawful" to speak of them.[ ii. 317, 318. Many verbal alterations from the original text of Isis Unveiled were made by H.P.B. in her quotations therefrom, and these are followed throughout.]

The quote is in John and it is Jesus quoting Isaiah. Note both are saying that each and everyone of us is a god; omniscient, omnipresent and omnipotent.

Some of the reasons for this secrecy may be given.

The fundamental law and master-key of practical Theurgy, in its chief applications to the serious study of cosmic and sidereal, of psychic and spiritual, mysteries was, and still is, that which was called by the Greek Neoplatonist “Theophania.” In its generally-accepted meaning this is “communication between the Gods (or God) and those initiated mortals who are spiritually fit to enjoy such an intercourse.” Esoterically, however, it signifies more than this. For it is not only the presence of a God, but an actual - howbeit temporary - incarnation, the blending, so to say, of the personal Deity, the Higher Self, with man - its representative or agent on earth. As a general law, the Highest God, the Over-soul of the human being (Atma-Buddhi), only overshadows the individual during his life, for purposes of instruction and revelation; or as Roman Catholics - who erroneously call that Over-soul the “Guardian Angel” - would say, “it stands outside and watches.”

HPB seems to be differentiating between the Atman and an 'Oversoul' that she calls the Atma-Buddhi. And I would be inclined to agree with her here if this is so. The Atma-Buddhi would be the divine spark that is of the ONE that became the ALL...the All-Father that is the macrocosmic Kether. The Atman would be the microcosmic Kether. Again, HPB uses the word 'temporary' to describe the nature of the Atman and again, I would rather say 'temporal'. As a temporal manifestation, immortality is only a potential and not an a-priori, given. The Mage develops the Ruach to immortalize it and moves in true relation to the actual and objective material world; one that seems so etheric to we who are asleep in this same material world. I refer you to my comments on Crowley's Wake World.

But in the case of the theophanic mystery, it incarnates itself in the Theurgist for purposes of revelation. When the incarnation is temporary, during those mysterious trances or "ecstasy," which Plotinus defined as

The liberation of the mind from its finite consciousness, becoming one and identified with the Infinite,

This sublime condition is very short. The human soul, being the offspring or emanation of its God, the "Father and the Son" become one, "the divine fountain flowing like a stream into its human bed." [Proclus claims to have experienced this sublime ecstasy six times during his mystic life: Porphyry asserts that Appollonius of Tyana was thus united four times to his deity - a statement which we believe to be a mistake, since Apollonius was a Nirmanakaya (divine incarnation - not Avatar) - and he (Porphyry) only once, when over sixty years of age.

The idea that the relationship between the Angel and the Adept is a temporary one that occurs infrequently is important. There are those who speak of the K&C as if it were a condition that puts the Angel as an available consultant, 24/7 for the Adept. Hence, the Adept makes no decision without the consultation of the Angel; the Angel then really becoming the consoler god that Hadit abhors. There are even those alleged Adepts in the Thelemic community today that hold public displays of their alleged 24/7 communication (to keep their students in awe of them, of course!).

We should therefore, differentiate between contact with the Angel, which is communication with the lower vehicle and the nature of the state of immortality, which is the congealing of the Soul and worked in conjunction with the Angel. And we should look into any possible phenomenon connected with this congealing, such as the intense explosion of light about the individual as described in Dr. Maurice Bucke's Cosmic Consciousness and elsewhere.

Theophany (or the actual appearance of a God to man), Theopathy (or "assimilation of divine nature"), and Theopneusty (inspiration, or rather the mysterious power to hear orally the teachings of a God) have never been rightly understood.] In exceptional cases, however, the mystery becomes complete; the Word is made Flesh in real fact, the individual becoming divine in the full sense of the term, since his personal God has made of him his permanent life-long tabernacle - "the temple of God," as Paul says.
Theopathy seems to be this congealing of the Soul and its willing affiliation to the 'Oversoul'. It may be that this condition, being attained, includes the other two conditions simultaneously; with Theophany being that explosion of light and Theopoeusthy being accompanying 'praeter-human' communication.

Now that which is meant here by the personal God of Man is, of course, not his seventh Principle alone, as per se and in essence that is merely a bean of the infinite Ocean of Light. In conjunction with our Divine Soul, the Buddhi, it cannot be called a Duad, as it otherwise might, since, though formed from Atma and Buddhi (the two higher Principles), the former is no entity but an emanation from the Absolute, and indivisible in reality from it.

Stating that differentiated ego (Atma) is an emanation from non-differentiated ego (Buddhi) is plausible; but then stating that they are yet, one in the same as HPB says one "otherwise might" presents problems. Crowley addresses this in his commentary to Liber AL:

Therefore you have an infinite number of gods, individual and equal though diverse, each one supreme and utterly indestructible. This is also the only explanation of how a being could create a world in which war, evil, "etc." exist. Evil is only an appearance because, like "good", it cannot affect the substance itself, but only multiply its combinations. This is something the same as mystic monism, but the objection to that theory is that God has to create things which are all parts of himself, so that their interplay is false. If we presuppose many elements, their interplay is natural. It is no objection to this theory to ask who made the elements -- the elements are at least there; and God, when you look for him, is not there. Theism is "obscurum per obscurius".

The personal God is not the Monad, but indeed the prototype of the latter, what for want of a better term we call the manifested Karanaatma [ Karana Sharira is the "causal" body and is sometimes said to be the "personal God." And so it is, in one sense.] (Causal Soul), one of the "seven" and chief reservoirs of the human Monads or Egos. The latter are gradually formed and strengthened during their incarnation-cycle by constant additions of individuality from the personalities in which incarnates that androgynous, half-spiritual, half-terrestrial principle, partaking of both heaven and earth, called by the Vedants Jiva and Vijnanamaya Kosha, and by the Occultists the Manas (mind); that, in short, which uniting itself partially with the Monad, incarnates in each new birth. In perfect unity with its (seventh) Principle, the Spirit unalloyed, it is the divine Higher Self, as every student of Theosophy knows. After every new incarnation Buddhi-Manas culls, so to say the aroma of the flower called personality, the purely earthly residue of which its dregs - is left to fade out as a shadow. This is the most difficult - because so transcendentally metaphysical - portion of the doctrine.

It is important to find in the above paragraph a place where HPB and Crowley completely disagree. Yet, Crowley recognizes her as a Master of the Temple, though each their two truths are contradictory. Both really, are theoretical models; and though one may feel correct to one as the other would be to another, neither should create a dogma that needs to be defended. This is what religious institutions have done and remains at the heart of sectarianism.

As is repeated many a time in this and other works, it is not the Philosophers, Sages, and Adepts of antiquity who can ever be charged with idolatry. It is they in fact, who, recognising divine unity, were the only ones, owing to their initiation into the mysteries of Esotericism, to understand correctly the ὑπσνσια(hyponea), or under-meaning of the anthropomorphism of the so-called Angels, Gods, and Spiritual Beings of every kind. Each, worshipping the one Divine Essence that pervades the whole world of Nature, revered, but never worshipped or idolised, any of these "Gods," whether high or low - not even his own personal Deity, of which he was a Ray, and to whom he appealed.[ This would be in one sense Self-worship.]

The Ladder of Being -

The holy Triad emanates from the One, and is the Tetraktys; the gods, daimons, and souls are an emanation of the Triad. Heroes and men repeat the hierarchy in themselves.

Thus said Metrodorus of Chios, the Pythagorean, the latter part of the sentence meaning that man has within himself the seven pale reflections of the seven divine Hierarchies; his Higher Self is, therefore, in itself but the refracted beam of the direct Ray. He who regards the latter as an Entity, in the usual sense of the term, is one of the "infidels and atheists," spoken of by Epicurus, for he fastens on that God "the opinions of the multitude" - an anthropomorphism of the grossest kind. ["The Gods exist," said Epicurus, "but they are not what the hoi polloi (the multitude) suppose them to be. He is not an infidel or atheist who denies the existence of Gods whom the multitude worship, but he is such who fastens on the Gods the opinions of the multitude.""] The Adept and the Occultist know that "what are styled the Gods are only the first principles" (Aristotle). None the less they are intelligent, conscious, and living "Principles," the Primary Seven Lights manifested from Light unmanifested - which to us is Darkness. They are the Seven - exoterically four - Kumaras or "Mind-Born Sons" of Brahma. And it is they again, the Dhyan Chohans, who are the prototypes in the aeonic eternity of lower Gods and hierarchies of divine Beings, at the lowest end of which ladder of being are we - men.
Crowley states this in his own terms as well:

Let me declare this Work under this title: ‘The obtaining of the Knowledge and Conversation of the Holy Guardian Angel’, because the theory implied in these words is so patently absurd that only simpletons would waste much time in analysing it. It would be accepted as a convention, and no one would incur the grave danger of building a philosophical system upon it.

The Great Work of the Mage is to congeal the Ruach and then to cast the Atma-Buddhi across the Abyss that it might connect with the originating archetype (casting a star into the heavens) and cast that astral energy back down into the Ruach; immortalizing it; connecting it with the spiritual energy that comes from above and subsequently, the Ruach being also formed of the body, also connecting it with the spiritual energy the comes from the body. This is yet another paradigm for uniting that which is above to that which is below.

Occultism, or Theurgy, teaches the means of producing such union. But it is the actions of man - his personal merit alone - that can produce it on earth, or determine its duration. This lasts from a few seconds - a flash - to several hours, during which time the Theurgist or Theophanist is that overshadowing “God” himself, in whom he becomes “God” himself. When Simon the Magician claimed to be “God the Father,” he meant to convey the idea that he was a God in his own Higher Self, or divine prototype, and others such a hypostatical state of avataric condition may last during the whole life; whereas in the case of full Initiates, who have not yet reached the perfect state of Jivanmukta, [One entirely and absolutely purified, and having nothing in common with earth except his body.] Theopneusty, when in full sway, results for the high Adept in a full recollection of everything seen, heard, or sensed.

Taijasa has fruition of the supersensible.[ Mandukyopanishad, 4.]

It is Magick and not Mysticism that teaches this ultimate union; and in this union the perspective called omniscience and omnipotence is attained. Looking at all the Occult systems in play today, only Thelema recognizes this inbred nature of humanity. The others extant today, still involve themselves with anthropomorphosized deity. Mysticism informs our sensibilities; Magick lets us make use of this...teaches us the 'movement of the Soul.'

For one less perfect it will end only in a partial, indistinct remembrance; while the beginner has to face in the first period of his psychic experiences a mere confusion, followed by a rapid and finally complete oblivion of the mysteries seen during this super-hypnotic condition. The degree of recollection, when one returns to his waking state and physical senses, depends on his spiritual and psychic purification, the greatest enemy of spiritual memory being man's physical brain the organ of his sensuous nature.

Morals serve a practical end and have nothing really to do with being 'nice.' This is why the first education is moral; a way to prepare the vehicle by loosing its attachment to the natural and unconscious attachment to the physical being that it might come to recognize also, the spiritual being. But the mind is the central arbiter of our being and is itself sensuous in nature. There is no part of our humanity that is evil or in error; but it is our wholesome totality as human beings that we've yet to attain.

Three Ways Open to the Adept - To repeat: the Greek, rarely-used word, “Theophania,” meant more with the Neoplatonists than it does with the modern maker of dictionaries. The compound word, Theophania” (from “theos,” “God,” and “phainomai,” “to appear”), does not simply mean “a manifestation of God to man by actual appearance” - an absurdity, by the way - but the actual presence of a God in man, a divine incarnation. When Simon the Magician claimed to be “God the Father,” what he wanted to convey was just that which has been explained, namely, that he was a divine incarnation of his own Father, whether we see in the latter an Angel, a God, or a Spirit; therefore he was called “that power of God which is called great.” [ Acts, viii, 10 (Revised Version).] or that power which causes the Divine Self to enshrine itself in its lower self - man.

This is one of the several mysteries of being and incarnation. Another is that when an Adept reaches during his lifetime that state of holiness and purity that makes him “equal to the Angels,” then at death his apparitional or astral body becomes as solid and tangible as was the late body, and is transformed into the real man. [ See the explanations given on the subject in “The Elixir of Life,” by G.M. (From a Chela’s Diary), Five Years of Theosophy.] The old physical body, falling off like the cast-off serpent's skin, the body of the “new” man remains either visible or, at the option of the Adept, disappears from view, surrounded as it is by the Akashic shell that screens it. In the latter case there are three ways open to the Adept:
This is identical with the teaching of Sri Aurobindo & Mother...that the true material universe and material body can be found and made through the application of what they call the Supramental Yoga.

(1) He may remain in the earth’s sphere (Vayu or Kama-loka), in that ethereal locality concealed from human sight save during flashes of clairvoyance. In this case his astral body, owing to its great purity and spirituality, having lost the conditions required for Akashic light (the nether or terrestrial ether) to absorb its semi-material particles, the Adept will have to remain in the company of disintegrating shells - doing no good or useful work. This, of course, cannot be.

(2) He can by a supreme effort of will merge entirely into, and get united with, his Monad. By doing so, however, we would (a) deprive his Higher Self of posthumous Samadhi - a bliss which is not real Nirvana - the astral, however pure, being too earthly for such state; and (b) he would thereby open himself to Karmic law; the action being, in fact, the outcome of personal selfishness - of reaping the fruits produced by and for oneself - alone.

One should not equate 'selfishness' with the way its common connotation as an immoral or immature behavior. Rather self--ish or of the self would be the way one should examine the meaning. Karma or activity brings its own fruits to all of us.

(3) The Adept has the option of renouncing conscious Nirvana and rest, to work on earth for the good of mankind. This he can do in a two-fold way: either, as above said, by consolidating his astral body into physical appearance, he can reassume the self-same personality; or he can avail himself of an entirely new physical body, whether that of a newly-born infant or - as Shâkârâchârya is reported to have done with the body of a dead Rajah - by entering a deserted sheath,“ and living in it as long as he chooses. This is what is called "continuous existence." The Section entitled "The Mystery about Buddha" will throw additional light on this theory, to the profane incomprehensible, or to the generality simply absurd. Such is the doctrine taught, everyone having the choice of either fathering it still deeper, or of leaving it unnoticed.

The above is simply a small portion of what might have been given in Isis Unveiled, had the time come then, as it has now. One cannot study and profit by Occult Science, unless one gives himself up to it - heart, soul, and body. Some of its truths are too awful, too dangerous, for the average mind. None can toy and play with such terrible weapons with impunity. Therefore it is, as St.Paul has it, "unlawfull" to speak of them. Let us accept the reminder and talk only of that which is "lawful."

The fact that such truths can be so very dangerous, is why one should not proselytize for the Occult. One should not seek converts nor to convince others that there is an essential truth to the system of Magick. Such types that are not naturally attracted to the Great Work are Souls that would not properly handle the work anyway. Or as Liber AL puts it:

AL III.42: “The ordeals thou shalt oversee thyself, save only the blind ones. Refuse none, but thou shalt know & destroy the traitors. I am Ra-Hoor-Khuit; and I am powerful to protect my servant. Success is thy proof: argue not; convert not; talk not overmuch! Them that seek to entrap thee, to overthrow thee, them attack without pity or quarter; & destroy them utterly. Swift as a trodden serpent turn and strike! Be thou yet deadlier than he! Drag down their souls to awful torment: laugh at their fear: spit upon them!

As to ecstasy, and such like kinds of self-illumination, this may be obtained by oneself and without any teacher or initiation, for ecstasy is reached by an inward command and control of Self over the physical Ego; as to obtaining mastery over the forces of Nature, this requires a long training, or the capacity of one born a “natural Magician.” Meanwhile, those who possess neither of the requisite qualifications are strongly advised to limit themselves to purely spiritual development. But even this is difficult, as the first necessary qualification is an unshakable belief in one’s own powers and the Deity within oneself; otherwise a man would simply develop into an irresponsible medium. Throughout the whole mystic literature of the ancient world we detect the same idea of spiritual Esoterism, that the personal God exists within, nowhere outside, the worshipper. That personal Deity is no vain breath, or a fiction, but an immortal Entity, the Initiator of the Initiates, now that the heavenly or Celestial Initiators of primitive humanity - the Shishţa of the preceding cycles - are no more among us. Like an undercurrent, rapid and clear, it runs without mixing its crystalline purity with the muddy troubled waters of dogmatism, an enforced anthropomorphic Deity and religious intolerance.

Man is God - We find this idea in the tortured and barbarous phraseology of the Codex Nazaraeus, and in the superb Neoplatonic language of the Fourth Gospel of the later Religion, in the oldest Veda and in the Avesta, in the Abhidharma, in Kapila’s Sāṃkhya, and the Bhagavad Gītā. We cannot attain Adeptship and Nirvana, Bliss and the “Kingdom of Heaven,” unless we link ourselves indissolubly with our Rex Lux, the Lord of Splendour and of Light, our immortal God within us. “Aham eva param Brahman” “I am verily the Supreme Brahman” has ever been the one living truth in the heart and mind of the Adepts, and it is this which helps the Mystic to become one. One must first of all recognize one’s own immortal Principle, and then only can one conquer, or take the

Kingdom of Heaven by violence. Only this has to be achieved by the higher - not the middle, nor the third - man, the last one being of dust. Nor can the second man, the “Son” - on this plane, as his “Father” is the Son on a still higher plane - do anything without the assistance of the first, the “Father.” But to succeed one has to identify oneself with one’s divine Parent.
The successful traversal of the Abyss involves connecting with one’s ‘father’ (as described in the Gospels), which means one discovers oneself to be God. Failure in the Abyss means that one comes to the ideation of oneself being the only God; the success being the revelation that one as God is in a company of Gods. In identifying oneself with one’s parent in the chain that HPB describes above, we see the individualized nature of one’s Atman as but one element in a host of elements. This is not the Brahman archetype of the ONE original being; but the Paratman or Atma-Buddhi. That the Adam Kadmon of the Hindus, Brahma, has been anthropomorphized, both by exoteric Hinduism and the pseudo-Hinduism of Western New Agers is a mistake.

The first man is of the earth, earthly; the second [inner, our higher] man is the Lord from heaven. . . . Behold, I show you a mystery. [I Cor., xv. 47.50.]

Thus says Paul, mentioning but the dual and trinitarian man for the better comprehension of the non-initiated. But this is not all, for the Delphic injunction has to be fulfilled: man must know himself in order to become a perfect Adept. How few can acquire the knowledge, however, not merely in its inner mystical, but even in its literal sense, for there are two meanings in this command of the Oracle. This is the doctrine of Buddha and the Bodhisattvas pure and simple.

To ‘know thyself’ is to become self-ish. Such is also the mystical sense of what was said to Paul to the Corinthians about their being the “temple of God,” for this meant Esoterically:

The highest principle in Man is the Paratman or Hadit; the Monad being the undifferentiated part of man’s nature.

This carries precisely the same meaning as the “I am verily Brahman” of the Vedantin. Nor is the latter assertion more blasphemous than the Pauline - if there were any blasphemy in either, which is denied. Only the Vedantin, who never refers to his body as being himself, or even a part of himself, or aught else but an illusory form for others to see him in, constructs his assertion more openly and sincerely than was done by Paul.

But the body is part and parcel of who we are; the astral taking the shape and form of this body. It is the ‘idealized body’ of the Roman Catholics; and though it is temporal, attains to something eternal in the congelation of the Ruach; though that may then become perfected yet still further by the force of Will. This is the Great Work of Alchemy. This is also what is proclaimed by al-Hallaj in the Third Degree initiation ritual of the O.T.O.; when he says: “I am the truth, and wrapped in my turban is nothing but God.”

The Delphic command “Know thyself” was perfectly comprehensible to every nation of old. So it is now, save to the Christians, since with the exception of the Mussulmans, it is part and parcel of every Eastern religion, including the Kabalistically instructed Jews. To understand its full meaning, however, necessitates, first of all, belief in Reincarnation and all its mysteries; not as laid down in the doctrine of the French Reincarnationists of the Allan Kardec school, but as they are expounded and taught by Esoteric Philosophy. Man must in short, know who he was, before he arrives at knowing what he is. And how many are there among Europeans who are capable of developing within themselves an absolute belief in their past and future reincarnations, in general, even as a law, let alone mystic knowledge of one’s immediately precedent life? Early education, tradition and training of thought, everything is opposing itself during their whole lives to such a belief. Cultured people have been brought up in that most pernicious idea that the wide difference found between the units of one and the same mankind, or even race, is the result of chance; that the gulf between man and man in their respective social positions, birth, intellect, physical and mental capacities - every one of which qualifications
has a direct influence on every human life - that all this is simply due to blind hazard, only the most pious among them finding equivocal consolation in the idea that it is "the will of God." They have never analysed, never stopped to think of the depth of the opprobrium that is thrown upon their God, once the grand and most equitable law of the manifold re-births of man upon this earth is foolishly rejected. Men and women anxious to be regarded as Christians, often truly and sincerely trying to lead a Christ-like life, have never paused to reflect over the words of their own Bible.

I maintain that reincarnation is not a constant; nor is it the inevitable result after death...it is a potential for him or her who has in life congealed the Ruach. That the ultimate spark of Spirit reincarnates is I think, an obvious deduction. But this spark, being non-differentiated, holds nothing as it is the non-differentiated parcel of the self...and recalls nothing as it says and does nothing...fitting for the Ain. Memory and tendencies belong to the Ruach, which may become congealed in life or in death...or may not and ultimately disperse through disintegration; carrying but fragments of life. This is why more than one person may be able to claim that he or she was Julius Caesar in a past life.

To say that the Jivatman simply needs to discover the Paramatman is really but half the formula. And first, really, through the use of the abhored (in traditional Yoga instruction) 'siddhis' does the work of bringing to consciousness, the cells of the body, along with each, their innate consciousness to one congelation is an actuality in the operations of Magick. A discovery, as you put it, of the Jivatman to apprehend the Paratman does not describe a congelation (not even symbolically). So the Jivatman is not a ready formed being, but in using this terminology, would be the created being called 'asar un nefer', once congealed. This requires the mastery of self and the creation and physical education of the astral body; then mastering other techniques in Magick.

I disagree with the Hindu concept of Jivatman being automatically formulated and immortal. This formulation is the completion of the work of incarnation and manifestation and either does or does not occur in the lifetime of the human being. And only then is the immortality of the evolving personality possible. And it is only on this plane that all the various elements or Atmans interact. It seems that consciousness has no beginning and no end. However, the human body is composed of billions of beings (the mitochondria), each with their own Atman (as defined in your lexicon) and the "lower ego" (as coined in the West) is really a complex of all these semi-conscious beings. That which is said to be Jivatman would then even be assigned one to each cell in our body. The congealing process it seems to me, in my theoretical speculations, would be to bring these cells to full consciousness and then fully bring them to one unified purpose.

We know the body intrinsically works with many flaws in its healing and vitalizing processes; and that even the brain is a disordered and chaotic mess. This is one reason why Crowley stresses the ordering of the mind and the development of intellectual clarity. And unfortunately for the "Intelligent Design" crowd, the body's imperfections reveal how impotent their intellects really are. Sat Prem is especially clear in his book Life of the Cells, to demonstrate Mother and Sri Aurobindo's theory on how the cells of the body can often become destructive to the body in many cases where they incorrectly attack a physical ailment. Ofen enough, we've created medicines that more prevent them from their automatic responses that the body might heal before they kill it off altogether. And they assert that full consciousness of the cells would prevent this.

And as I've stated previously, this is all articulated well in the symbology of the Egyptian Book of the Dead. It's in the basic design or their burial practices; preserve the body from deterioration that the subtle body would have all the time it needs to congeal. Then we can study the symbolism of what goes on immediately after death in Maat's chamber (the goddess of Truth, with reference to integrity) to look for methodology. The buying of time means the body won't disintegrate, and the astral body that is a direct reflection of that also won't then deteriorate with its elements dispersing. Rather, it seems a certain moral stamina as reflected in its symbolism is still in need of better interpretation before we will yet solve the riddle the myth of the weighing of the heart et al, holds for us.
This part of the self that manifests the Will is the Jivatman. Though we should articulate further on the nature of Will. Pure Will is the spontaneous attractions and interactions that are a part of our life's course, and which serve as sacraments in the practice of holiness. Per the idea of (for want of a better phrase) personal destiny and/or Dharma (also as truth), this unfolds throughout a lifetime in the decisions we make as we walk through life. This 'true will' as often discussed by Crowley and contemporary Thelemites (in general), is composed of the general inertia that accumulates through the implementation of those decisions. The decisions are as much emotional as intellectual, which means they emerge from the body with the many Atmans (one for each cell) that compose that body.

The congelation is then the bringing of these cells to full consciousness according to their own nature, that they might better comprehend the role they play in the maintenance of the body and more accurately feed the mind from the impressions they generate to the mind, which comes from the phenomenal awareness of what they are encountering and the impressions being made upon them. Remember, our emotions are the mental analysis of what the body is experiencing and our intellect is in one part, the analysis of our emotional state. How often do our emotions contradict our intellect? How often do the cells of our body in their attempt to heal the body, actually bring harm to the body (requiring us to use medicines to stop this and find an alternate path to healing)?

Al. II.70: “There is help & hope in other spells. Wisdom says: be strong! Then canst thou bear more joy. Be not animal; refine thy rapture! If thou drink, drink by the eight and ninety rules of art: if thou love, exceed by delicacy; and if thou do aught joyous, let there be subtlety therein!”

Refining one's rapture is the congealing of the cells, which compose the animal nature and is one-half our humanity! The A.'.A.' seeks to make one fully human; not disembodied.

HPB takes this to a more complete measure:

The Logos, or both the unmanifested and the manifested WORD, is called by the Hindu, Iswara, "the Lord," though the Occultists give it another name. Iswara, say the Vedantins, is the highest consciousness in nature. "This highest consciousness," answer the Occultists, "is only a synthetic unit in the world of the manifested Logos -- or on the plane of illusion; for it is the sum total of Dhyan-Chohanic consciousnesses." "Oh, wise man, remove the conception that not-Spirit is Spirit," says Sankaracharya. Atma is not-Spirit in its final Parabrahmic state, Iswara or Logos is Spirit; or, as Occultism explains, it is a compound unity of manifested living Spirits, the parent-source and nursery of all the mundane and terrestrial monads, play their divine reflection, which emanate from, and return into, the Logos, each in the culmination of its time. There are seven chief groups of such Dhyan Chohans, which groups will be found and recognised in every religion, for they are the primeval SEVEN Rays. Humanity, occultism teaches us, is divided into seven distinct groups and their sub-divisions, mental, spiritual, and physical. Hence the seven chief planets, the spheres of the indwelling seven spirits, under each of which is born one of the human groups which is guided and influenced thereby. There are only seven planets (especially connected with earth), and twelve houses, but the possible combinations of their aspects are countless. As each planet can stand to each of the others in twelve different aspects, their combinations must therefore, be almost infinite; as infinite, in fact, as the spiritual, psychic, mental, and physical capacities in the numberless varieties of the genus homo, each of which varieties is born under one of the seven planets and one of the said countless planetary combinations.

Motta talks a bit about the various magickal schools, named by colors and drawn from Crowley's teachings, as found in Magick Without Tears. I think HPB may not only be more specific in this detail, but more accurate in attributing each to a planet. We Thelemites may be of the Sun; but other mystical/magickal schools would then be of other planets, having other purposes, paths and augoeides.

What you are describing is of the body, though the mind itself is not present or conscoius; though I'm not disagreeing with you necessarily. One of the points that I have been trying to make is that the body has its own consciousness, which in itself seeks to be united with mind as Atman; this congealing of the Ruach. To this end, I will again quote from HPB:

As to the "elemental atoms," so called, the Occultists refer to them by that name with a meaning analogous to that which is given by the Hindu to Brahma when he calls him ANU, the "Atom." Every elemental atom, in search of which more than one Chemist has followed the path indicated by the Alchemists, is, in their firm belief (when not knowledge), a SOUL; not necessarily a disembodied soul, but a jiva, as the Hindus call it, a centre of POTENTIAL VITALITY, with latent intelligence in it and, in the case of compound Souls -- an intelligent active EXISTENCE, from the highest to the lowest order, a form composed of more or less differentiations. It requires a metaphysician -- and an Eastern metaphysician -- to understand our meaning. All those atom-Souls are differentiations from the ONE, and in the same relation to it as the divine Soul -- the Buddha -- to its informing and inseparable Spirit, or Atman.

The compound soul is an important is an important idea to consider. Each atom of our body, and every cell, each having their own life. Indeed, as you read through certain GCL documents, you will see that
the mitochondria itself is an independent and symbiotic life form. We discussed this a bit in our Star Wars examples. A part of my theory on this is that as all the cells are each in themselves composed with their own life force, so the human soul is an aggregate of these life forces. The nature of human evolution is then to congeal these life forces into one unified structure.

The Supramental Yoga school of Sri Aurobindo & Mother covers this in their analysis of the dysfunctionality of human cells, which they say requires that one induce the cells to full consciousness that they might work together to carry out more effectively the task of the centralized consciousness of the body. This dysfunctionality is evident in some healing processes, which actually become destructive to the body as the cells and the organs they comprise cannot consider the totality of the body.

But it is important also to recognize that Brahma is a mythological and not an actual or anthropomorphosized god. His sleep is the allegory for manifestation, which HPB calls the manvantara; wherein the Universe comes to be as his dream and is then retraced as he awakes...awakes to what? I feel even the idea of manvantara is misleading; that the myth is really describing the ebb and flow or expansive and contracting qualities of the Universe. The Universe is not annihilated on some certain date and only to begin again with me and infinite number of times, sitting at this computer on this day and writing this message. I realize there is another Hindu myth that says this is so, by showing an egoistic prince many ants walking across the floor of his palace; each being his many incarnations in the past and at this same point in history. But that is the ego-loser philosophy in Hindu parlance.

What the myth ignores is that before Brahma shows this prince his many incarnations, the prince took pride in the great things he built and the marvelous beauty he brought to the world. With this supposed enlightenment, now the prince is rendered inert but enlightened by the meaninglessness of his life--ouch!-instilled nihilism. Is it no wonder that AL proclaims the rituals of the old world to be black?! And what the hell is Brahma doing there anyway?...he's supposed to be asleep

Whether one tends towards the path of Magick and the invocation of the Augoeides at Tiphareth or whether one is merely mystically minded and comes to the certainty of God indwelling the Self (Yeheshua) this is one certain step and not to be confused and mixed with the plane that is the Abyss. It is worth again, quoting from HPB:

Atma (our seventh principle) being identical with the universal Spirit, and man being one with it in his essence, what is then the Monad proper? It is that homogeneous spark which radiates in millions of rays from the primeval "Seven;" -- of which seven further on. It is the EMANATING spark from the UNCREATED Ray -- a mystery. In the esoteric, and even exoteric Buddhism of the North, Adi Buddha (Chogy dangpoi sangye), the One unknown, without beginning or end, identical with Parabrahm and Ain-Soph, emits a bright ray from its darkness.

This again is that affirmation that we each are the Logos; and in Christian terms, then, we would each be Jesus Christ or the Son of God. Remember, Thelema comes as a philosophy to correct the errors of the Christian mystery as perverted by Constantine and Irenaeus. As HPB says above, this Atman is then intimately and unseparably connected to our soul. It is then that should we congeal and empower that soul to a unified, aggregate consciousness, that we will then gain control over subsequent incarnations as we go through the cycles of life.

The star under which a human Entity is born, says the Occult teaching, will remain for ever its star, throughout the whole course of its incarnations in one Manvantara. But this is not his astrological star. The latter is concerned and connected with the personality, the former with the INDIVIDUALITY. The "Angel" of that Star, or the Dhyani-Buddha will be either the guiding or simply the presiding "Angel," so to say, in every new rebirth of the monad, which is part of his own essence, though his vehicle, man, may remain for ever ignorant of this fact. The adepts have each their Dhyani-Buddha, their elder "twin Soul," and they know it, calling it "Father-Soul," and "Father-Fire." It is only at the last and supreme initiation, however, that they learn it when placed face to face with the bright "Image." How much has Bulwer Lytton known of this mystic fact when describing, in one of his highest inspirational moods, Zanoni face to face with his Augoeides?

There is a difference between the Paratan and the personality and hence our HGA is something beyond the lower ego (personality). Yet, it is our Twin Soul as also hinted at in the Gnostic Gospel of Thomas.
This Paratman or star is the central sun of each our individual universes. As Thelemites, we are (in Motta's words) *Children of the Sun*.

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This was known to every high Initiate in every age and in every country: "I and my Father are one," said Jesus (John x. 30). When He is made to say, elsewhere (xx. 17): "I ascend to my Father and your Father," it meant that which has just been stated. The identity, and at the same time the illusive differentiation of the Angel-Monad and the Human-Monad is shown by the following sentences: "My Father is greater than I" (John xiv. 26); "Glorify your Father who is in Heaven" (Matt. v. 16); "The righteous will shine in the kingdom of their Father" (not our Father) (Matt. xii. 43) "Know ye not ye are a temple of God, and that the Spirit of God dwelleth in you?" (I Cor. iii. 16); "I ascend to my Father," etc., etc. It was simply to show that the group of his disciples and followers attracted to Him belonged to the same Dhyani Buddha, "Star," or "Father," again of the same planetary realm and division as He did.

First we learn how to relate each to our own personal augeoieades...each our own personal god or Adonai (as shown right at the beginning of Liber LXV). But then of what planetary path may others be? Liber AL teaches us that the Jews have the half; might they be of the Moon? Certainly it is important in our science that the Sun and Moon be conjoined. And here we have another way of interpreting this; outside the science of sexual magick.

It is then the "Seven Sons of Light" -- called after their planets and (by the rabble) often identified with them -- namely Saturn, Jupiter, Mercury, Mars, Venus, and -- presumably for the modern critic, who goes no deeper than the surface of old religions* -- the Sun and Moon, which are, according to the Occult teachings, our heavenly Parents, or "Father," synthetically. Hence, as already remarked, polytheism is really more philosophical and correct, as to fact and nature, than anthropomorphic monothesism. Saturn, Jupiter, Mercury, and Venus, the four exoteric planets, and the three others, which must remain unnamed, were the heavenly bodies in direct astral and psychic communication with the Earth, its Guides, and Watchers -- morally and physically; the visible orbs furnishing our Humanity with its outward and inward characteristics, and their "Regents" or *Rectors* with our Monads and spiritual faculties. In order to avoid creating new misconceptions, let it be stated that among the three *secret* orbs (or star-angels) neither Uranus nor Neptune entered; not only because they were unknown under these names to the ancient Sages, but because they, as all other planets, however many there may be, are the gods and guardians of other septenary chains of globes within our systems.

And so these Rectors, each having their own church or community (and perhaps are also addressed in the Book of Revelation; cf. the GCL document: Liber Congregus Restituuo) may present certain other cultural loci in the human congress of seven races.

The Planetary origin of the Monad (Soul) and of its faculties was taught by the Gnostics. On its way to the Earth, as on its way back from the Earth, each soul born in, and from, the "Boundless Light,"* had to pass through the seven planetary regions both ways. The pure Dhyani and Devas of the oldest religions had become, in course of time, with the Zoroastrians, the Seven Daevas, the ministers of Ahriman, "each chained t

* For the modern critic, who goes no deeper than the surface of old religions.

** The mystical/magickal schools would be of other planets, having other purposes, paths and augeoieades.

And yet, perhaps these are seven levels of being (with both possible doctrines not necessarily contradicting the other) that are a part of our natural evolutionary process.
HADIT is "everywhere the center", which tells me that every last cell of our being is a monad (which I believe HPB affirms in what I have copied into this message above. And so really, every space-mark and every coordinate is an HADIT; the aggregate Soul congealing into a yet-greater HADIT, which brings me to a conundrum that it seems HPB calls a mystery and as found in Liber AL:1.52:

If this be not aright; if ye confound the space-marks, saying: They are one; or saying, They are many; if the ritual be not ever unto me: then expect the direful judgments of Ra Hoor Khuit!

In other words, we are all connected as ONE, though we are MANY, which means in my view, we are all gods/monads though this fabric composed of us is the connecting link. The only true affirmation is to recognize our connection by being of service to the world around us (participating in life) in the love of the world and the time/space continuum, which is itself eternal. Being of service, acting in the world is the perfect adoration of NUIT, which I teach my students in contradistinction with most other A.'.A.' lineages that simply have their Aspirants write a poem that they call an adoration whilst continuing with their narcissism.

Acting in the world and not despising it as Buddha teaches is the love of NUIT per AL:1.53:

This shall regenerate the world, the little world my sister, my heart & my tongue, unto whom I send this kiss. Also, o scribe and prophet, though thou be of the princes, it shall not assuage thee nor absolve thee. But ecstasy be thine and joy of earth: ever To me! To me!

That we are both ONE and MANY is easily affirmable, as I can focus on myself (know thyself) and I can focus on that expanded consciousness of my connection with the world around me. But I also maintain that the NOT is ineffable and should not be quantified; whether as consciousness or otherwise. Yes the ALL/MANY is consciousness...NOT has nothing to do with this.

The NOT became manifest as it could do no other thing and was dissatisfied with this condition (or it would not have become manifest)...and it will remain in perpetuity in this manifest state; the state of living and being alive...manifest in the space/time continuum. I draw this from the teachings of the Qabalah. As the ancient Rabbi's contemplated God, they saw that in its ineffable nature, it was unknowable and completely beyond human comprehension and apprehension, which is why also, the Jews abhorred idolotry (though the Christians adopted it in a totality and made the world or European Art). In considering that God was unperceivable and undescribable, they termed it the AIN, meaning NOT. Subsequently, they deduced that this Nothing was without limit: the AIN SOPH...and ultimately, then they gleaned but one small perception; that this limitless nothing must be a limitless light...the AIN SOPH AUR. Now, this nothing they taught, sought a means by which it can know itself...(so much for infinite bliss!...the false teaching of that spector called Buddha)...so it concentrated a center called Kether...and the rest is history...or the Tree-of-Life.

Personal evolution is also an important part of the science of Eugenics, which deals with evolution of our society at-large; the "wise application of the laws of heredity." Back in the 1930s ev, there was a great deal of philosophic and ethical debate and creative thought; especially by such writers as George Orwell and Aldous Huxely. This was and should be seen as important with our society making a big mistake in throwing the baby out with the bath water after the Nazi horror. Rather, Eugenics concerns itself with a study of the direction of human evolution.

Heredity through human reproduction is not random; each generation is shaped by the prior generation. Whether its beautiful appearing people marrying other beautiful appearing people; athletic or intelligent people marrying others of their ilk; and/or the rich marrying within their own class and klan, human reproduction is far from random.

Eugenic science is very much in tune with the Thelema and the work of the A.'.A.'. We see everyone's personal evolution as vital for the growth and well being of the human race. Our intent is to assist those capable, of becoming fully human. And we don't apply any discriminatory practices to our method of selection. Simply, one must approach us, say it is their Will to join us, and then to do the work. And the work speaks for itself.
Marian Van Court in her paper on Eugenics, appearing in the Winter 2004 ev issue of The Occidental Quarterly, sums of the situation with human intelligence at this time:

1. Human intelligence is largely hereditary.
2. Civilization depends totally upon innate intelligence. Without innate intelligence, civilization would never have been created. When intelligence declines, so does civilization.
3. The higher the level of civilization, the better off the population. Civilization is not an either-or proposition. Rather, it's a matter of degree, and each degree, up or down, affects the well-being of every citizen.
4. At the present time, we are evolving to become less intelligent with each new generation. Why is this happening? Simple: the least-intelligent people are having the most children.
5. Unless we halt or reverse this trend, our civilization will invariably decline. Any decline in civilization produces a commensurate increase in the collective "misery quotient."

Eugenics as a science dates back to the Egyptians, who were especially concerned with this, as discussed in my GCL article, Liber LH, wherein I write:

The Pharaoh was said to have the power of rule only when he physically sat on the ‘Throne of Horus’. And the throne was also referred to being the Chariot of the Queen. Indeed, the heir to the throne of Egypt was produced by the child or the union of the son and the daughter. This not only tells us that the line of succession was matrilineal. But leads us to wonder why this particular bloodline was considered to be so important. For this, it gets particularly interesting in light of the scientific knowledge that we have of Mitochondrial DNA. Nuclear DNA is that formed in the zygote by the union of Nuclear DNA from both the sperm and the ova. However, Mitochondrial DNA is without the nucleus of the cell and is not penetrated by the sperm into the ova. Therefore, it is the mother’s Mitochondrial DNA that is transferred solely to the child. On rare occasions, the seminal Mitochondrial DNA has penetrated and altered the bloodline, but this is really the exception to the rule.

The Egyptian bloodline had to be maintained mitochondrially, by what today is considered incestuous practices. This is even remembered in Liber LXV, where it says; right in the first verse:

"O heart of my mother, my sister, mine own..."

Exploring this further would be beyond the scope of the present concern. Suffice to say, that the evolution of the individual is intimately connected with the evolution of society. The stratified human race is today, a reflection of the stratified individuals that comprise it. As each of us individually learns to congeal the Soul, so does the impetus to congeal our race becomes stronger. Let us all seek to this Great Work.
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