

**INTEGRAL RELATIVITY OF AWARENESS AND ENERGY**  
**- The Continuum Of Consciousness, Energy, Mind And Matter**

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**ABSTRACT**

Integral Relativity, as an extension of General Relativity, Special Relativity and Advanced Relativity, has four proposed Tenets: (1) The Equation of Energy with Awareness; (2) The Conservation of Awareness; (3) The Continuum of Energy, Consciousness, Mind and Matter via the Kosmic Constant; (4) The Integral Relativity between Observers and the Observed in Hilbert Spaces as specified Frequency Domains. It is corroborated by the Observer Effect in all the related double slit and interferometer experiments, most notably those of Dean Radin's Sigma 5.7 rated results (2016); by the Unified Spacememory Network, modeled by Nassim Hamein and William Brown (2016); by Elizabeth Rauscher's Complex Eight Dimensional Model of Minkowsky Space; and is modeled by an extension of Ken Wilber's All Quadrants, All Levels (AQAL) Integral model called the "AQAL Cube" (Neale, 2011), which correlates non-physical existence with physical existence.

Integral Relativity predicts that the Observer and observed are a mutually inclusive Consciousness/Mind/Energy/Matter continuum. We propose that the terms Consciousness and Mind be no longer used synonymously in the scientific community, but differentiated as an integral Awareness/Energy continuum between Hilbert Spaces, where Consciousness is non-local or Subtle awareness, and Mind is its correlated local or Concrete awareness and means of en-action.

**KEYWORDS:**

Observer Effect, Observer/Witness, Consciousness, Mind, Energy, Matter, Quantum Vacuum, Zero Point Field, Quantum Field, Unified Spacememory Network, Hilbert Spaces, Subtle Energy, Integral Theory, AQAL Cube.

## INTRODUCTION

Integral Relativity was originally presented as a paper “AQAL Square to AQAL Cube – the Integral Relativity of Consciousness, Mind and Energy” at the Integral European Conference in Budapest (Neale, 2014). The paper was then commissioned by Integral Publishers as the book “Knowing the Knower – the Integral Science of Self” (Neale, 2015). In April 2016, “Integral Relativity of Consciousness, Mind and Energy” was presented at The Science of Consciousness Symposium, Tucson (Neale, 2016).

By definition, an Integral Metatheory is inclusive of *all* Awareness and Energy states, structures and phenomena. Therefore, by definition, Integral Relativity correlates Energy in all states with Awareness in all states. The proposal of Integral Relativity as an Integral Metatheory is therefore by definition as a true TOE, as opposed to various partial energy TOE’s proposed by the hard sciences. To establish a foundation for this, in this paper it has been necessary lay down the initial groundwork of the Integral model and its Eight Fundamental Perspectives, and the resulting fractal model of an octodynamic Kosmos.

Integral Relativity is an extension of General and Special Relativity, where the equation of Energy and Mass can be further correlated via the Observer Effect with the equation of Energy and Awareness, as Integral Relativity.

Integral Relativity proposes Four Tenets[1] that by definition are integral with those of General Relativity: (1.) *The Equation of Awareness with Energy*: where Energy in all states is the action potential and kinesis of Awareness in all states, in that Energy in all states is Awareness in all states made existent. (2.) *The Conservation of Awareness*: where the Law of Conservation of Energy in all states, via the First Tenet, is extended to the Conservation of Awareness in all states. (3.) *The Continuum of Consciousness, Energy, Mind and Matter via the Kosmic Constant*: whereby Awareness and Energy are two sides of the same coin; and whereby the coin itself is the Kosmic Constant, as the Kosmic Primordial Vibration, as the Ground of Being and Awareness. (4.) *The Integral Relativity between Observers and the Observed*: whereby Awareness and Energy operate and correlate in Hilbert Spaces as specified Frequency Domains, as correlated Frequency Spectrums. In observing a specified object, an Observer’s experience in one Hilbert Space is relative to another Observer’s experience in another Hilbert Space according to their relative frequencies.

Integral Relativity differentiates Mind as Awareness operating in the Concrete Domain/Spectrum from Consciousness as Awareness operating in the Subtle Domain/Spectrum, in the same way that Hilbert Spaces propose universes other than this physical universe. In this paper we provide formulations for the Four Tenets, and a mathematical basis for a continuum of correlated Awareness and Energy information between the Concrete and Subtle Spectrums as Hilbert Spaces.

The author predicts that through the rigorous and scientific implementation of the combined Tenets of **GR** and **IR**, it is possible to demonstrate and explain such active potentials as levitation, mind-reading, remote viewing, intentional teleportation, astral travel, after-death awareness, past lives memory, Akashic Wisdom awareness and

ultimately Mind/Consciousness Enlightenment; and further predict these will become the norm of human experience in our imminent future. The **IR** model provides a solid basis for understanding how and why this is so, and can therefore provide solid guidance in accelerating our understanding of Mind and Consciousness, just as Einstein's **GR** accelerated our understanding of Energy and Matter.

Corroborating these validity claims are The Global Consciousness Project[2], in distributing random number generators (RNG's) to every locale on the planet, and proving time and again a global interconnectivity of awareness as events occur locally; Dean Radin's[3] double-slit experiments at I.O.N.S. with meditators worldwide, showing Sigma 7 levels of validity in correlating the meditator's awareness with the behavior of photons; Radin's[4] further collaboration with the GCP correlating observer awareness with events; Nassim Hameiri's and William Brown's Unified Spacememory Network[5], whereby the free exchange of entangled information between non-locality and locality exacerbates the evolution of sentience in individual organisms via sentience as a unified field; and the rigorous empirical research of after-death Subtle existence (Schwartz[6], Stevenson[7], Van Lommel[8]), which has created the need of a *unified Integral model* that can not only categorize this research, but also explain its results.

## **INTRODUCING THE INTEGRAL MODEL**

The differentiation of Consciousness, Mind, Energy and Matter is made via a new model that combines with two similar prominent models: Firstly with Elizabeth Rauscher's development of the Complex Eight-Dimensional Model of Minkowsky Space (CEDMS)[9], where Minkowsky differentiated the four dimensions of Physical Space from four dimensions of "Super-space"; and secondly with aspects of Wilber's Integral Model (1995)[10], which differentiates four interactive categories of Kosmic existence as Four Quadrants. The added dimension of a third axis differentiates the Four Quadrants of physical existence (Wilber's model) from Four correlated Quadrants of non-physical existence (Neale, 2011)[11]. But rather than being merely Minkowsky's "Super-space", or the "Non-locality" as defined by Quantum Field Theory, we propose that this added Subtle Domain of existence is also synonymous with "Subtle existence" of the Ancient Traditions in the true etymological sense of Meta-Physical, or "beyond physical" - the Domain of our Soul, as a Subtle Consciousness monad, with its Subtle Body and Subtle Realms of existence.

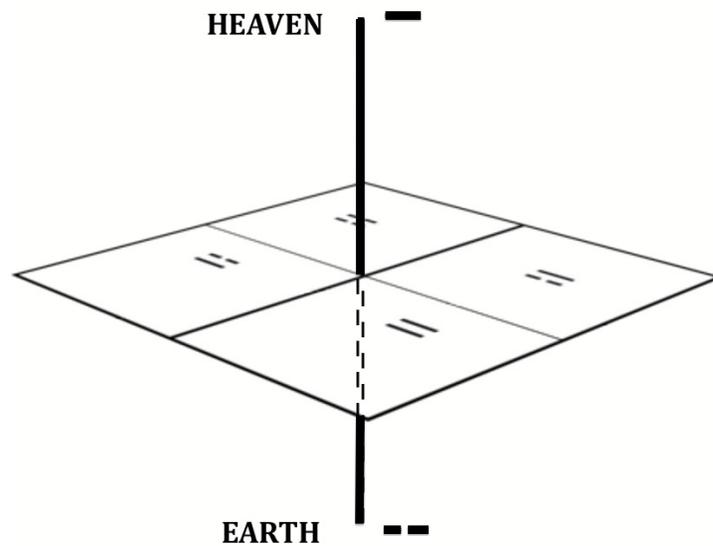
This is basically a subquantum affirmation of "Indra's Net", as described in the Avatamska Sutra of the Mahayanas:

*"Far away in the heavenly abode of the great god Indra, there is a wonderful net which has been hung by some cunning artificer in such a manner that it stretches out infinitely in all directions. In accordance with the extravagant tastes of deities, the artificer has hung a single glittering jewel in each "eye" of the net, and since the net itself is infinite in dimension, the jewels are infinite in number. There hang the jewels, glittering "like" stars in the first magnitude, a wonderful sight to behold. If we now arbitrarily select one of these jewels for inspection and look closely at it, we will discover that in its polished*

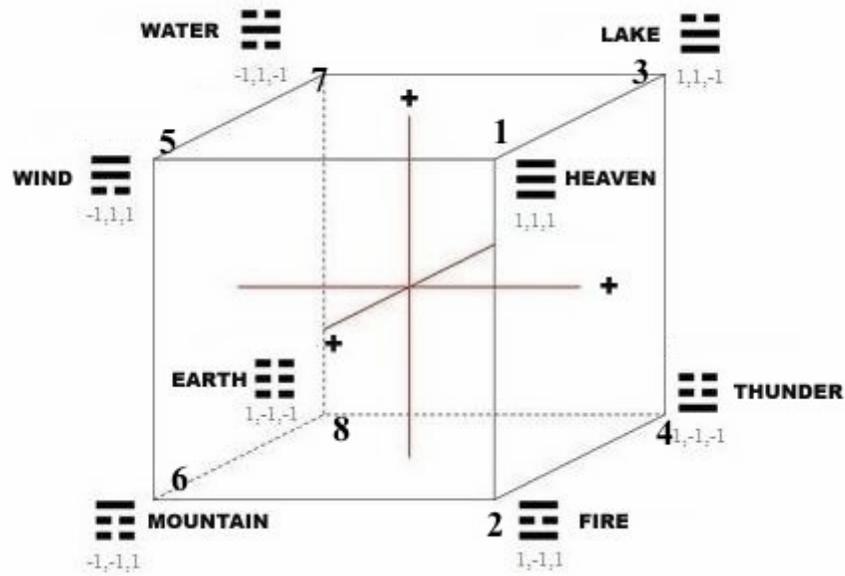
*surface there are reflected all the other jewels in the net, infinite in number. Not only that, but each of the jewels reflected in this one jewel is also reflecting all the other jewels, so that there is an infinite reflecting process occurring.”*

The Integral model fittingly had its origin in the most ancient cosmological model known, devised by Fu Hsi around 5000 BC: In Fig 1, the vertical axis differentiates the Concrete (Earth) from the Subtle (Heaven) Domains. The horizontal axes form their first generation recombinants as four bigrams. In Fig 2, the three axes form their second-generation recombinants as a cosmological template of eight trigrams. In Fig. 3, we see how this translates to the modern AQAL Cube model of Integral Relativity. And in Fig. 4 we see how the Integral AQAL Cube model maps the underpinnings of the Kosmos as an Awareness-Energy continuum. The use of “K” pertains to a Kosmos that integrates and correlates the proposed Subtle Domain with the physical Cosmos or Concrete Domain.

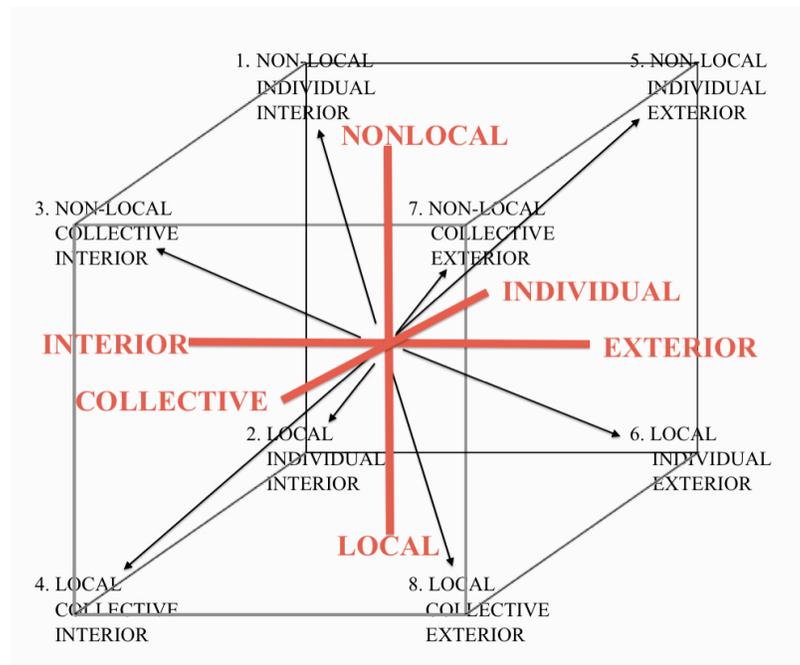
**Fig 1. The Primal Polarity with Four First Generation Polarities**



**Fig 2. Eight Second Generation Polarities**

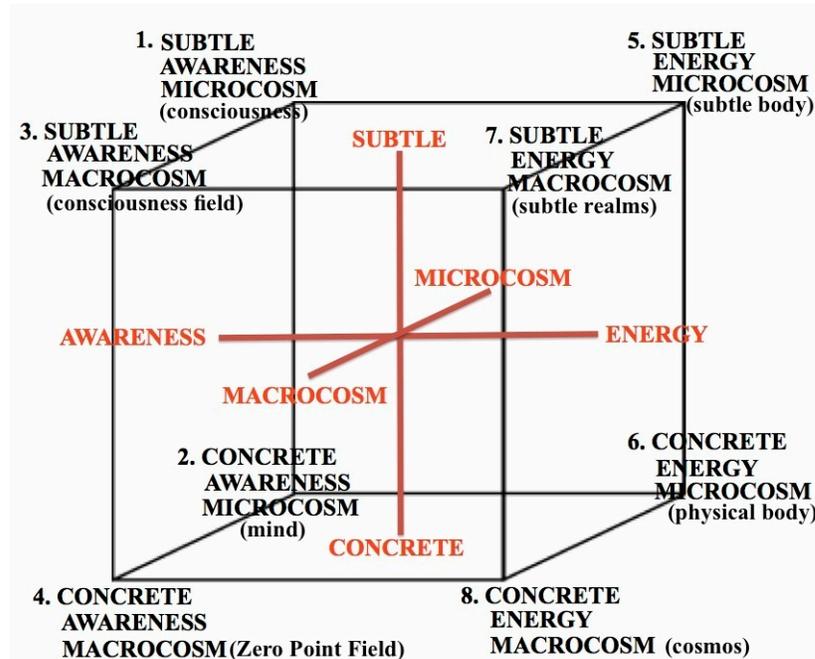


**Fig. 3. The Integral Cosmological Template of Eight Fundamental Perspectives**



The Eight Fundamental Perspectives are the basis of the Integral Model where any specified entity, such as a photon, has an interior aspect, an exterior aspect, an individual aspect, a collective aspect, a local aspect and a non-local aspect. These six polarities through recombination inevitably give eight fundamental perspectives of that photon, or of that organism. Because the 8 FP's can be applied to *any* specified aspect of the Cosmos *anywhere* in the Cosmos (Figure 4), as a fractal cosmology they provide *a valid model for a true TOE* (Neale, 2011).

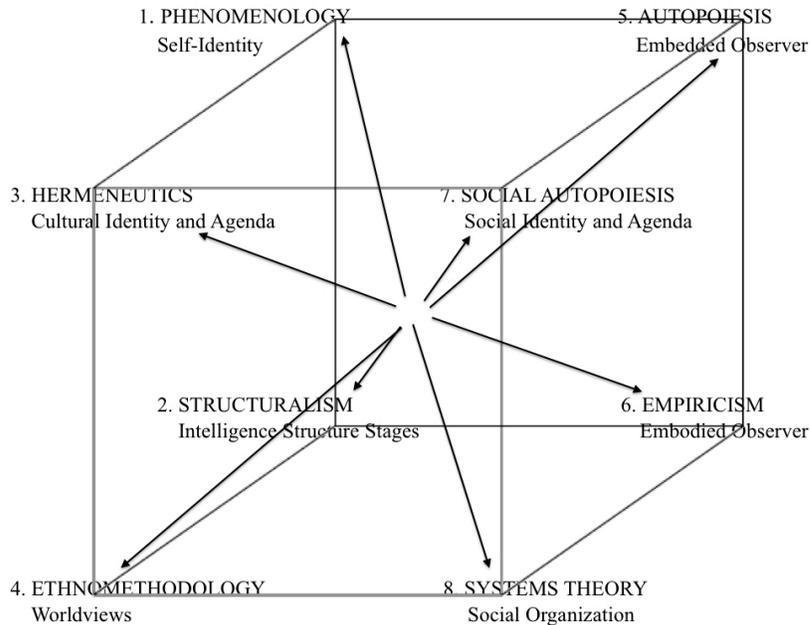
**Fig 4. The Template of Kosmic Manifestation**



The four lower octants 2,4,6,8 pertain to the Physical Universe (Concrete Domain), and the four upper octants 1,3,5,7 pertain to the Meta-Physical Universe (Subtle Domain). *These are the eight “archangelic” creative forces of most religious cosmologies.*

As an octodynamic fractal cosmology, it comes as no surprise that the Awareness and Energy systems embraced by Integral Relativity *inevitably* fall into the eight traditional academic disciplines according to the same template, shown in Figure 5.

**Figure 5. The Eight Disciplines**



## DEFINING INTEGRAL RELATIVITY

Integral Relativity advocates the primacy of Awareness as the initiator of all en-action - *En-ergia* - Energy. Any energetic phenomenon therefore has its correlate in Awareness from low frequency proto energy/awareness to enlightened high frequency Energy/Awareness as non-dual experience. Modes of awareness are differentiated variously as Sensory, Mind, Consciousness, Witness, and Knower/Observer. Their commonality *is* Awareness, from the Indo-European root *A Varus*, meaning “in Truth”, as in *Veritas*. Our definitions therefore begin with the use of the generic term “Awareness” for *all* modes, when not referring to a specified mode. It will be seen that *each* specified mode of Awareness, as Sensory, Mind, Consciousness, Witness and Knower/Observer, is *differentiated and defined by a correlated experiential injunction*. From this follows the **Four Tenets of Integral Relativity**:

1. The Equation of Energy with Awareness.  
*Awareness defines the latent potential of Energy; where Energy in all states is the action potential and kinesis of Awareness in all states, and becomes Awareness made existent.*

This is a reiteration of John the Divine’s biblical genesis:  
*In the Beginning was Energy, and the Energy was with Awareness, and the Energy was Awareness.*

2. The Conservation and Continuity of Awareness:

*The Law of Conservation of Energy in all states, via the First Tenet, is extended to the Conservation of Awareness in all states, whereby Awareness cannot be created nor destroyed, but only transformed from one state to another.*

This is a reiteration of the Buddha's assertion in the Pali Canon[12] of the *Continuity of Consciousness*.

3. The Continuum of Consciousness, Energy, Mind and Matter via the Kosmic Constant: *The Kosmic Constant is the primordial frequency or carrier wave of Energy from which all subsequent phenomena emerge through the CEMM continuum. It follows, via the First and Second Tenets, that the Kosmic Constant is also the primordial Awareness, or the Supreme Knower; the activity of whom is the primordial Energy and all its subsequent phenomena.*

According to Planck's formula, the higher the frequency of energy, the more information it encodes. A quasi-infinite frequency would therefore carry a quasi-infinite capacity of information, which via the First Tenet would be its omniscience; with a quasi-infinite velocity as its omnipresence; and with a quasi-infinite action potential as its omnipotence. In this context, Planck's formula validates most religious cosmologies, and also validates the Kosmic Constant as the Absolute "In Truth", or *A Varus*, of Awareness.

4. The Integral Relativity between Observers and the Observed in Hilbert Spaces as specified Frequency Domains:

*The perception of any given observed phenomenon is relative to the Awareness frequencies of the Observers of that phenomenon.*

In other words, the Observer experience of any observed activity is relative to the specified Concrete, Subtle and Causal perspectives taken by the Observers. Integral Relativity is therefore a higher-octave take of Special Relativity, where an Observer's *velocity* now becomes analogous to an Observer's *frequency*.

Richard Lawrence Norman[13] formulates the Four Tenets for the purposes of this paper as follows:

1. Deriving from the First Tenet, "*Awareness defines the latent potential of Energy; where Energy in all states is the action potential and kinesis of Awareness in all states, and becomes Awareness made existent*", it follows that: mass/energy equivalence is extended to include cognitive teleology as an attentionally-defined, self-recursive, emergent process articulating all aspects of manifest reality including mass, as

$$E(-\Psi-)A = R,$$

where  $\Psi$  = Wave function,  $A$  = Awareness,  $E$  = Energy,  $R$  = Reality (awareness made existent), and "(- -)" defines an emergent self-recursive relation between elements.

As per Integral Relativity, **a wave must itself embody the link correlating Awareness and Energy.**

2.

Deriving from the Second Tenet, “*The Conservation of Awareness, whereby the Law of Conservation of Energy in all states, via the First Tenet, is extended to the Conservation of Awareness in all states*”, it follows that: Awareness and Energy are the components of information.

Awareness structures energy into information. Energy and Awareness are therefore necessarily conserved in a quantum paradigm, as energy is conserved. The quantum limit expressed in an elementary quantum of action then, necessarily implies a *delineated* hence necessarily finite (if mathematically "infinite") number of frequency bound energetic combinations, increasing with the amount of energy, which may be structuralized. Awareness, therefore, as Energy, is conserved due to Planck's constant  $h$ .

$h =$  in metre-kilogram-second units  $6.62607004 \times 10^{-34}$  joule-second, with a standard uncertainty of  $0.000000081 \times 10^{-34}$  joule-second.

The domain is constrained by the numerical specificity imposed by  $h$  as it subdivides  $E$ , the range then corresponds to said limit imposed upon  $A$  (allowing transformative restructuralization within a conserved and bounded energetic/informational medium).

*Maximum bound* delineating conservation of Awareness may then be expressed as:

$$Eh = A,$$

where  $A$  = Awareness,  $E$  = Energy at a given frequency, and  $h$  is Planck's Constant.

3.

Deriving from the Third Tenet, “*The Continuum of Consciousness, Energy, Mind and Matter via the Kosmic Constant, which is the primordial frequency or carrier wave of Energy from which all subsequent phenomena emerge through the CEMM continuum*”. It follows that: the vibratory quantum ground of universal processes as a functional of basis of conscious interactivity is expressed as a primary emergent ontological beat-frequency limited by the *coherent mass-fraction* of the universe.

To extend the ideas of Hameroff and Penrose (2014)[14] to universal physical systems, we write:

$$\tau \approx \hbar / (dE_G / dCmf),$$

where  $\tau$  = time,  $\hbar = h/2\pi$   $E_G =$  *gravitational self-energy* of the *difference* between the two (stationary) mass-distributions of the superposition, derivative of the universal Coherent Mass Fraction ( $Cmf$ ).

4.

Deriving from the Fourth Tenet, “*The perception of any given observed phenomenon is relative to the Awareness frequencies of the Observers of that phenomenon*”, it follows that:

$$dP/d\nu \propto P,$$

where  $P$  = Perception and  $\nu$  = Frequency, perception being a differential function of the relative frequency of observers.

Integral Relativity therefore proposes that all types of Relativity, from General, to Special, to Advanced, to Integral, are collectively defined as *the relativity between Observers and the Observed in all Domains/Hilbert Spaces*; where each type of Relativity is defined by a specified Observer and an Observed in a specified Hilbert Space.

Relativity Theory began with Einstein’s work on the Doppler Effect, as an experiment between two Observers, one a train and the other on the platform, as the train’s whistle blew. Much later this progressed to the two clocks experiment where again there were two Observers, one on the ground and the other hurtling through space, comparing how the clock of the one in space was running slower. This supposedly affirmed the Lorentz Transformation and time dilation theory. However, Advanced Relativity, Sorli and Fiscaletti (2016)[15], shows there is no time dilation, only the increasing duration of an event; which is not explained by velocity, but by the increasing energy density of space surrounding the accelerating Observer.

So Relativity Theory follows a progressive relativity between *assumed* Observers according to the frequencies and Hilbert Spaces of the Observers. In General and Special Relativity, the assumed Observer is the physical sense-body whose existence is experienced as 3D Hilbert space-time; where Relativity as variable rate of clocks is a function of their variable velocities; and whose assumed Absolute Awareness is Mind.

In Advanced Relativity, the assumed Observer is the Concrete Mind grounded in 4D Hilbert Space, or the Zero Point Field; where Relativity is a function of the Observer and observed moving through the variable energy density of the quantum vacuum; and whose assumed Absolute Awareness is the “Now” of Consciousness in 5D Hilbert Space.

In Integral Relativity, the assumed Observer is the Subtle Consciousness in 5D Hilbert Space, whose existence is experienced as a “Now” throughout the Concrete and Subtle Spectrums; where Relativity is a function of the variable frequency of the Observers; and whose assumed Absolute Awareness is the Witness in nD Hilbert Space. For the Causal Witness, the assumed Absolute Awareness is the Supreme Knower/Observer, which is no longer assumed but finally realized; and where Relativity dissolves in a non-dual experiential continuum.

Integral Relativity models the Concrete, Subtle and Causal Spectrums, or **Full-Spectrum Domains**, as a nested Domains Hierarchy of Hilbert Spaces of Energy and Awareness. As such, the Domains are not a levels hierarchy of Awareness/Energy, but a holarchy of coexisting and coevolving full-spectrum Hilbert Spaces of Awareness/Energy. Through the above Four Tenets, we propose that Awareness operates in a continuum: in the Causal Spectrum as the Observer / Witness; in the Subtle Spectrum as Soul / Consciousness; and in the Concrete Spectrum as Body / Mind; where the Witness is the energy vehicle of the Knower, the Soul is the energy vehicle of Consciousness, and the Body is the energy vehicle of Mind.

It therefore follows that Integral Relativity both differentiates and defines Awareness variously as: *The Primordial Knower/Observer operating through the Causal Spectrum as Witness, through the Subtle Spectrum as Consciousness, and through the Concrete Spectrum as Mind.*

We therefore propose that in nD Hilbert Space, the assumed Observer is the Causal Witness; whose existence is the *Attention*, the frequency of which determines the level of en-action through the correlated frequencies of intentional Consciousness and extensional Mind. In nD Hilbert Space, the level of *Attention* of the Witness determines the variable frequency of the Observer in all other Domains of Awareness as Hilbert Spaces.

So the lowest level or First Attention enables self-aware activity in 3D and 4D Hilbert Spaces; the Second Attention extends this self-awareness through 5D HS; and the Third Attention extends this self-awareness through nD HS. We propose that in 5D Hilbert Space, the *Intention* of Consciousness-as-Observer, through *Extension* into lower Hilbert Spaces, creates the variations in the energy density of 4D and 3D Hilbert Spaces, per Advanced Relativity, as correlated energy en-actions of the Mind and physical Body. In this way, there is a dynamic continuum of Awareness/Energy throughout the Hilbert Spaces.

In other words, the relative positioning in this holarchy of assumed Observers, and their correlated energetic activities through the Causal, Subtle and Concrete Spectrums, comprises Integral Relativity; which establishes the First Tenet of Integral Relativity – that *Awareness defines the latent potential of Energy; where Energy in all states is the action potential and kinesis of Awareness in all states, and becomes Awareness made existent*; and also establishes the Fourth Tenet - that *the perception of any given phenomenon is relative to the Awareness frequencies of the Observers of that phenomenon*. The Fourth Tenet therefore describes perception as the process of Awareness viewing through specified Spectrum lenses at specified frequencies.

## **TOWARDS PROVING THE FIRST TENET**

The First Tenet of Integral Relativity draws the correlation between Energy and Awareness in *all* states, and an elementary proof of this correlation is in every awareness-correlated action taken by organisms. However, such a definition is restricted to the

confines of the organism itself, whereas the Observer Effect shows that the Awareness/Energy correlation extends beyond such confines.

Under laboratory conditions, proof comes via every version of Double Slit or Double Mirror experiment to demonstrate the Observer Effect. The latest experiments of Dean Radin[3,4] demonstrate to a Sigma 7 level of verification that the Observer Effect in these experiments extends instantaneously to remote observers half a planet away, when directing their attention and intention towards the lab-based equipment, resulting in their *observable manipulation* of its activity in real time.

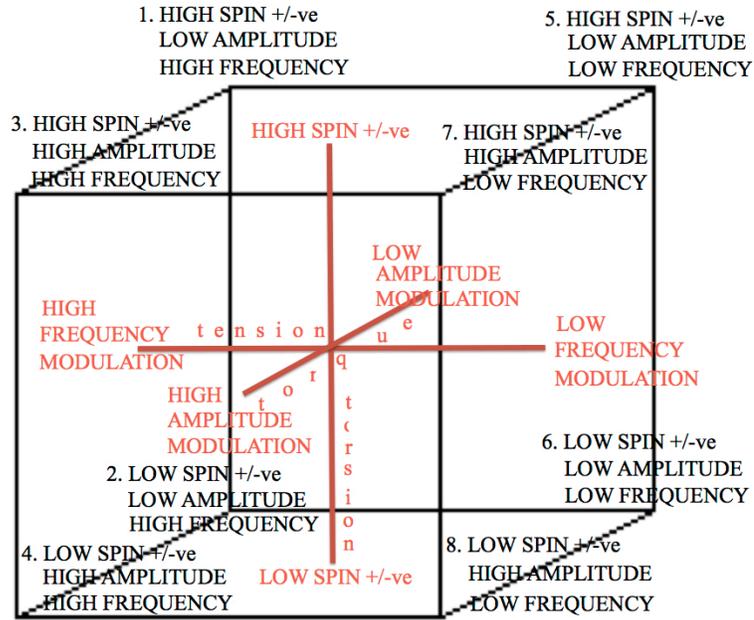
Radin has now become involved with the Global Consciousness Project[2,4], which correlates the radical shifts in random number generators (RNG's) to radical events in their locality generating a massive coherence between observers, such as a calamity, or polarized awareness in mass meditation events. These are dramatic demonstrations of the Observer Effect as Awareness/Energy correlations in the global arena.

Integral Relativity proposes an explanation of the Observer Effect in a later chapter, as to how the Observer's attention and intention are the actual causes of that effect, as encoded in the very nature of a waveform. The experiments of Anirban Bandyopadhyay and Stuart Hameroff (2016)[16] are leading to a proof of this, in demonstrating how a photon's pilot wave operates at a much higher frequency than the photon itself in informing the photon of its intended trajectory and mode of enaction. We predict that further experiments in this will also visually demonstrate the real-time link between the Observer's intentions and the conformation of a wave, as further proof of the First Tenet.

To provide a theoretical basis for further experiments, the First Tenet of Integral Relativity holds that energetic activity is the result of the Observer's attention on a conscious intent; so there must also be an energetic means to execute this intent within the waveform itself. In other words, ***a wave must itself embody the link correlating Awareness and Energy.***

A wave has Amplitude, Frequency and Polarity/Spin, or **AFP**. These three modes also have modulations, as in radio waves with AM, FM and Digital Polarity Modulation. In addition, an Energy wave also has Tension, Torque and Torsion, while Awareness has Attention, Intention and Extension. We therefore propose that the Observer Effect demonstrates how a waveform correlates the Energy/Awareness polarity via AFP modulations in the waveform: The *Attention* correlates with a wave's *Tension*, which compresses/dilates a wave's *Frequency*; and the *Intention* correlates with a wave's *Torque*, which is a wave's force or *Amplitude* to execute the intention; and lastly is the *Extension* of that information into a manifest correlated action through a wave's *Torsion*, which is a wave's capacity of *Polarity or Spin* to traverse from Non-locality to Locality. As a result, a wave has the capability to encode the Eight Fundamental Perspectives through its AFP modulations, shown in Figure 6.

**Figure 6. A Wave Encoding the Eight Fundamental Perspectives**



The latitudinal conformation of a torsional wave is a function of the wave's spin, the reversing polarity of which is its means of self-transduction from one Spectrum to another, and also of its instantaneous presence. Nassim Hamein and Elizabeth Rauscher[17] have modeled the means of this transduction via the quantum geometry of eight vectors deriving from six axial spinors, as two interlocking tetrahedrons that interface the 4D quantum vacuum with 3D space, as shown in Figure 7.

**Figure 7. The Eight Vectors Star Tetrahedron**

**Geometrical visualization of the bi-spinor parameters**

The locations of the 8 real bi-spinor parameters  $\varphi_0$  on the cube are given by the 8 base vectors  $\hat{\varphi}_0 \gamma^\mu \varphi_0$ . The base vectors point to the vertices of the cube.

Each of the 4 central diagonals is associated with one Left and one Right chiral parameter.  
Left: 1,2,3,4 Right: 1,2,3,4

The left and right chiral states are each others parity inverse with respect to the center of the cubical representation.

Connections on the cube's face-diagonals come from the Pauli-matrices acting on a chiral state

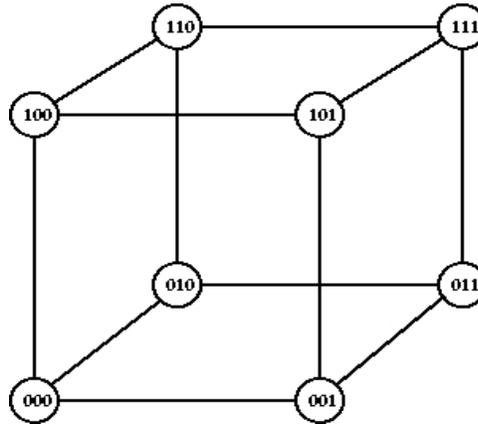
Connections on the cube's edges are from the mass coupling between the left and right chiral states

The arrows represent the U(1) operator acting symmetric in xyz. The rotation of the phases is simultaneous in all directions

The real spin eigen states are symmetric in xyz. There is no preferred direction for one spin as in the complex Dirac field

The resulting spinor coding format, of eight triplet permutations resulting from the six polarities, is exactly and inevitably that used in computer coding, shown in Figure 8 as one Byte comprised of eight Bits. In this way, Artificial Intelligence can be made to mimic Awareness.

**Figure 8. One Byte of Eight Bits**



In other words, the spinors transduce subquantum information from the 4D quantum vacuum into 3D protophysical forms, that in turn fractally provide the octodynamic basis of subatomic (Standard Model) and atomic forms (Periodic Table). In this way there is a continuum of coded intentional Awareness and Energy information between non-locality to locality in a toroidal informational feedback vortex called *Entanglement*.

The Dalai Lama has lined up his best meditators under controlled laboratory conditions, also with Dean Radin at IONS[18], to show how higher Gamma frequency intentional Awareness from 80Hz to 140Hz yields higher frequency Energy enactments in the Lower and Higher Hilbert Spaces. These are *siddhis* or supernatural powers of the yogis. Radin is pursuing these higher awareness enactments such as remote viewing and mind reading under strict laboratory protocols using high-frequency meditators. However, much of this work has already been done clandestinely by the CIA. Radin is also experimenting with intentional OBE's like astral travel, which brings us to the Second Tenet.

## **TOWARDS PROVING THE SECOND TENET**

The Second Tenet of Integral Relativity proposes the continuum and continuity of Awareness, where the Law of Conservation of Energy in all states, via the First Tenet, is extended to the Conservation of Awareness in all states - wherein Awareness cannot be created nor destroyed, but only transformed from one state to another.

Flying in the face of this is the death and disintegration of the sentient organism, and the perennial mystery of life after death. However, there are several doorways into after death and meta-physical experiences, some of which can be verified objectively, and

others subjectively, and all under the standard scientific laboratory protocols, including repeatability by other parties.

Perhaps leading this extensive field is Dr Gary Schwartz and his Afterlife Experiments (U Az)[6], where he empirically explores the transpersonal Domains under multiple-blind protocols, using for each experiment several isolated mediums interfacing with a single deceased entity and their isolated living relatives. The accuracy of exchanged information is at a Sigma 7 level of authenticity. Equaling these results are those Drs Ian Stevenson (U V)[7] and Pim Van Lommel (University of Amsterdam)[8] in their separate field researches into remembered past lives and reincarnation. In addition, Van Lommel extended this into NDE's, where the subjects were able to disclose discreet but verifiable information resulting from their experiences.

Especially amongst Buddhist meditators there is much vivid experiential consensus regarding the nature of the Subtle and Causal Domains, and of past life recall, which is necessarily a high-frequency ability, so the future of this research again favors those with higher awareness capabilities.

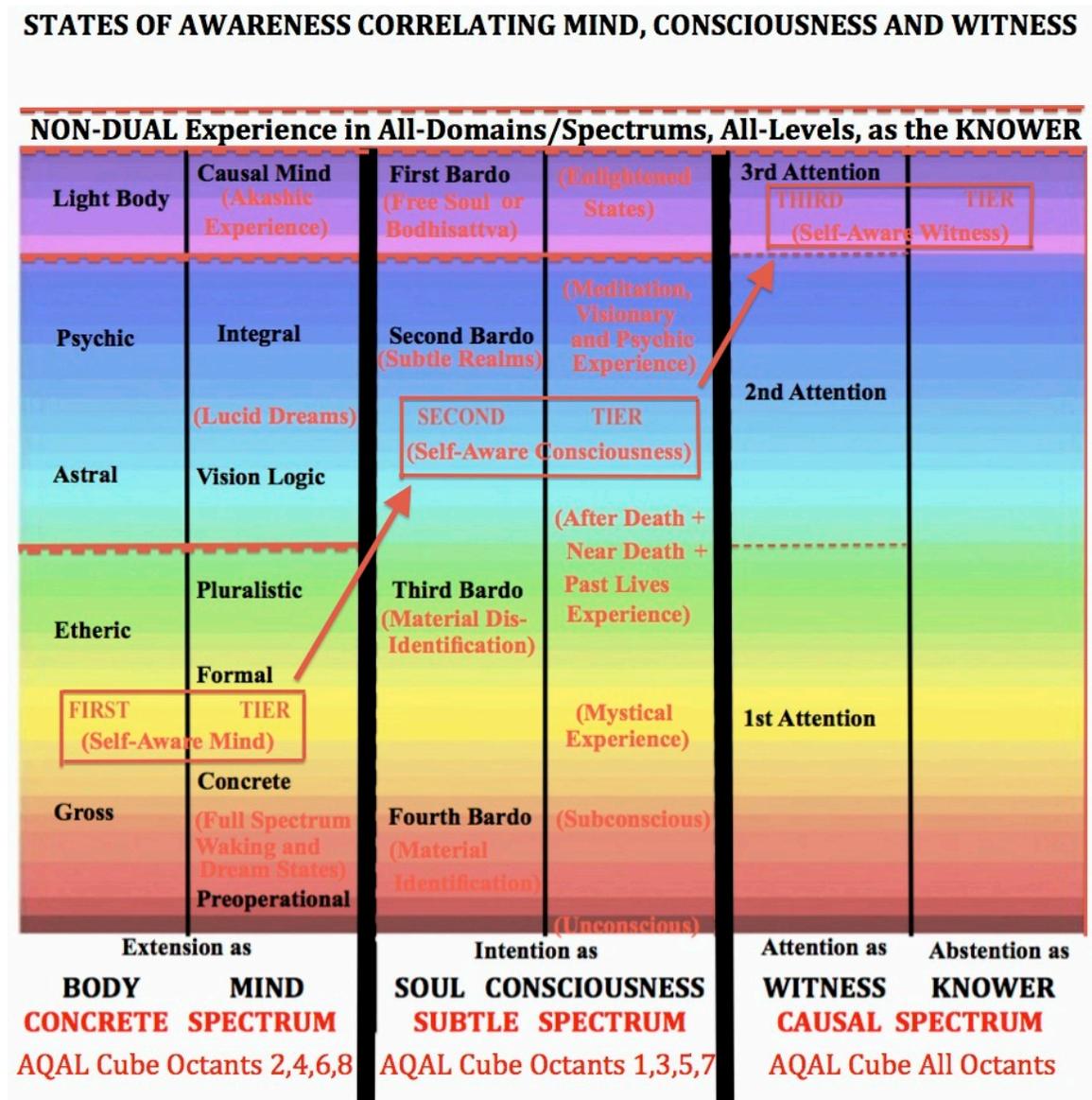
The cosmological picture beginning to emerge in the New Sciences, most notably quantum physics and quantum biology, is strikingly similar to that of ancient cosmologies. The Vedic scientists and meditators several thousand years ago in India mapped out an extremely detailed cosmology with three full-spectrum Domains called *kayas* or vehicles: *Nirmanakaya* as this Concrete Universe, *Sambhogakaya* as the Subtle Universe, and *Dharmakaya* as the Causal Universe. The individual Awareness is said to occupy **all** these Domains through a series of full-spectrum “sheathes” or *koshas*: *Anamayakosha* is this gross physical body, *Pranamayakosha* is its accompanying Energy Body / Chakras, and *Manamayakosha* is the individual Mind as our Concrete Awareness; *Vijnanamayakosha* is our Subtle Awareness; and *Anandamayakosha* is our Causal Awareness. They describe how when the physical *Anamayakosha* dies, the Energy Body *Pranamayakosha* and individual Mind *Manamayakosha* associated with it dissolve back into the undifferentiated Akashic field from which they emerged, where our experiences are stored in the universal memory. However, our *Vijnanamayakosha* or individual Soul awareness persists in the Subtle Domain, and looks for another physical incarnation to continue its evolution with perfect continuity. Buddha said that a self-aware “Continuity of Consciousness” between and during incarnations is a pre-requisite for Enlightenment.

To be able to pursue this scientifically, transpersonal experiential proofs are in the Observers being able to perform the experiential injunctions for each Domain with repeatable results. For the Concrete Domain we require the Self-aware Mind; for the Subtle Domain we require the Self-aware Consciousness; and for the Causal Domain we require the Self-aware Witness. For example, we require that the Observer can differentiate their passive Consciousness-as-Experiencer as witnessing the thoughts, emotions and sensory input of their Mind-as-Experience.

To demonstrate these injunctions, the chart in Figure 9 was presented at the The Science of Consciousness symposium, Tucson (Neale, 2016), showing how all states of

Awareness and correlated Energy enactments are explained by vibratory frequencies that correlate between the Concrete, Subtle and Causal Spectrums at specified levels. The three Spectrum Domains are contiguously embodied and embedded aspects of each other like the Vedic sheathes of Awareness. Integral Relativity proposes that the Concrete Body and Mind, the Subtle Soul and Consciousness, and the Causal Witness, are each full-spectrum, each culminating in the Non-Dual awareness in white. All the cited transpersonal research being done can be located on this chart according to the injunctions required for the research.

**Figure 9. Chart of Awareness States in the Three Spectrum Domains**



The red arrows show how we evolve, via the Domain injunctions in the red boxes, through the Three Spectrums; where our physical **Energy Body** in the far left column is ultimately vibrating as a Light Body; and where our **Mind** in the second column is

ultimately vibrating in Akashic experience; and where our **Soul** in the third column is ultimately vibrating in First Bardo as a Free Soul (Nagual, Bodhisattva); and where our **Consciousness** in the fourth column is ultimately vibrating in Third Stage Enlightenment, and where our **Witness** in the fifth column is ultimately vibrating in the Third Attention. The red dotted lines across each column are the vibrational barriers we need to transcend via the injunctions needed for awareness access to the next Domain/Spectrum.

The **Knower/Observer** in the sixth column is where we each individually operate from in all three Domains. According to the First Tenet of Integral Relativity, the Observer both **views** as Awareness and **enacts** as Energy through all Domains *at specified Levels/Colors*. So the Observer **views** through the Causal Spectrum as Witness awareness, and **enacts** through the Causal Spectrum as the Attention; the Observer **views** through the Subtle Spectrum as Consciousness awareness, and **enacts** through the Subtle Spectrum with Intention as Subtle Energy and Soul; the Observer **views** through the Concrete Spectrum as Mind awareness, and **enacts** through the Concrete Spectrum with Extension as Concrete Energy and Body. The first column **Body** is also synonymous with the vibrational frequencies of the Chakras.

From this it follows that: *the Witness can be defined as* the Knower/Observer viewing through the Causal Spectrum of information; that *Consciousness can be defined as* the Knower/Observer viewing through the Subtle Spectrum of information; and *Mind can be defined as* the Knower/Observer viewing through the Concrete Spectrum of information.

We propose that such a map can be used to help experimenters and their subjects identify and locate their meta-physical experiences. However, by the same token, such a map also describes **a model of moment-to-moment perception** that operates for each sentient individual through All-Dimensional Hilbert Spaces, which leads us to the Third Tenet.

## TOWARDS PROVING THE THIRD TENET

The Third Tenet describes the continuum of Consciousness, Energy, Mind and Matter via the Kosmic Constant, which is the primordial frequency or carrier wave of Energy, from which all subsequent phenomena emerge through the CEMM continuum.

Because Planck's Law maintains that information is proportional to frequency, and that torsional waves at the Planck scale travel at *quasi-infinite* velocities, it follows that such a wave of *quasi-infinite* frequency in the quantum vacuum (Zero Point Field) tends towards an amplitude related "omnipotence", a frequency related "omniscience" and a polarity related "omnipresence", which, through the Four Tenets, *are* the capacities of Causal Awareness. And because Awareness and Energy share full-spectrum Domains, the Awareness-Energy correlation in a waveform must apply all the way through to an "infinite frequency", or Kosmic Constant, as a Primordial Vibration.

We propose here, that within such a fundamental vibration, in the "Carrier Wave" as it were of *physical existence* in the Zero Point Field, there is the informational capacity of a

Universal Memory that is none other than the Hindu *Akasha*, or the “Book of Records” of most religions. And implied is that for the Awareness to enter Akashic experience is to be vibrating in the “Ultra Violet” band of the Mind Spectrum of nD Hilbert Space.

Needless to say, there have been countless experiential claims of Enlightenment (aka the Causal injunction) throughout history to the present, that this is so.

## **THE FOURTH TENET - EXPLAINING THE OBSERVER EFFECT**

The Fourth Tenet claims that the perception of any given observed phenomenon is relative to the Awareness frequencies of the Observers of that phenomenon. This is the key to explaining the Observer Effect.

Integral Relativity proposes that Awareness in the three Spectrums/Domains is the Knower/Observer viewing through **the ground states of each Domain**. The ground state is a given Spectrum/Domain’s fundamental frequency, as the Carrier Wave of all subsequent frequencies **in that Domain**. So for the Concrete Domain, the ground state of a 3D Observer is 4D Mind residing in the Zero Point Field, or Quantum Vacuum.

For a 3D Observer at rest, making no observation, their 4D Mind is in its ground state as latent potential. The moment an intention comes to Mind, such as to make an observation, that intention originates in the Observer’s 5D Consciousness, which also resides as a 5D Carrier Wave embedded in and embodied by the 4D Mind ground state. The 5D energetic intention has the effect of activating 4D Mind from a state of latent to a state of kinetic potential, which is the precursor of an energetic 3D action or kinesis correlated to the intention. The continuum for this process is *entanglement*, as described by Hamein and Brown’s Unified Spacememory Network[5].

In the Observer Effect, the switch from the 4D Mind’s latent action potential to kinetic action potential is the switch from the Observer as Awareness to the Observer as Energy, according to the First Tenet. This is the energetic effect that is classically described in the Double Slit experiment as a “wave collapse to particle”. With this new model of Integral Relativity, we can now see that *in the Observer Effect there is no actual wave collapse and no actual particle*, but simply a shift from a wave’s latent potential as Awareness to its kinetic potential and resulting Energy kinesis. We propose the “wave collapse” is when the 5D Consciousness coded intention in *superposition* switches to *infraposition* as the 4D Mind’s kinetic potential. This represents a shift in AFP Band Modulation from the intentional information encoded in a 5D Consciousness waveform, via spin transduction entanglement, to 4D Mind with lower frequencies and higher amplitudes, as a step-down or infrapositioning of coded information, which is now ready for correlated 3D kinesis/enactment. Thus there is a perfect continuity of coding from 5D to 4D to 3D.

In the mentioned Anirban Bandyopadhyay and Stuart Hameroff collaboration (2016), it has been demonstrated how an encoded photon appropriately transduces its information to a biophoton, via selected Alpha/Beta dimers in the helix of a neuron’s microtubule,

which is then brought into correlated 3D activity either via the cell's DNA, or a larger network such as the brain itself. In the experiment one can actually see the dimers flashing on and off in the microtubule as the information is decoded/encoded from the photon to the biophoton. Nassim Hameiri and William Brown (2017)[19] show that this process is enabled by the coded resonance of the water column within the microtubule itself. Bandyopadhyay has recorded this symphonic resonance, showing how the biophotons are then converted to *phonons*, which then resonantly orchestrate the information into the coded assembly of ions and molecules as cellular messengers.

This entire process is in fact *the Observer Effect in extension via entanglement*. Integral Relativity proposes and predicts that this entire sequence of coding is fractal in nature, as the octodynamic fractalization of information via Eight Fundamental Perspectives, into the increasing dimensional density of Hilbert Spaces. We are in preparation of a sister-paper to this effect – *The Octodynamic Coding of Awareness and Energy*.

All this suggests a new model of information theory that further explains the Observer Effect. In elucidating Integral Relativity it has become clear that Awareness and Energy operate through correlated levels in a holarchy of Spectrum Domains. The Spectrum Domains proposed by Integral Relativity are therefore spectrums of information through which correlated levels of Awareness and Energy operate, where information itself is Awareness-neutral and Energy-neutral. Information in this context is therefore encoded in unique configurations of AFP standing-wave modulations, and instantaneously accessed by *correlated* unique AFP wave modulations of Awareness via entanglement, as described above. This model is in perfect correspondence with Hameiri's Unified Spacememory Network, which posits the total connectivity of information through entanglement between Hilbert Spaces.

We now approach this through the mathematical model of Davide Fiscaletti[15], who for the purposes of this paper has extended the Advanced Relativity math to include Integral Relativity in the next chapter.

## QUANTUM ENERGY AND MIND IN ADVANCED RELATIVITY

Advanced Relativity, Sorli, Fiscaletti(2016), proposes the Tenet: *The Equation of Mind with Primordial Matter*, whereby the Physical Ground of being and awareness reside in the Zero Point Field. First we consider the emergence of Quantum Energy from the subquantum ground of physical existence in the Zero Point Field, along with its awareness correlate as Mind. In other words, they propose that the Zero Point Field is also the ground of pre-quantum Mind. It is here that we can begin to elucidate the "Observer Effect" embedded in all quantum experiments, as proposed in AR, and from there begin to formulate Integral Relativity.

**AR** is a natural extension of Einstein's **GR** and of quantum mechanics, which fully integrates the Observer, yielding to a suggestive unification of Space, Matter and Mind. Sorli, Fiscaletti and Mageshwaran (2016).

In **AR**, universal space has its origin in a fundamental three-dimensional (3D) quantum vacuum, and time is merely the numerical order of changes, i.e. motion. In **AR**, elementary particles and stellar objects diminish the energy density of space in correspondence to the amount of their energy. Diminished energy density of space can be considered the origin of mass and gravity from the micro to the macro scale. Each material object endowed with a mass  $m$  is produced by a change of the energy density of space on the basis of equation

$$m = \frac{V \cdot \Delta\rho_{qvE}}{c^2} \quad (1),$$

where

$$\Delta\rho_{qvE} = \rho_{pE} - \rho_{qvE} \quad (2),$$

$$\rho_{qvE} = \rho_{pE} - \frac{mc^2}{V} \quad (3),$$

and

$$\rho_{pE} = \frac{m_p \cdot c^2}{l_p^3} \quad (4)$$

is Planck's energy density (the energy density of space in the absence of material objects, which is the maximum energy density that can be sustained in the minimum quantized space, and can be considered as the ground state of the same physical flat-space

background),  $m$  is the mass of the object,  $V$  is its volume,  $m_p$  is Planck mass and  $l_p$  is Planck length. Equations (1)-(3) describe baryonic matter both in macrophysics and in microphysics.

In **AR**, each material particle corresponds to an opportune excited state of the quantum vacuum defined (in the center of that particle) by the energy density (3) and by the change of the energy density (2), with respect to the ground state, and, in analogous way to Chiatti's and Licata's transactional approach (Chiatti, 2012), its evolution is determined by opportune **Special Relativity** processes of creation/annihilation of quanta. It is described by a wave function as two components satisfying a time-symmetric extension of the Klein-Gordon quantum relativistic equation

$$\begin{pmatrix} H & 0 \\ 0 & -H \end{pmatrix} C = 0 \quad (5)$$

$$H = \left( -\square^2 \partial^\mu \partial_\mu + \frac{V^2}{c^2} (\Delta\rho_{qvE})^2 \right)$$

where equation (5) corresponds to the following equations

$$\left( -\square^2 \partial^\mu \partial_\mu + \frac{V^2}{c^2} (\Delta \rho_{qvE})^2 \right) \psi_{Q,i}(x) = 0 \quad (6)$$

for creation events and

$$\left( \square^2 \partial^\mu \partial_\mu - \frac{V^2}{c^2} (\Delta \rho_{qvE})^2 \right) \phi_{Q,i}(x) = 0 \quad (7)$$

for destruction events. By writing the two components of the wave function in polar form

$$\psi_{Q,i} = |\psi_{Q,i}| \exp\left(\frac{iS_{Q,i}^\psi}{\square}\right) \quad (8),$$

$$\phi_{Q,i} = |\phi_{Q,i}| \exp\left(\frac{iS_{Q,i}^\phi}{\square}\right) \quad (9)$$

and decomposing the real and imaginary parts of the Klein-Gordon equation (5), for the real part one obtains a couple of quantum Hamilton-Jacobi equations that, by imposing the requirement that they are Poincarè invariant and have the correct non-relativistic limit, assume the following form

$$\partial_\mu \begin{pmatrix} S_{Q,i}^\psi \\ S_{Q,i}^\phi \end{pmatrix} \partial^\mu \begin{pmatrix} S_{Q,i}^\psi \\ S_{Q,i}^\phi \end{pmatrix} = \frac{V^2}{c^2} (\Delta \rho_{qvE})^2 \exp\begin{pmatrix} Q_{Q,i}^\psi \\ -Q_{Q,i}^\phi \end{pmatrix} \quad (10),$$

while the imaginary part gives the continuity equation

$$\partial_\mu \left( \rho \partial^\mu \begin{pmatrix} S_{Q,i}^\psi \\ S_{Q,i}^\phi \end{pmatrix} \right) = 0 \quad (11)$$

where  $\rho$  is the ensemble of particles associated with the spinor under consideration and

$$Q_{Q,i} = \frac{\square^2 c^2}{V^2 (\Delta \rho_{qvE})^2} \begin{pmatrix} \left( \nabla^2 - \frac{1}{c^2} \frac{\partial^2}{\partial t^2} \right) |\psi_{Q,i}| \\ \frac{|\psi_{Q,i}|}{\left( \nabla^2 - \frac{1}{c^2} \frac{\partial^2}{\partial t^2} \right) |\phi_{Q,i}|} \\ - \frac{\left( \nabla^2 - \frac{1}{c^2} \frac{\partial^2}{\partial t^2} \right) |\phi_{Q,i}|}{|\phi_{Q,i}|} \end{pmatrix} \quad (12)$$

is the quantum potential of the vacuum (Fiscaletti and Sorli (2014); Fiscaletti and Sorli, (2016a); Fiscaletti and Sorli (2016b)).

The quantum potential of the vacuum is the fundamental entity which guides the occurring of the processes of creation or annihilation in space, and makes the 3D quantum vacuum a fundamentally non-local manifold. In virtue of the quantum potential (12), the 3D quantum vacuum, as a fundamental medium subtending the observable forms of matter, energy and space-time, is a timeless background. On the basis of the quantum potential of the vacuum (12), the behavior of matter in the universe can be seen as an undivided network of **RS** processes that take place in the 3D timeless quantum vacuum and time exists merely as a mathematical parameter measuring the dynamics of a particle or object.

In quantum mechanics, the energy of the photon is:

$$E = n \cdot h \cdot \nu ,$$

where  $h$  is the Planck constant,  $\nu$  is the photon frequency, and  $n$  is the integer (1,2,3...). In **AR**, the photon is the wave of universal space, also called the “3D quantum vacuum” or “3D physical vacuum”, which is the matrix of Mind.

We can describe Awareness as the wave of  $n$  dimensional Hilbert space (where  $n$  is cardinal number of natural numbers). In physics we observe the photon in a 3D material world. When the frequency of the 3D photon is increased to an infinite value, it enters the higher dimensions of Hilbert spaces. Finally in  $n$ -dimensional Hilbert space, the energy of the photon is transformed into energy of the Subtle Spectrum and Consciousness. This is in fact the process of meditation, in raising our vibration to subtle states of awareness. We can describe this as:

$$\lim_{\nu \rightarrow \infty, n \rightarrow \infty} n \cdot h \cdot \nu = \text{consciousness} .$$

where integer  $n$  represents the dimensionality of Hilbert spaces. When vibration  $\nu$  becomes infinite, integer  $n$  becomes the cardinal number of natural numbers. Consciousness is the vibration of  $n$ -dimensional Hilbert space whose limit tends to an infinite value of frequency, and zero value of the wavelength  $\lambda$ . Out of that, it follows that the velocity  $\nu$  of Consciousness is zero:

$$\nu = \nu \cdot \lambda = 0$$

This mathematical model is not a real picture of Consciousness; it only indicates its real nature. Consciousness does not move in space. When the vibration of Consciousness goes lower it enters the Concrete Spectrum as Mind and light.

Quantum Mind acts via bio-photons on the microtubules of the brain. Information flow from the Mind to the 3 dimensional living matter composing living organisms runs from  $n$  dimensional Hilbert space of Consciousness via the less dimensional Hilbert spaces of Mind, until it arrives in 3 dimensional matter. Each “information jump” to the space with a lower number is accompanied by the lower energy of the “photon”, according to the

following formula:

$$E = n \cdot h \cdot \nu ,$$

where  $n$  is an integer (1, 2, 3, ...),  $h$  is Planck's constant, and  $\nu$  is the frequency. In the formula above we can see the Planck constant *is* the constant, which bridges different Hilbert spaces.

Our standard view that the vibration can exist only in a 3D reality is now upgraded to the understanding that higher dimensions do exist, and that they have their own vibrations (these are different layers of old “ether” in spiritual sense). The Planck constant is the constant connecting these n-dimensional vibrations.

A Photon observed in a 3D world is connected with Mind via Hilbert spaces. Hence biophotons, discovered by Russian physicists Alexander Gurwitsch Gurrijef and German physicists Albert Fritz Popp, are of immense importance. Information that flows from the higher Hilbert spaces to the lower Hilbert spaces designs not only the functioning of the single living organism, but also entire the evolution of all life developing in the universe.

From the formula  $E = n \cdot h \cdot \nu$  we can see that the energy of primordial Awareness in n-dimensional Hilbert space has infinite energy. The 3D world exists within this poll of infinite cosmic energy. With the lowering of frequency, while descending in the Hilbert spaces with fewer dimensions, the infinite energy of Consciousness becomes more and more solid, until finally we can measure it in a 3D world as a photon. Recent discoveries confirm matter is made out of photons:

<http://phys.org/news/2013-09-scientists-never-before-seen.html>

<https://www.theguardian.com/science/2014/may/18/matter-light-photons-electrons-positrons>

## **FROM ADVANCED RELATIVITY TO INTEGRAL RELATIVITY**

We have stated that because Planck’s Law maintains that information is proportional to frequency, and that torsional waves at the Planck scale travel at *quasi-infinite* velocities, it follows that such a wave of *quasi-infinite* frequency in the Zero Point Field tends towards an amplitude related “omnipotence”, a frequency related “omniscience” and a polarity related “omnipresence”, which, through the Four Tenets, *are* the capacities of Causal awareness.

We now reconsider the two formulae previously stated:

1.  $E = n \cdot h \cdot \nu ,$

where  $h$  is the Planck constant,  $\nu$  is the photon frequency, and  $n$  is the integer (1,2,3...). In **AR**, the photon is the wave of universal space, also called the “3D quantum vacuum” or “3D physical vacuum”.

$$2. \quad \nu = \nu \cdot \lambda = 0,$$

where Consciousness is the Subtle Spectrum of n-dimensional Hilbert Spaces, whose limit tends to an infinite value of frequency, and zero value of the wavelength  $\lambda$ . From these it follows that the velocity  $\nu$  of Consciousness is zero.

In other words, there is a resonant continuum of awareness-as-information and energy-as-information between the Subtle and the pre-quantum-to-quantum Concrete Domains; and that this continuum is upheld by the First Tenet of Integral Relativity:

*Energy is the action potential and kinesis of Awareness, and is therefore Awareness made existent (as the ZPF, aka Mind).*

Whereas the Zero Point Field and its pre-quantum Mind correlate provide the ground of physical being, this is NOT the Ground of All Being of spiritual fame. To include the latter we now consider the “big picture” of Integral Relativity – by including the Subtle Energy Spectrum and its Subtle Consciousness correlate.

Through the Four Tenets, it follows that every level of Awareness through the Concrete, Subtle and Causal Spectrums have their correlates of Energy activity as bodies and realms of ex-istence. *Integral Relativity therefore proposes that these correlated levels of Awareness and enactment are synonymous with the Hilbert Spaces.*

Going back to our mathematical treatment of Advanced Relativity, the quantum potential of the vacuum (equation 12) may be considered the origin of Concrete awareness as Mind. Depending on the frequency modes which characterize the creation and destruction processes of the 3D quantum vacuum, the information processing of thought and communication at all levels can be described in terms of Fourier transforms (Sorli, Fisaletti and Mageshwaran, 2016). By expressing the wave function in terms of the Fourier frequency modes, which represent its information channels (in the sense that they give rise to different levels of consciousness), equations (6) and (7) concerning the evolution of creation events and destruction events of quanta become respectively

$$\left( -\square^2 \partial^\mu \partial_\mu + \frac{V^2}{c^2} (\Delta \rho_{qvE})^2 \right) \int_{-\infty}^{+\infty} g_{Q,i}(\nu) e^{2\pi i \nu t} = 0 \quad (13)$$

and

$$\left( \square^2 \partial^\mu \partial_\mu - \frac{V^2}{c^2} (\Delta \rho_{qvE})^2 \right) \int_{-\infty}^{+\infty} h_{Q,i}(\nu) e^{2\pi i \nu t} = 0 \quad (14),$$

where

$$\psi_{Q,i}(t) = \int_{-\infty}^{+\infty} g_{Q,i}(\nu) e^{2\pi i \nu t} d\nu \quad (15)$$

and

$$\phi_{Q,i}(t) = \int_{-\infty}^{+\infty} h_{Q,i}(\nu) e^{2\pi i \nu t} d\nu \quad (16),$$

$$g_{Q,i}(\nu) \quad h_{Q,i}(\nu)$$

and being the frequency modes characterizing the creation and destruction processes respectively. In this way, in the quantum Hamilton-Jacobi equations (10)-(11), the quantum potential of the vacuum which guides the occurring of the processes of creation or annihilation in space and makes the 3D quantum vacuum a fundamentally non-local manifold, assumes the following form:

$$Q_{Q,i} = \frac{\square^2 c^2}{V^2 (\Delta \rho_{qvE})^2} \left( \frac{\left( \nabla^2 - \frac{1}{c^2} \frac{\partial^2}{\partial t^2} \right) \left| \int_{-\infty}^{+\infty} g_{Q,i}(\nu) e^{2\pi i \nu t} \right|}{\left| \int_{-\infty}^{+\infty} g_{Q,i}(\nu) e^{2\pi i \nu t} \right|} - \frac{\left( \nabla^2 - \frac{1}{c^2} \frac{\partial^2}{\partial t^2} \right) \left| \int_{-\infty}^{+\infty} h_{Q,i}(\nu) e^{2\pi i \nu t} \right|}{\left| \int_{-\infty}^{+\infty} h_{Q,i}(\nu) e^{2\pi i \nu t} \right|} \right) \quad (17).$$

According to equation (17), one can say that the non-local action of the quantum potential to guide the occurring of the processes of creation or annihilation in space is determined by the frequency modes, which appear in the wave of the quantum vacuum. In other words, the frequency modes appearing in relations (15) and (16) may be considered the different information channels of the quantum potential of the vacuum, the different levels of energy of consciousness. The different ranges and levels of

Consciousness are associated with the frequency modes  $g_{Q,i}(\nu)$  and  $h_{Q,i}(\nu)$  characterizing the creation and destruction events of quanta in the 3D quantum vacuum.

Moreover, the fundamental quantum Hamilton-Jacobi equations (10)-(11) of the 3D quantum vacuum become

$$\partial_{\mu} \begin{pmatrix} S_{Q,i}^{\psi} \\ S_{Q,i}^{\phi} \end{pmatrix} \partial^{\mu} \begin{pmatrix} S_{Q,i}^{\psi} \\ S_{Q,i}^{\phi} \end{pmatrix} = \frac{V^2}{c^2} (\Delta \rho_{qvE})^2 \exp \left( \begin{array}{c} \left( \nabla^2 - \frac{1}{c^2} \frac{\partial^2}{\partial t^2} \right) \left| \int_{-\infty}^{+\infty} g_{Q,i}(\nu) e^{2\pi i \nu t} \right| \\ \hline \left| \int_{-\infty}^{+\infty} g_{Q,i}(\nu) e^{2\pi i \nu t} \right| \\ \left( \nabla^2 - \frac{1}{c^2} \frac{\partial^2}{\partial t^2} \right) \left| \int_{-\infty}^{+\infty} h_{Q,i}(\nu) e^{2\pi i \nu t} \right| \\ \hline \left| \int_{-\infty}^{+\infty} h_{Q,i}(\nu) e^{2\pi i \nu t} \right| \end{array} \right) \quad (18),$$

while the imaginary part gives the continuity equation

$$\partial_{\mu} \left( \rho \partial^{\mu} \begin{pmatrix} S_{Q,i}^{\psi} \\ S_{Q,i}^{\phi} \end{pmatrix} \right) = 0 \quad (19).$$

Equation (18) may be seen as a real Law of Conservation of Consciousness, while equation (19) may be considered as a Law of Continuity of Consciousness. Equation (18) physically means that Consciousness cannot be created nor destroyed but only transformed from one state to another. Equation (19) expresses always a conservation law, which can be interpreted as a conservation of the probability to observe the state of Consciousness corresponding to one or more specific frequency modes in whatever point in space. The quantum potential of the vacuum (17) may be seen as the real energy governing the behavior of Consciousness and its non-local action in the universal space.

In this way, by introducing the frequency modes (15) and (16) which characterize the creation and destruction processes of the 3D quantum vacuum, in terms of Fourier transforms, inside the mathematical formalism of the **RS** processes of the 3D quantum vacuum given by equations (5)-(12), **AR** can be extended through levels of Awareness yielding to a real Integral Relativity (**IR**), which turns out to be a metatheory inclusive of all structures and phenomena. ‘Therefore, by definition, it is inclusive not only of all Energy states but also of all Consciousness states aware of such phenomena. As a result, Integral Relativity must deal with Consciousness and Energy as two sides of the same coin.’

The mathematical formalism expressed by equations (13)-(19) can be considered the starting-point of Integral Relativity and the explanation of the different consciousness

states. Integral Relativity based on equations (13)-(19) can be seen as a Local-to-Nonlocal extension of Einstein's Special Relativity, where the relativity between Local/Concrete Energy and Mass is extended to the relativity between Nonlocal/Subtle Energy and Consciousness. Integral Relativity advocates the primacy of Awareness as the initiator of all en-action – *En-ergia* – Energy, expressed just by the quantum potential of the vacuum (17) determined by the frequency modes which appear in the wave of the quantum vacuum. On the basis of equations (13)-(19), any energetic phenomenon has its correlate in Consciousness. In particular, the fundamental starting-point equations of Integral Relativity are the equation (17) expressing the link of the quantum potential of the vacuum with the different frequency modes, the conservation law of Consciousness (18) and the continuity law of Consciousness (19).

It remains to be seen, how are Consciousness and Mind related? Here, we consider the problem of the emergence of Quantum Energy from the ground of physical existence in the Zero Point Field associated with the 3D quantum vacuum, along with its awareness correlate as Quantum Mind. In other words, we propose that the Zero Point Field defined by the quantum potential of the vacuum (17) is also the ground and the origin of the Quantum Mind. In particular, we define (15) and (16) as the two components of the fundamental wave function describing the quantum vacuum. In other words, (15) and (16) are the components of the fundamental ground state of Mind, corresponding to the fundamental, primordial quantum energy of the Zero Point Field.

Human awareness can be defined as the synchronization degree with the state of components (15) and (16), as finite approximations of the general state of components (15) and (16) and thus can be expressed as a superposition of a finite number of states

corresponding to specific frequency modes:

$$\psi_{Q,i}(t) = \sum_i |g_{Q,i}(v)\rangle \quad (20)$$

and

$$\phi_{Q,i}(t) = \sum_i |h_{Q,i}(v)\rangle \quad (21).$$

The Observer effect embedded in all quantum experiments can be elucidated by considering relations (20) and (21).

In Integral Relativity, Consciousness can be expressed as a wave of a  $n$  dimensional Hilbert space (where  $n$  is cardinal number of natural numbers) and this wave is decomposed in specific several frequency modes. When the frequency of 3D photons increases to an infinite value, it is also entering higher dimensions of Hilbert spaces. As a consequence, in  $n$ -dimensional Hilbert space energy of the photons is transformed into energy of Consciousness. In other words, the fundamental, Primordial Consciousness (namely the Kosmic Constant defined by the 3rd tenet of Integral Relativity) can be described as a fundamental wave, which has infinite frequency and exists in  $n$ -dimensional Hilbert space:

$$\lim_{\nu \rightarrow \infty} n \cdot h \cdot \nu = \text{consciousness} \quad (22)$$

where  $h$  is the Planck constant,  $\nu$  is the photon frequency. When vibration  $\nu$  becomes infinite, the integer  $n$  becomes a cardinal number of natural numbers. Cosmic Consciousness is therefore the vibration of  $n$ -dimensional Hilbert space whose limit tends to an infinite value of frequency and zero value of the wave length  $\lambda$ . Out of that it follows that the velocity  $v$  of consciousness is zero:

$$v = \nu \cdot \lambda = 0 \quad (23)$$

which means that, at a fundamental level, the speed of transmission of Consciousness states is zero, namely Consciousness is an immediate, non-local phenomenon. When the vibration of Consciousness goes lower it transforms into light as Mind as a continuum of Energy and Awareness. In correspondence, the fundamental state defined by the components (15) and (16) is approximated by the Mind with a finite state of components (20) and (21). It is in virtue of the finite superposition states (20) and (21) that subquantum Mind acts via bio-photons on the microtubules of the brain. Because of the non-local action of the quantum potential of the vacuum (17) on the states of components (20) and (21), information flow from the Mind to the 3-dimensional living matter composing living organisms runs from  $n$  dimensional Hilbert space via less dimensional Hilbert spaces, until it arrives in 3-dimensional matter. Each “information jump” to the space with a lower number is accompanied by the lower energy of the “photon”, according to equation

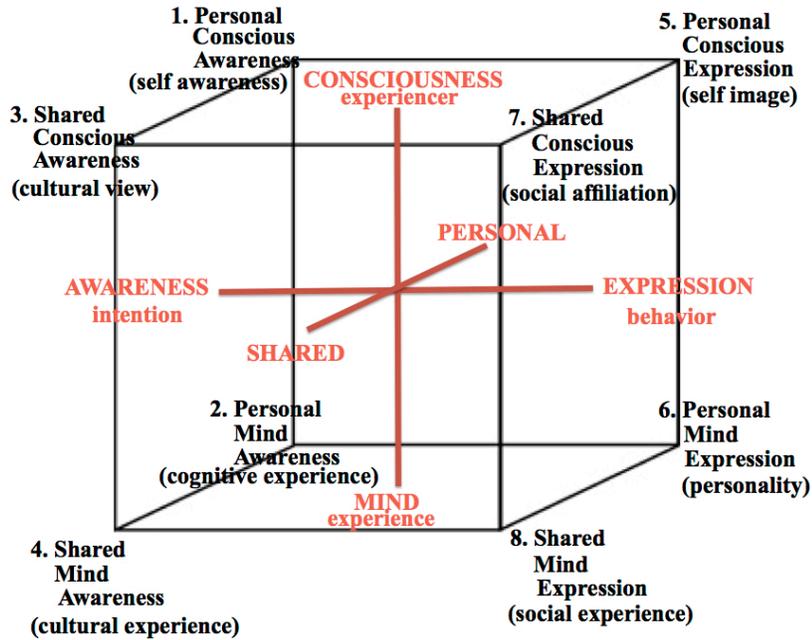
$$E = n \cdot h \cdot \nu \quad (24),$$

where we can see that the Planck constant *is* the constant, which bridges different Hilbert spaces. Thus, in Integral Relativity, our standard view that vibration can exist only in a 3D reality can be now upgraded with the understanding that higher dimensions do exist, and that they have their own vibrations (these are different layers of old “ether” in spiritual sense) of infinitely variable frequency modes.

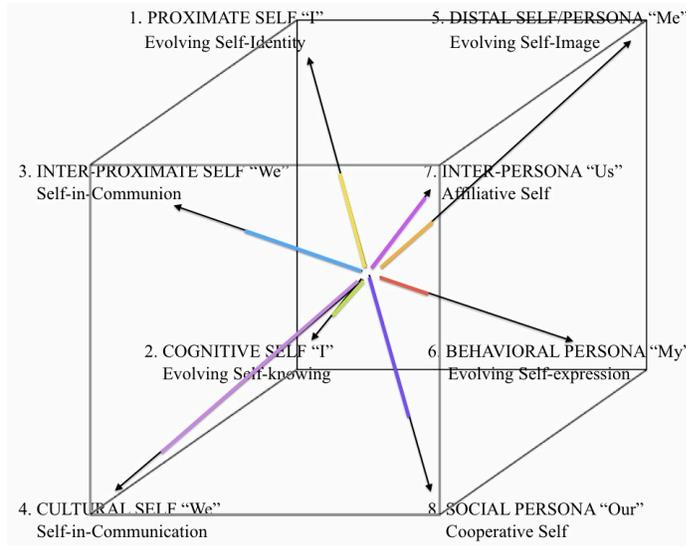
## CONCLUSION

Integral Relativity as a Metatheory appears to be developing as a Fractal Metatheory. When modeled as a tri-axial cosmology of manifestation generating Eight Fundamental Perspectives, this octo-dynamic then fractals into a myriad octaves of manifestation all the way through the octodynamics of vibrational frequencies, the octodynamics of the Standard Model, the octodynamics of the Periodic Table, the octodynamic Classification of Phenomena (or Integral Methodological Pluralism), and onwards through to the octodynamic roots of our biological Self-awareness shown in Figures 10 and 11.

### Figure 10. The First Person Template



**Figure 11. The Eight First Person Pronouns**



It is no coincidence that the world languages differentiate an *octet* of personal pronouns for each Person. And so it seems that Awareness as our conscious worldview is formed according to the same Energy fractal paradigm as the very Kosmos we inhabit. The idea of a fractal or holographic cosmology is becoming more and more self-evident in the New Sciences as time goes by. And so it is of no great surprise that a truly Integral Kosmology, as proposed by Integral Relativity, would be fractal by nature both as Observer and Observed.

The Knower/Observer, Science, is therefore the supreme overseer of Science as “knowing” in its dogged quest for Truth on all levels. Following this paradigm, it would seem that our evolution is to be the knower of more and more experiential knowledge, all-the-way-up to a Supreme Knower/Consciousness of a Supreme Knowledge/Energy. So we are drawn again and again to the inevitable and inescapable conclusion that Awareness and Energy are indeed two sides of the same coin – all-the-way-down, all-the-way-up. Our own conscious perspectives matter, because they result in our own material manifestation. Integral Relativity provides a model and mathematical framework to explain how this is so.

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