

# **Intuitive consciousness and the logic of single field physics: A conscious synergy of worldviews and theories**

**James Beichler and Sperry Andrews**

Abstract: Many scientists have come to believe that any true unification model in physics must include a concept of consciousness as well as a model for the mind that interprets the external physical/material world. And, that number is growing. This particular physical model does just that. In fact it goes much further. Since Beichler's single field theory (SFT) includes a physical model of the neural net and explains how Mind and Consciousness can emerge from the physics of living organisms, it assimilates more intuitive models such as Andrews' 0-D point Void which witnesses and co-creates higher-dimensional Riemannian geometrical realities as well as other more generalized physical models of consciousness to form a truly synergistic model of reality. In other words, physical reality and the consciousness that perceives and interprets that reality both come from the same source, they are co-created at the very beginning of the universe. A singular discrete 0-D point/twist Void emerged within the absolute spaceless-timeless Void of nothingness that preceded everything and through a logical sequence of events produced everything that now exists as our universe. This synergistic model goes well beyond the notion of Mind and Consciousness as mere perceivers and interpreters of the external material/physical world. It clearly demonstrates that the precursors to our experience of Consciousness are fundamental elements and active participants in creating the physical world that we perceive and scientifically interpret through the application of physics.

## **Andrews' intuitive approach to consciousness science**

It is well known that intuitives are often the very people who intimately experience first-hand knowledge of consciousness. Their views of consciousness and the inner workings of the world in general greatly differ from those of ordinary people and the majority of scientists. Even the word 'intuition' has been looked down upon in science as recently as a few decades ago. Most scientists consider their own worldview above reproach, believing their insights are based upon acute observations of the external world around them. In general, scientists have historically looked down upon all types of intuitive knowledge and have obstinately refused to consider intuitive knowledge of consciousness and how it works in relation to the world as a whole. They view intuitive data with suspicion as no more than anecdotal evidence, without any scientific validity. Yet that evidence or data, anecdotal or not, can provide valid observations of consciousness and how consciousness works in the world at large. So to those few scientists willing to seriously consider information from intuitives, it can seem as though conservative scientists are wrong on this issue, as well as overly biased by acting completely in an unscientific manner within the broader meaning of science itself.

Keeping this in mind, it is both interesting and informative to consider insights brought forward by Sperry Andrews whose under-graduate degree in science and ongoing study has been enhanced as a Near Death Experiencer (NDEr) from the age of four, over sixty years ago. Andrews has proposed a speculative bottom-up theory in physics of everything originating from nothing, including how top-

down theories, such as general relativity and quantum mechanics, might approximate Beichler's single field theory as well as theoretical models that posit a consciousness space or universe. Andrews asks if the solution to this question may be found in Bernhard Riemann's original conception of space curvature, whereby an  $n$ -dimensional space is embedded in an  $n+1$  dimensional manifold: *i.e.*, all 3-D points are united at one point in 4-D. Then, if  $n = 0$ , that which is dimensionless could be embedded in 1, 2, 3, 4, 5 and 6-D. If so, all point-centered events would share a dynamic relationship, as would every dimensionless point in our commonly-sensed physical 3-D reality. The overall action in this 0 to 6-D ("holomovement") might offer each of us a constant 6-D context through which we can witness and share experientially.

What Paul LaViolette calls sub-quantum kinetics; the Russians, torsion fields; David Bohm, pilot waves; and Rupert Sheldrake, morphogenetic fields, may be energetic information that changes, and is changed, by the participation of our biological forms—*affecting a bio-genesis that is both nonlocal and universal in nature*. Brian Swimme, Duane Elgin, these authors, as well as others, submit that all-things re-originate every moment. Does the absence of form unite and coordinate countless potentials, possibilities, fields, forces and particle-like behavior, while also sustaining the indivisibility and the re-generation of the whole? We wish to show how this is physically possible.

*"Within the expanse of spontaneous presence is the ground of all that arises. Empty in essence, continuous by nature, it has never existed as anything whatsoever, yet arises as anything at all."* – The Chö Ying Dzöd

Andrews' conception of consciousness, as a re-creative witness of what is shared inter-subjectively, coalesces with the structure of the universe as a whole by acting on physical space-time through a 0-D point-centered Void. His insight fits the Riemannian geometric structure of physical space-time as expressed in Beichler's single field theory.

### **Single field theory and consciousness**

The single field model unites general relativity, electromagnetic theory, quantum theory and consciousness by utilizing an interpretation of points in space called 'twists'. Each point in three-dimensional space is a 'twist' (Clifford, 1873, also Penrose's 'twistors') due to its natural tendency or innate potential to act as a center of rotation or circular motion, which acts as the beginning point of a vector that stretches into the fourth dimension (Riemannian embedding manifold) of space in a five-dimensional space-time. This point-centered vector can be identified in common physics with the magnetic vector potential (where special patterns in 3-D space constitute individual consciousness) and the gravnetic vector potential (Dark Energy in free space and inertial mass inside material particles). In all cases the vector potential can also be associated with the state vector  $\Psi$  represented by a similar or analogous dualism in the form of quantum probabilities  $\psi$  (analogous to metric or 3-D extension space) and  $\psi^*$  (analogous to anti-symmetric or 3-D point space) in quantum mechanics. In this view probabilities (and indeterminism) only enter nature after the dualistic split (as space vs time

in Heisenberg's Uncertainty Principle) which means that the state vector  $\Psi$  in its role as the Schrödinger wave function is not necessarily indeterministic in itself (as some have assumed).

In so far as the Schrödinger wave equation (simultaneously) describes the physical reality of an individual observation and the superposition of all wave functions representing every interaction and observation in the universe (what David Bohm called the quantum potential field) this function can easily be equated to quantized curvature (a curved 'sheet' of parallel three-dimensional surfaces stacked in the fourth dimension of space) in the single field theory. Since consciousness can collapse the wave function to determine physical reality, consciousness and the single field theory are tied together in a branch of science Beichler calls Neurocosmology.

In his theoretical structure, the role of consciousness has fundamental importance as it should in any unifying theory of physics. The twists manifest electromagnetically in the space-time continuum as the fundamental components of the magnetic vector potential field wherein special multileveled (domain) structures of varying density patterns (complexities of memories) form a single field 'holomovement' in time. These magnetic vector field potential patterns (corresponding to our living bodies) emerge in the overall single unified field from the originally chaotic structures of new memories to form the complexity of consciousness that we perceive in our 'selves'. These memory structures (multi-leveled magnetic vector potential patterns) are formed through the interaction of microtubules (bio-magnetic induction coils) and surrounding water molecules (whose spins are quantized by interference patterns from electromagnetic pulses emitted by the microtubules) in our neurons. In fact, the whole neural net can be explained on this basis.

The single field theory itself is an extended, and thus completed, version of Einstein's unified field theory. It completely incorporates the Standard Model of point particles and quantum fields, although the philosophical interpretation of the quantum theory differs from the normally accepted Copenhagen Interpretation. Within this context, the point/twists also manifest gravitationally in the space-time continuum as what Beichler calls the gravnetic (normal gravity's counterpart analogous to the electric magnetic relationship) vector potential field which accounts for what are mistakenly called Dark Matter and Dark Energy in modern physics. In other words, Dark Matter is just an additional (non-local curvature) effect of normal baryonic matter that causes normal (local) gravity effects. This non-local effect can be expressed by the Heaviside equation (gravitational equivalent of the Lorentz equation in electromagnetic theory) in classical Newtonian physics or the anti-symmetric tensor (Einstein-Cartan-Schrödinger) in relativity theory. The fourth spatial dimension, which is the embedding space or our normal three-dimensional space according to Riemannian geometry as well as the fifth dimension relative to our four-dimensional space-time, can be geometrically modified to account for point-elements (Riemann) or twists (Clifford) and thus defined to allow the unification of gravity and electromagnetism in a five-dimensional space-time framework (Kaluza-Einstein-Bergmann).

The resulting macro-extended embedding spatial dimension (fourth spatial dimension or the fifth space-time dimension) can then be quantized into parallel three-dimensional 'sheets' (equal

collections of Riemannian surfaces) with an 'effective width' along the fourth spatial direction, literally quantizing the space-time curvature of the continuum. Our three-dimensional material reality corresponds to the  $n=1$  or lowest energy quantum state 'sheet'. Higher quantum numbered 'sheets' ( $n = 2, 3 \dots$ ) are stacked in the fourth direction of space like pages in a book. The real existence of the fifth dimension of space as an embedding dimension for our four-dimensional space-time of experience and the single field density variations that constitute other fields, material bodies and life, mind and consciousness implies a further sixth embedding dimension whose geometry and physical characteristics are yet to be 'specified'. This sixth embedding dimension could possibly be the 'place' where a cosmic consciousness, universal collective consciousness or a consciousness space (like but not necessarily equivalent to Faggin's concept of a C-space) exists that could directly affect and influence all of space-time.

The 1938 research of Einstein and Peter Bergmann implied that utilizing a higher-dimensional embedding space should be the proper course for unifying gravity and electromagnetism if the physical characteristics of the embedding space could be completely specified, but Einstein eventually gave up on that approach because he could not justify using a hyperspace without any observational or detectable evidence that a higher dimension actually existed. Unfortunately, he never suspected that consciousness interacted with the universe as a whole through the higher dimension in what we normally call intuition or paranormally refer to as our sixth sense.

Our material bodies can be represented in relativity theory as a complex matter/energy pattern (a three-dimensional surface that undulates over time) equivalent to a complex quantized curvature pattern (four-dimensional) that varies internally over time. Our mind can be modeled as a corresponding three-dimensional complex electric field pattern within the quantized curvature pattern. In this way, individual consciousness becomes the multi-leveled magnetic (domain structure) pattern made up of vector potential points in three-dimensional space that extend into the fourth dimension of space. So every living organism has a consciousness, not just humans and other highly evolved animals, that extends into the higher embedding dimension of our commonly experienced four-dimensional space-time and represents each living organism's experiential existence.

The philosophical debate between quantum discreteness and relativity's continuity, which has poisoned real advances in physics for the last century, is actually a misstatement and misrepresentation of the point-space (Riemann's point-element) versus extension-space (Riemann's metric-element). Placing this problem within its correct context and recognizing the problem in its true form as just the simple geometric dualism of physical space (point as quantum versus extension as metric curvature) resolves the physical problems between quantum and relativity. Both of these problems, geometrical and physical reduce to our conscious interpretation of space and time as perceived by the brain/mind. We perceive three-dimensional space as a unitary or holistic conceptual 'thing', not as the dualistic reducible 'thing' that geometry tells us it is.

So the unresolved problems of unifying physics comes back to consciousness and its interpretative relationship to the natural world of perception and how it is represented by a particular geometrical

model of space and time. When this is realized, the determinism versus indeterminism debate reduces to no more than “much ado about nothing” since neither viewpoint represents physical reality, just human vanity with regard to physical reality. Nature tells us how it acts through our observations, we do not tell nature how to act based upon our philosophical and mathematical interpretations of how we think nature ‘should’ act. In other words, we ought not project our philosophical biases on the world in an attempt to understand how nature works. This means that the quantum and relativity theories are not incompatible as has long been thought, but are in fact totally and completely compatible.

Completing Einstein’s unified field theory by combining the anti-symmetric approach of Erwin Schrödinger and Einstein (to account for Dark Matter and Dark Energy) with the higher embedding dimension approach of Theodor Kaluza (to account for a unified EM and GR), and accepting the consequences of doing so by accounting for points, given this this new geometrical structure, leads to a full unification of the quantum and relativity theories in the form of a quantized space-time curvature. The curvature is quantized by utilizing Oscar Klein’s suggestion that the embedding dimension (in this case the fourth spatial dimension), even though it is now macroscopically extended, quantizes three-dimensional space (the embedded dimensions). Each three-dimensional ‘sheet’ (stacked like pages in a book in the fourth direction of space) is actually a quantized group of parallel three-dimensional (infinitesimally thick) Riemannian surfaces intersecting and perpendicular to four-dimensional extensions of the three-space points as described by Einstein and Bergmann. In other words, it is our three-dimensionally dominated (consciousness derived) geometrical interpretation, or rather misinterpretation, of space and time that is delaying the progress of physics, which is exactly why an intuitive approach to the problem is needed to overcome the deadlock and advance science.

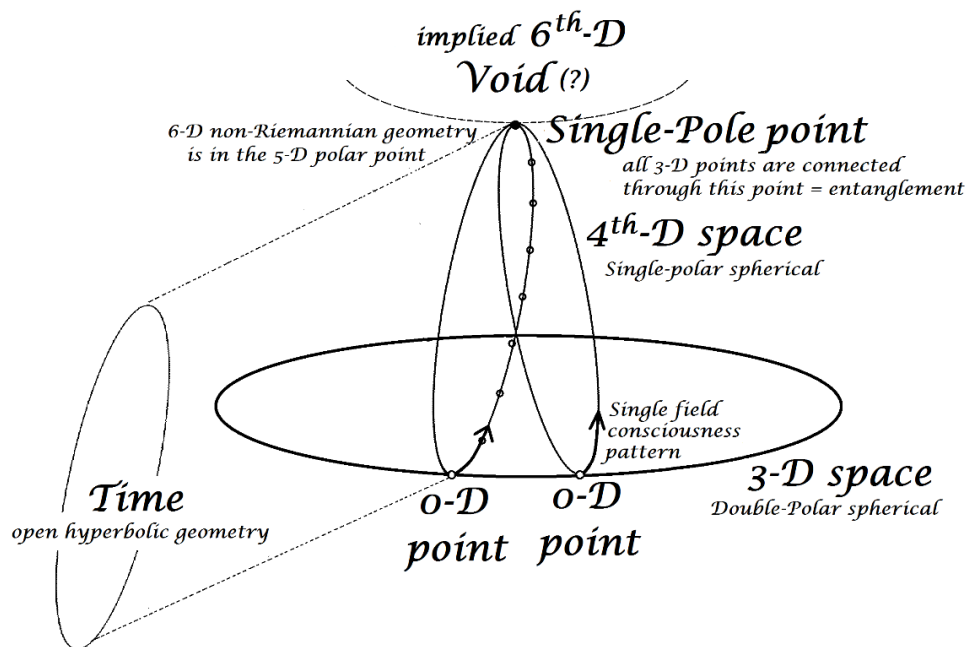
### **0-D point/twist Void is the original singularity**

Adopting the 0-D point/twist Void as the original Riemannian point-element from which our Riemannian space structure evolved changes everything. For example, the original singularity in the form of a dimensionless point-centered process from which everything (or every ‘something’) in our universe evolved (according to the Big Bang theory) has specific qualities that separate it from the absolute Void of ‘no-thing-ness’ from which it emerged. Establishing how these ‘differ’ defines how the evolution of our experienced material/physical universe has proceeded, including the evolution of life, mind and consciousness, within the (‘no-living-thing’) nature of matter and energy.

The Riemannian geometry that expresses this unification starts with the discrete 0-D point/twist Void which creates our commonly experienced three-dimensional physical space, embedded in a fourth dimension of space. From this nothing, (with 0-D and the single field as precursors) our matter/field/energy reality emerges. While this geometry accounts for and describes the creation of the four-dimensional space-time continuum, it also accounts for the dynamical substantiality of our world. The twist portion of the three-dimensional discrete 0-D point/twist maintains and guarantees the integrity of this fundamental unit of re-creation as it creates the ‘virtual torques’ (pre-force) in both

directions of the fourth dimension, which are collectively the precursors for the potential and anti-potential of the single field.

The ‘virtual torques’ above the three-dimensional surface and the negative ‘virtual torques’ below that surface in the fourth direction of space form the potential and anti-potential, respectively, that collectively yields the pure potential of the single field. In the post-Riemannian geometry, which is based upon both metric- and point-elements, the higher embedding fourth dimension must be single-polar spherical and this geometric pre-requisite is fulfilled by the simple fact that the virtual torques and negative virtual torques (having oppositely directed twists) come together at the polar point. However, these differences imply the existence of a further sixth embedding dimension whose geometry is completely unspecified except possibly at the single-polar point where the next embedding space comes into contact with the lower embedded dimensions of space.



The discrete nature of the 0-D point/twist Void also allows for the quantization of the single field and formation of quantum fields to be rendered in terms of Riemannian geometry, further allowing quantum (matrix) mechanics and wave mechanics to be adequately explained as physical characteristics of the geometrical point/twists (discrete quantum field centers) within the context of the single field (which is equivalent to Bohm’s quantum potential field). This can also be interpreted as the superposition of all possible Schrödinger wave functions for all possible quantum events.

The single field also serves as the precursor to classical three-dimensional fields, such as gravity, electricity and magnetism as well as matter/energy, life, mind and consciousness, which can be explained (Beichler 2014, 2015) as a spectrum of single field density patterns in five-dimensional space. These structures form our external reality which is essentially reduced to extrinsic four-dimensional space-time curvature in an overall five-dimensional continuum. The inanimate matter/energy that we perceive in our three-dimensional brain/minds (through three-dimensional sensations) is no more, nor

less, than temporal and spatial variations of curvature of the three-dimensional surface ('sheet') as it is extrinsically extended into the higher embedding fourth dimension of space. These are accompanied by the normal electric and magnetic fields associated with inanimate matter as perceived by us, while the emergence of life, mind and consciousness through the evolutionary process proceeds from the development over time of specific complexities of matter/energy, electric and magnetic fields.

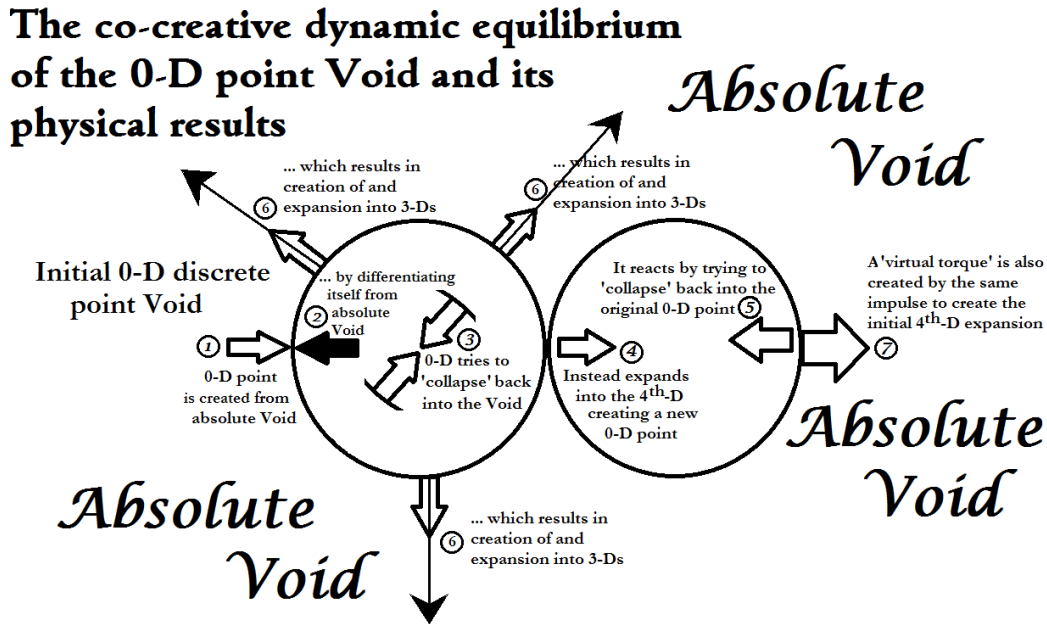
The evolution of life and Consciousness itself has been influenced by and proceeded from a primordial or primal awareness based on the reciprocal relationship between the absolute Void of nothingness that preceded the Big Bang and the 0-D discrete point/twist Void that emerged from that absolute Void as the original singularity. The 0-D discrete point/twist Void thus introduces a way to explain how the 'some-thingness' of our perceived physical/material universe emerged and evolved from the 'no-thingness' of the assumed Void that existed before the Big Bang within the Riemann geometric context of the single field theory.

The higher embedding dimensions would literally be within every discrete geometrical point (a 0-D point/twist Void in a physical sense) in our three-dimensional space of experience. Where the only way that it could be understood is if each and every discrete geometrical point was enfolding into itself (back into the Void from which it emerged physically) and consequently emerging into the fourth dimension of space before unfolding back into the 0-D point-twist Void to expand and create the three-dimensions of normal space. However, physical reality (and logic) would dictate that such a 0-D point/twist could only (or must) be stable since our space, which is made of such point/twists, does not 'collapse' into itself (by enfolding), but remains constant. Therefore the 0-D discrete point/twist Void must be a dynamical object—a stable object whose stability depends upon a dynamic equilibrium—in that it would constantly and continuously be enfolding into itself, more-or-less like an object spinning three-dimensionally toward its center point in three-dimensional space, while an equal and opposite unfolding outward occurred to stabilize it. An enfolding of this type could be abstractly described as a three-dimensional 'virtual spinning', or 'twist', of a three-dimensional object into itself in four-dimensional space.

A 0-D discrete point/twist can thus be approximated, or pictured, as a three-dimensional object in three-dimensional space 'spinning' inward, toward its center, in so far as it can be imagined as a dimensionless point-centered sphere in three-dimensional space of (or approaching) zero radius (analogous to the concept of  $\Delta S \rightarrow 0$  in Riemannian metric geometry). In other words, we can imagine the property of this spherical point by decreasing the radius (measure of its extension  $\Delta s$  in the three-dimensions of space) to zero (a dimensionless point), whereby doing so gets rid of the extension in space but not the enfolding spin endowing each dimensionless point with a 'twist'.

A 0-D point/twist is a sphere-like structure whose radius has been reduced to, or approaches, its infinitesimal limits of zero (simultaneously) in each of the sphere's three dimensions, yet its three-dimensional spin, or twist, would still result in it enfolding into itself, creating a 'virtual torque, as well as expanding by duplication of new 0-D point/twists (in each direction) into the fourth dimension of space. These new 0-D point/twists in both directions of four-dimensional space would form as an equal

but opposite reaction to any action implied by the 'desire' or 'need' of the original 0-D point/twist Void to completely 'collapse', or 'implode', back into the absolute Void--as this would be prevented by the 'twist'.



This virtual torque in the fourth embedding direction (#7 above) of our real physical space is thus a product of the 'twist' of every 0-D point/twist Void, which also creates a 'virtual torsion' in the three-dimensional space surrounding each and every 0-D point/twist Void. So all the discrete 0-D geometrical points that constitute our 'real' perceived space-time continuum are actually 0-D discrete point/twists attempting to collapse back into an absolute Void. But all are prevented from doing so, such that they are maintained (or stabilized) in a dynamic equilibrium by the 'twist'.

The resulting 'torsion' in the direction of the surrounding three-dimensions of space results in the creation of new discrete 0-D point/twists and the subsequent expansion of three-dimensional space that is made up of all such 0-D point/twist Voids. This (action/reaction) co-creative process takes place, and repeats itself, during every infinitesimal moment-to-moment of time, which leads to an explosive expansion (commonly called cosmic inflation) of three-dimensional space coupled to an equivalent expansion into the fourth direction of space that continues until an infinite number of moments have passed, such that (true) measurable extensions of space (length, area and volume), and time (duration), come into being.

The various 'virtual torques' correspond to pure 'potential', and thus form the beginning of the single field that corresponds to a geometrically structured space-time continuum. These virtual torques collectively form pure potential, not energy or matter themselves, but the potential to later form matter and energy, given both the quantum and geometric restrictions of the space-time continuum and single field, by which matter/energy and other physical fields are defined. The expansion



continued until an undefined moment in the process when either quantum anomalies, some form of fluctuations, or geometric conditions caused a 'blow-out' at some points in the balloon-like three-dimensional surface of our universe. These 'blow-out' points formed the first protons after the surface ('sheet') counteracted and closed (or capped) them off.

The 'problem' was still not fixed and a new series of 'blow-outs' were attempted, but the counteracting surface tension (of the 'sheet') was enough to stop the local point-centered curvature from blowing-out, thus creating electrons with the opposite electrical charge of protons. Any other excess 'momentum' of the inflationary expansion outward only resulted in small (the minimum local amount of point-centered curvature distinguishable and thus measurable to the surface or 'sheet') puckers, or bumps, that we can detect as neutrinos. This process ended the inflationary period and slowed down the runaway expansion, locking it into what we detect today with only small variations. No anti-particles were created at this time since the 'blow-outs' were all directed in the favored direction (outward for positively curved surfaces) of the fourth dimension instead of inward. From this point onward, our present day universe has continued to evolve.

Andrews believes that the dynamical interchange occurring between a spaceless-timeless Void (*i.e.*, from what is not-dimensional) to what functions as a dimensionless (0-D) point-centered 'process' may well have defined the extent of indeterminacy due to the as yet undetermined 'linkage' between what we quantify as space and time in Heisenberg's uncertainty principle. "This" may help us understand what the (so called) Planck 'unit of non-local action' is and why the single field theory both limits-and-localizes the degree of indeterminacy as a point-centered process, and also why 0-D consciousness collapses the wave function, linking the potentials of space and time into an apparent singular deterministic space-time manifold out of nothing whatsoever. He further believes that this enquiry may help explain the 'structural' origins of the 'twist' between what is not-dimensional and what is, as well as what's occurring between (and among) all the discrete 0-D point-centered processes in three dimensions and the single pole they all share in both 4-D and 0-D, plus the deterministic (causal) consciousness dynamic due to six dimensions within all other point-centered processes. If so, the 'fluctuation' between form and formless, between what is not-local and 'what is' at the foundation of existence and non-existence, would logically 'resonate' throughout 'all that is,' ensuring our experience of an always unified consciousness.

Therefore, in each discrete 0-D point/twist Void in all four dimensions of space, from the beginning singularity onward, there have existed certain immeasurable and vaguely defined 'qualities' that eventually led to the emergence and evolution of life, mind and consciousness. In other words, the potential for consciousness existed in every geometric point in space, whether it was inhabited by matter or not. The original 0-D point/twist Void (some-thing) was differentiated into existence (and thus began time) from the absolute Void of 'no-thing-ness'. This differentiation process, whatever it was, created the 0-D point-twist 'tendency', 'desire', 'need', 'instinct', 'memory', or whatever it can be called, for a primal awareness that differentiated it from the absolute Void, as a primary quality of the 0-D point/twist Void.

Every time that the discrete 0-D point/twist Void duplicated itself during the expansion process, the newly created discrete 0-D point/twists carried with them the same primal awareness and thus its very own distinction of its 'self'. Each geometric point in space thus 'senses' its 'self' as being distinct from other such geometrical point or they would all collapse and become a single dimensionless nothingness or Void. Physically the twist keeps them from reabsorbing each other. This 'sense' is related to the 'twist' property that is associated with each geometrical point. The 'twist' allows individual points to remain contiguous but separate so that they can form a continuous extension while remaining discrete in their dimensionless selves. So just as all of the 'virtual torques' of each point in four-dimensional space collectively yield the potential of the single field, the collective nature of this primal awareness lends space as a whole a pre-consciousness potential.

The single field potential is the precursor for all matter, fields and energy in the universe while the corresponding pre-consciousness potential is the precursor for the later emergence, evolution and further development of life, mind and consciousness that is associated with or coupled to inanimate matter.

*Just as the collective effect of the 0-D point/twist Void's 'virtual torque' in 4-D space is the establishment of a single field potential that is the precursor to matter/energy, the collective effect of the 0-D point/twist Void's inherent quality of 'primal awareness' is the establishment of a corresponding pre-consciousness field potential in physical space that is the precursor to the emergence of life and evolution of consciousness*

In other words, the universe itself has the potential for the emergence of consciousness in every infinitesimal geometrical point from which it is constructed. This structural property or quality can be called a consciousness space, a universal collective consciousness, a cosmic consciousness, or even an absolute space which is the 'sensorium of God' as Newton called it. Technically, all of these descriptive words work with the concept to one extent or another and only a better physical theory can distinguish between them.

### **The point-wise unification of relativity and quantum**

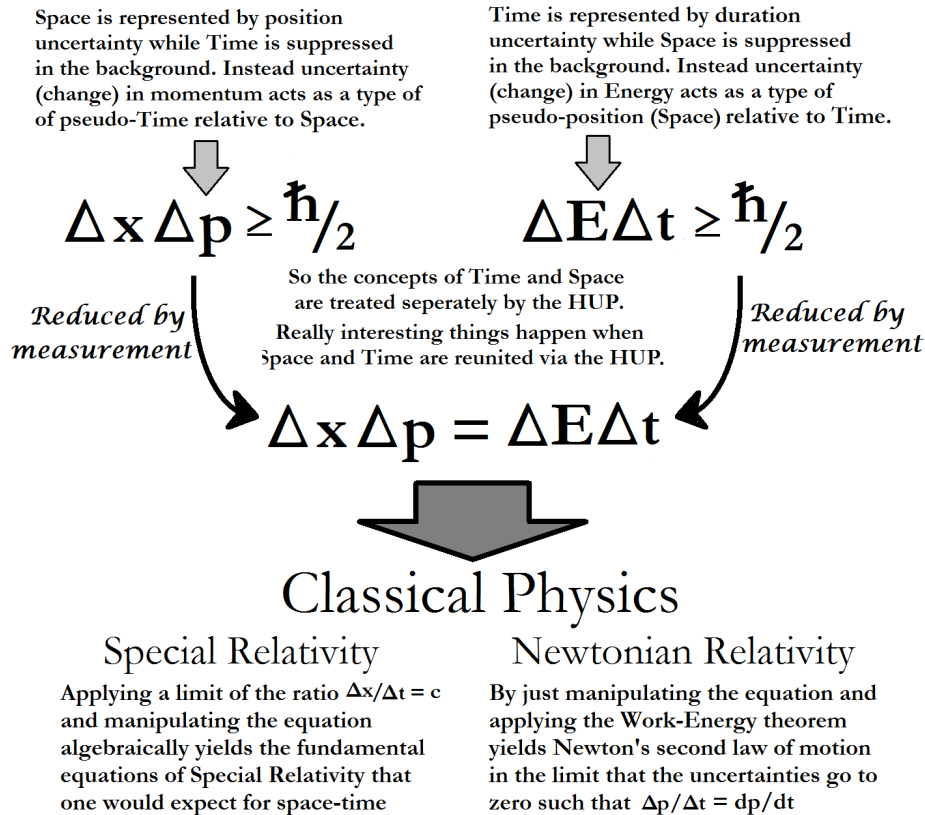
Given the different formulations of the Heisenberg uncertainty principle (HUP), which basically defines the quantum theory, there are several ways to proceed that allow other physical models of reality to be included or unified with the quantum. By setting these two equations equal, as they are equal to the same quantity, we get

$$\Delta x \Delta p \geq \frac{\hbar}{2} \leq \Delta E \Delta t$$

and then by simplifying

$$\Delta x \Delta p = \Delta E \Delta t$$

It would seem from HUP's expression of uncertainty that bringing space and time together suppresses the quantum effect as exemplified by the disappearance of Planck's constant, rendering the event real for consideration by classical physics.



For example, when the condition that the ratio of the uncertainty in position to time is less than or equal to the speed of light ( $\Delta x/\Delta t \leq c$ ), Einstein's equations for special relativity can be easily (algebraically) derived. On the other hand, when that condition is relaxed and the DeBroglie matter wave equation ( $\lambda = h/p$ ) is used, Newton's second law of motion ( $F = dp/dt$ ) can likewise be derived.

In other words, suppressing Planck's constant by combining the different quantum expressions for space and time results in a reality described by Newtonian physics and general relativity. When it is suppressed in this manner, quantum theory is closed with respect to classical physics and could never be derived from relativity theory, just as Planck's constant could never just pop up out of any relativistic considerations of material reality in either three-dimensional space or four-dimensional space-time.

## Conclusions

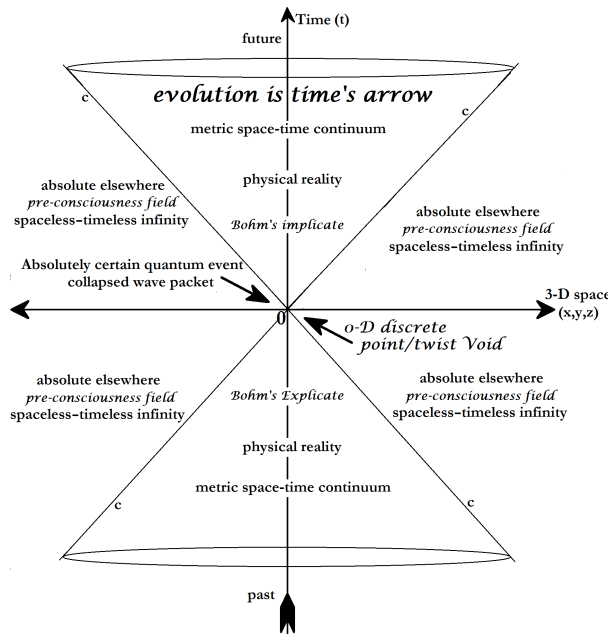
- a. The differences between classical and quantum physics are simply due to our logical misinterpretation and not inherent in external material/physical reality
- b. Since Planck's constant is suppressed when space and time are reunited to form space-time, it cannot be derived from the relativistic physics
- c. Planck's constant can therefore be identified as the binding constant between position in space and time or discrete point and moment such that it is inherent in the discrete 0-D point/twist Void in a Riemannian geometric structure

This fact has resulted in the false belief that relativity and quantum theories will always be mutually incompatible (when they are only mutually incompatible with regard to three-dimensional space) and cannot be unified intact, while retaining the major characteristics and concepts of each theory. It is true that quantum indeterminism has no place in a continuous world, just as a discrete point cannot exist along a continuous line (it would form a discontinuity) or surface, yet an infinite number of discrete 0-D point/twists of Void make up a continuous space-time manifold. So the continuous world of relativity can remain deterministic while the quantum world of the discrete point remains indeterministic. Under these circumstances, it is safe to conclude that Heisenberg uncertainty principle (HUP) is merely a limiting condition that applies when circumstances (specific physical conditions) are established to artificially separate changes in time and three-dimensional space by experimental means. Doing so would invoke Planck's constant, which means that it makes the most sense for the Planck constant to be interpreted as the binding constant for space and time—to yield space-time. (Beichler 1992, 1996, 2015)

### **Synergy of the model in four-dimensional space-time**

However, another path can be followed that leads to a complementary interpretation of the quantum and this path implies the physical reality of a higher embedding dimension of space: *i.e.* in the original equations of the Heisenberg uncertainty principle, when  $\Delta x$  and  $\Delta t$  are simultaneously forced to go to zero (by measurement or observation), this indicates an exact discrete point location in the three-dimensions of space as well as time. This point could then be considered (equivalent to) the point of origin in a space-time diagram that represents a specific quantum event in space-time, wherein both  $\Delta p$  and  $\Delta E$  become infinite (undefined) according to Andrews. This may seem a trivial concept, but it is instead full of useful information.

This shared point of view between an intuitive and scientists can be better illustrated using a common (Herman) Minkowski space-time diagram. The origin of the space and time axes coincides with Andrews' 0-D point in a Riemannian geometry as well as with the discrete point marking a specific event in the quantum theory.



The 'absolute elsewhere' has never been considered viable or even meaningful in modern relativity physics, it is considered a useless archaic concept. Yet, it still implies that something can exist beyond the purview of relativity (underneath or in the background of our physical space reality). So, it really should be of interest in fundamental physics.

The 'absolute elsewhere' can now be interpreted as relevant in a combined quantum/relativistic five-dimensional space-time framework with the discrete 0-D point/twist Void, not just the point location in space-time at its origin, which completely alters its traditional non-role in relativity physics. Quite simply it can be equated to a higher embedding dimension of space-time that is physically real and necessary to unify the different theories (modern paradigms) of physics, yet it also unites all four dimensions of space-time as a whole by providing a role for the formation of "qualia" in our experience as three-dimensional beings. In other words, it can be related to consciousness in some form or another. Since single field theory utilizes a five-dimensional space-time model with a single polar point through which all points in three-dimensional space are directly connected to each other, a sixth dimension is implied by the physics, the single polar point could be equated to a point in a further sixth embedding dimension of space that could thus take the form of Andrews' all-encompassing witnessing consciousness acting, or co-creating, physical reality through the individual discrete 0-D point/twist Voids in space-time.

Now, if we localize the quantum event to a discrete point (a point particle or a simple 0-D Void point/twist in terms of Riemannian geometry), then what's left of space-time outside of or beyond the light cone (the so-called normally irrelevant 'absolute elsewhere') can be interpreted as physically equivalent to a region (or a volume in three-dimensional space) of infinite uncertainty where  $\Delta E = \Delta p = \text{infinity}$  that results from an absolutely certain measurement of a discrete geometrical point in time and/or space. (Andrews, 2016) Or rather  $\Delta E/\Delta p = \text{infinity/infinity} = \text{some form of unity (1)}$  according to Andrews that corresponds to the region of the space-time diagram beyond the physically possible

limits set by the speed of light  $c$ , where  $\Delta x/\Delta t > c$ . This region is thus complementary and even necessary to fully understand the region inside the light cone that is classically deterministic with regard to both Newtonian and relativistic worldviews. The 'absolute elsewhere' thus represents the part of the diagram where infinity means 'undefined' rather than 'a number too large to count'. So on a space-time diagram, the infinite, or indefinite, nature of  $\Delta p$  and  $\Delta E$  would clearly correspond to the region outside of the light cone as the range of physical possibilities for any particular discrete quantum point event potentially occurring in the 'absolute elsewhere.'

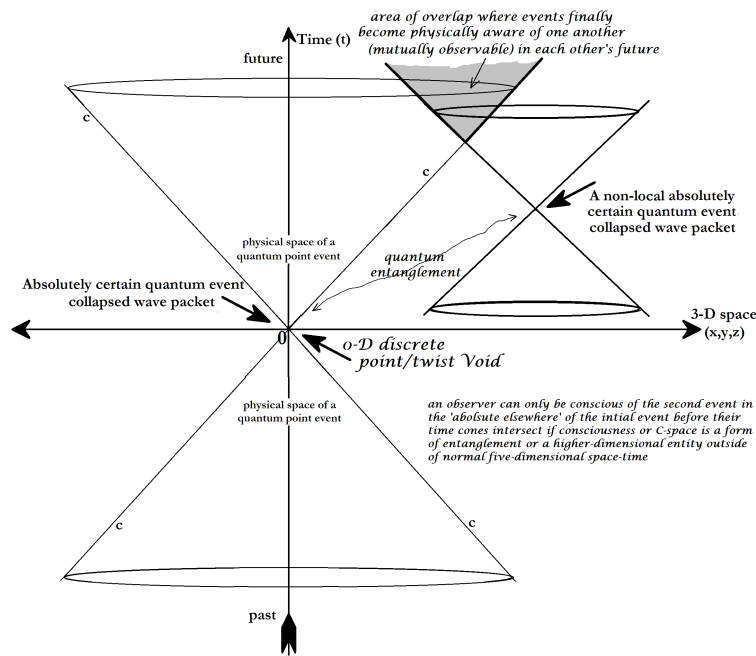
This region of the space-time diagram could also be interpreted as a higher embedding ( $n+1$ ) dimension of an  $n$ -dimensional Riemannian geometry, since the speed of light only applies in our normal three-dimensional space. While the spread of light outward from a source is only a limit in three-dimensional space, this speed limit has no significance along the fourth direction of space, within a physically real five-dimensional space-time framework, such as used in Beichler's single field theory. (Beichler, 2013, 2014, 2015) For example: the implied sixth dimension unites a five-dimensional space-time at a single pole, wherein Andrews' concept of consciousness shows how an infinite non-space/non-time (*i.e.* an 'absolute elsewhere') organizes and orchestrates our physical (four- and five-dimensional) space-time via its indivisible zero-dimensional point-centered presence, ensuring that every point in space-time is inseparable from their ongoing origination from a primordial spaceless-timeless Void.

In his model, the point-centered dimensions of our (commonly experienced) three-dimensional physical space are emergent properties of a spaceless-timeless Void. Every point-centered process would emerge from a 0-D embedding dimension (the quantum point at the origin of the space-time diagram). (Andrews, 2015) This notion can also be related to cosmic consciousness and similar speculative models as well as Federico Faggin's (2014) concept of C-space (Consciousness-space) and other theoretical models that are based upon cosmic consciousness. A universal collective consciousness could correspond to the implied sixth embedding dimension, as it acts through each and every point in the three-dimensional space of our experienced reality. Here again, there is the relationship to Faggin's P-space (Physical-space), whereby C-space creates the reality of P-space through the individual discrete points described by the Standard Model of quantum theory, as modeled algebraically by the Amplituhedron. The Amplituhedron could merely represent a non-Riemannian geometry that acts physically in lower spaces through the single-polar point via its capacity as a link to the otherwise undefined, yet implied, six-dimensional embedding manifold. In fact, any geometrical device that gives the physically proper answers for the quantum theory could be used as a non-Riemannian geometry within the single-polar point as an expression of the physical geometry of the discrete 0-D point-twist Void.

Yet the above space-time diagram is still incomplete and misleading since it only refers to the reference frame of one particular quantum point event. In reality, the real universe consists of an infinite number of other quantum point-centered events (that are just as real) which lay outside of any one point particle's light cone: *i.e.* within its own 'absolute elsewhere', wherein all point particle events

(taken together) constitute our experienced physical universe. This collective background of all individual discrete quantum point events, including the quantum point events both inside and outside of any one quantum point events unique 'absolute elsewhere', could just as well be related to Bohm's quantum potential field or even his implicate order.

All real quantum field points in physical space (points that exist after the collapse of the wave function into an apparent classical reality) are entangled by the geometric restrictions of the five-dimensional space-time continuum, even though they may be unobservable and (materially) non-interactive within any given 0-D point/twist's 'absolute elsewhere' (outside of its light cone) until a future time when their light cones overlap.



So the complete 'absolute elsewhere', relative to the whole universe simultaneously (*i.e.*, the collective effect of all the infinite number of differently located discrete 0-D point/twists that constitute our commonly experienced physical reality) in any corresponding consciousness space, must lie somewhere behind, or in the background of the whole of normal physical space, as a commonly shared virtual 'absolute elsewhere' that is reduced by each, and every, discrete quantum 0-D point/twist event to suit that event. Therefore, the complete 'absolute elsewhere' is not simply beyond the light-cone of any one particular quantum event, it is 'absolutely everywhere' beyond all possible events

Since a specific 'absolute elsewhere' is isolated, and thus defined by each and every discrete quantum point event in relative space, out of the whole virtual and infinite collection of discrete points that constitutes all of relative space, a specific 'absolute elsewhere' must require a collection of corresponding 'absolute elsewhere's' that constitutes a virtual background 'space' of its own. This virtual 'absolute elsewhere' space must exist somewhere that is not the three-dimensional relative space constituted by discrete quantum points. This then implies a higher-dimensional space that maps point-by-point onto the normal three-dimensional space or experience. Even a 'Newtonian-like'

absolute space (which was associated with mind and consciousness, as the “sensorium of God”) could be used to represent this virtual background ‘absolute elsewhere’. But the combined Beichler-Andrews model implies that it is a pre-consciousness space (*i.e.*, it is filled with a semi-physical pre-consciousness potential field or embedding manifold that both co-creates and witnesses events in the physical world of matter/energy fields. As such, it would favor and defines the evolution of life, mind and consciousness, as natural processes in the material/physical universe.

In other models, such as Faggin’s (which posits a fully functional Consciousness-space, Information-space and Physical-space, or variations of them), C-space (rather than P-space) is the real reality that generates P-space through I-space. This could be viewed as—at most—a final evolutionary state of our real perceived material/physical universe. This category would include all metaphysical speculations that our physical world is just a hologram, a computer program, information, or other such non-sensed realities (literally non-sensed since our sensations of the material world are themselves material), that would be mistakenly interpreted by our consciousness as material reality and thus rendering our sensed material reality somehow unreal or an illusion. In reality, our experienced universe is now developing toward that evolutionary end according to the Beichler-Andrews model, which is still a work in progress. As such, any speculation about the reality of an Information-space could only refer to a partially filled vessel that is presently being constructed, and filled, by all sentient beings that have evolved past the inanimate matter stage of a universal physical evolution. This would include all living beings and perhaps someday, at a much higher level of evolution, we will have evolved into non-material beings that are part of, and contributors to, a fully functional Consciousness-space that is creating Physical-space through an Information-space that we each helped to create by evolving.

### **The universe thus requires evolution so it can know itself**

The concept of a pre-consciousness potential field completely changes the way that science should regard our physical reality. This semi-physical (virtual) field would fully complement the single field but acts through individual discrete 0-D point/twists by way of the point-by-point three-dimensional field patterns of magnetic vector potential, to form complex internal surface patterns in the four-dimensional single field that are the individual consciousnesses of living beings. Yet this semi-physical field would also act collectively as a ‘force’ for order and increasing complexity in the universe.

Physics has always been confronted with the problem of something as simple and fundamental as ‘order in the universe’ let alone the complex order required for the existence of life, mind and consciousness. But no one has ever been able to make any logical sense of how they emerged after the Big Bang (or the creation of the universe). So the question was formerly relegated to the domain of the supernatural by default, or otherwise ignored altogether. Physics only came close to even considering this problem in the branch of science called thermodynamics, but even this failed, or was at least inadequate, to finally answer the problem. However, a radical change in the laws of



thermodynamics, that balance disorder (entropy) and order (evolution), would now seem to be in order.

The four normal laws of thermodynamics still hold true (and do not change) for the idealized situation of closed systems, even though a truly closed physical system is only an ideal toward which human-made machines are only approximations. Entropy is still favored over order by the universe in the large, but only because the volume, or total size, of the universe is expanding, while the number of material particles remains roughly constant, which yields a net increase in randomness over time. So the underlying order of the universe implied by the potential of the pre-consciousness field yields the need for the addition of new thermodynamical 'laws' to balance the current theoretical model upon which the existing laws depend rather than replacement of the old laws.

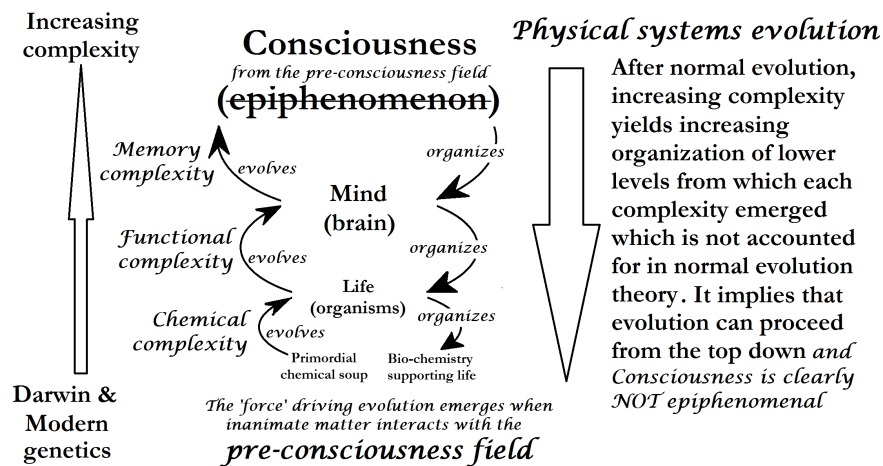
Over the past century and a half of its existence, ways have been developed to overcome the shortcomings of thermodynamics. Prigogine's Principle is already used quite extensively in conjunction with the second law because it clears up many problems associated with a closed system, which is suggested by the second law. In general, Prigogine's Principle states that a dissipative energy system, whose equilibrium destabilizes through a loss of energy, moves toward a maximum chaotic state before falling into another more stable equilibrium state. It is so commonly used that Prigogine's Principle should be elevated to the status of the fourth law of thermodynamics.

The mathematical system of chaos theory has also been used to supplement thermodynamics because chaos is similar to entropy. So the fifth law should introduce the concepts of chaos and the emergence of complexity. It could be stated in such a way that, under the proper environmental conditions (such as a system's interaction with external natural forces), complexities would naturally emerge to form new orderly systems. These newly emerged complex systems would have characteristics that could not have been predicted from the characteristics of the chaotic (entropic) system before the complexity emerged, one being the principle of organization. Once formed, complexities reorganize the chaotic systems from which they emerged for their own benefit and continuity.

The sixth law would combine the previous two laws—Prigogine's Principle and the emergence of complexity—yielding a physical law of material system evolution. System evolution can occur when chaotic (entropic) mixes of complex emergent systems move toward higher and higher levels of complexity as time passes. In other words, system evolution is universal, open-ended and continuous throughout the universe. The next and final law of thermodynamics, Murphy's Law that 'anything that can go wrong will go wrong', would always be the next and final law because something new, unexpected and completely unsuspected could always pop up. Murphy's Law could also be described as the 'law of unintended consequences' in that it would introduce some of the uncertainty of quantum theory into thermodynamics, since it is impossible to know absolutely everything about an event, or system, according to the quantum theory. It also seems a good balance for the Zeroth law (in its vague generality), while the other new laws balance the three classical laws of thermodynamics. Since evolution is occurring in all things, everywhere and all the time, it would be more accurate to say

that evolution, rather than entropy, is time’s arrow. Only evolution is every bit as ubiquitous as time in our universe. So it certainly makes far more sense to think and perceive the world around us, and even interpret nature, within the context of evolution.

Currently, the accepted theory of evolution is completely biological in nature and thus very straightforward, although it seems to depend on some undefined and/or non-specific form of ‘force’ in nature that pushes, or favors, evolution forward—against constancy and a non-changing world—except for simple motion as explained by physics. It is thought that biological evolution depends solely on the agencies of natural selection (Darwin), genetic mutation and genetic drift (modern genetic evolution), but these agencies always proceed from the bottom up, from the genome to the organism as a whole. People sense this ‘force’ of evolution at play in the world, but the present theory of evolution provides no answers, or clarification, about the character or identity of this ‘force’. So people invent such alternatives as Creationism or Intelligent Design to fill the perceived logical gaps in modern evolution theory. However, these inventions are not necessary. That ‘force’ which people ‘sense’ is merely the action of a pre-consciousness potential field within our physical world of experience. That ‘force’ acts, or interacts, with specific material bodies, to create order in the inanimate world as well as top-down (consciousness, to mind, to life) evolution in animate matter through the exigency of the emergence of complexities.



However, the principle of physical evolution that emerges from the new thermodynamics can now be considered to supplement normal bottom-up evolution and include top-down evolution—from consciousness to mind to the living organism. This fact of top-down evolution answers many of the difficulties facing the older versions of evolution theory.

In nature, animate and inanimate organisms can only be distinguished by their internal levels of complexity. Both groups follow the same basic physical principles and laws, as described by the physical theories that are interpretative explanations created by the human mind. Within this context, life, mind and consciousness can only be defined in physics within the larger sense and context of the universe. Life, the proverbial ‘life force’ or biofield as some call it, is the complex matter/energy field pattern that corresponds to a living organism. It is essentially a pattern of quantized space-time

curvature. Mind is the complex electrical scalar potential field pattern of the organism, literally the three-dimensional complex electrical pattern of the living organism which would include all biochemical interactions, as well as purely electrical interactions, that maintain life in the organism. And finally, as already stated, Consciousness is the complex magnetic vector potential field pattern associated with the mind of the living organism. Magnetic fields commonly direct electrical flow in the same manner that consciousness directs mind. Magnetic fields also form structural levels called domains to form permanent field structures, which compares well with the concept of levels of consciousness. Electric fields do not.

Within this context, living organisms originally evolved as Darwin and modern genetic biologists have claimed, internally from the bottom up, but with reservations because current evolution theory is inadequate and incomplete. The action of a pre-consciousness potential field on matter is necessary to explain the initial origin of life in the chemical soup from which it emerged. As animate organisms became more and more complex over time, bottom up evolution (from within) has become more and more difficult, while top-down evolution (from without) has slowly come to dominate the most complex organisms, simply because mind and consciousness represent the whole context of a living being and not just one internal aspect of its being. The evolution of physical systems, which now supplements earlier theories of biological evolution, is a natural part of our physical universe, an expression of the pre-consciousness potential field, rather than just a biological process. So Life is not matter and energy, Mind is not electricity and Consciousness is not magnetism. Life, Mind and Consciousness are the complex multi-leveled field patterns that have emerged and developed into ever more complex patterns over the course of history. Once living organisms emerged, they began to reorganize their own internal matter/energy interactions (field structures) by modifying electric/chemical and magnetic interactions to run more efficiently, thus enhancing further development and evolution.

All material objects are constructed from these same three physical fields—matter/energy, electric and magnetic—imprinted upon one another. These three fields all act, or react, in concert with one another to maintain life or not as specified by our scientific theories. Yet living organisms (animate matter) are different from inanimate or non-living matter. The animate matter of living organisms is defined by a high-level of complexity within the field structures that renders these particular field patterns in living organisms different from their inanimate material counterparts. All of these patterns must work together to create a living organism, which means that all living organisms have the same complex mix of patterns. But different living organisms have evolved both higher level patterns (paramecia versus humans) and different types of complexities (plants versus animals) than others. In other words, all life is conscious to one degree or another, but only in more highly evolved organisms has awareness of consciousness emerged as a chaotic complexity of memories within mind.

Within this much greater universal context, the brain/mind stores memories whose multi-leveled hierarchy of complex patterns form individual consciousness, or at least conform to the context already present in consciousness (already programmed into inherited neural net patterns) as preordained by the influence of the pre-consciousness field that acts through every 0-D point/twist in

space. As the new multi-leveled (domain structures of) complex magnetic vector potential patterns stored in mind change, the context established by existing consciousness for perceiving and interpreting new data input from the external physical world (through the five senses) also changes. But when changes in the complexity patterns are great enough (possibly during spiritual enlightenment or NDEs) they directly affect genomes. If intense enough (they are important for preservation and enhancement of the species), they are passed on to offspring and become part of the overall genetic pool of the species.

It is through such processes that the human species might soon be reaching a tipping-point in its own evolution, catalyzing a new leap in evolution. Since the magnetic vector potential acts through individual discrete points in three-dimensional space, or rather the 0-D point/twists that constitute the three-dimensionally curved surface (or 'sheet') that is our experiential material space (affecting the whole single field), the memories and thought patterns of individuals become permanent density pattern subgroups stored at the 0-D point/twist level (in the single field) due to the activation of the pre-consciousness potential field as a whole. In other words, the single field acts as an infinite storage bin for memories, thoughts and experiences, as well as countless consciousnesses.

The most complex memories that we easily recall and remember are stored and recalled by that part of the mind that correlates to the brain, because only the brain has the density of neurons and complexity of neural nets that have the ability to render storage and allow for recall. This is why we mistakenly believe our mind and consciousness exist in the brain alone. Our memories are both stored and recalled through the interactions between and among microtubules (nano-sized bio-magnetic induction coils) and the electromagnetic interference patterns they create in the surrounding water medium. These interference patterns quantize the nuclear magnetic spins of the water molecules in specific patterns to match incoming sensations from the external world, imprinting those memories as various magnetic vector potential patterns on a 0-D point-to-point basis within the single field.

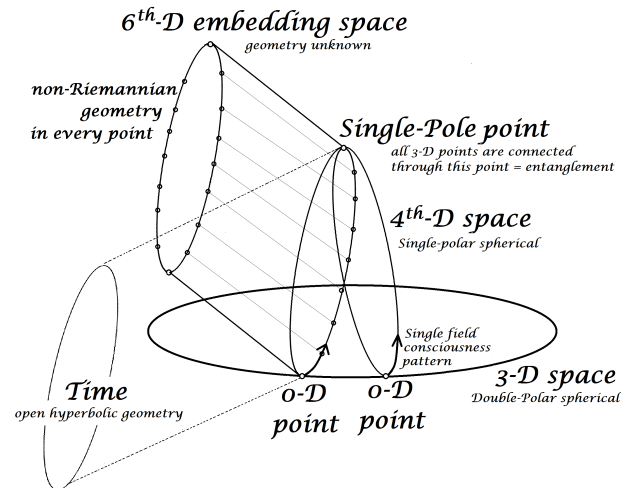
Recent developments in neuroscience indicate that the neural net patterns in the brain rewrite themselves (an alteration called brain plasticity) according to new learning and experiences. These newer and more complicated complexities slowly, but sometimes radically, alter the context of the overall consciousness pattern. Since human knowledge is increasing so rapidly, far more rapidly than ever before, and we are experiencing new phenomena (a greater breadth and variety of phenomena) at ever increasing rates due to technological and scientific advances, the (basic) complexity structure of human consciousness (that we all inherit) is currently under a great deal of stress. Add to this the present-day social, cultural, political and economic stress that we are forced to mentally deal with, the human species is forging a path whereby the overall nature of our pre-consciousness potential field and its proclivity for advancing the consciousness of the universe as a whole will soon initiate a new evolutionary leap for the human species that overcomes, or rather integrates, these mental stresses, giving us greater access to, and knowledge of, the single field and the higher dimension of space where the single field exists in its pure form.

### **Synergy emerges in the five-dimensional continuum**

The only geometrical 'place' that can fulfill this requirement is a higher dimension that is not specifically an embedding dimension (in the strict sense that an embedding space is represented by an extrinsic Riemannian metric or extension geometry), but is instead inseparable from our normal three-dimensional space of experience through individual discrete 0-D point/twist Voids in five-dimensional space as are analyzed by a non-Riemannian geometry. The non-Riemannian geometry in the surface points is intrinsic to the  $n$ -dimensional surface (or space) and thus does not require an  $n+1$ -dimensional embedding space. Any higher-dimensional Riemannian metric geometry, whose existence is required by the associated higher-dimensional non-Riemannian point geometry, could easily be considered spaceless and timeless since it technically lies outside of both our normal four-dimensional space-time continuum (or rather inside the discrete points that are not 'contained' within the continuum, but are tangent [Wolfgang Pauli first used this descriptive term in 1921] to the three-dimensional 'surface' at any given point under consideration) and also the embedded physical fifth dimension. In other words, these would be the discrete points in a six-dimensional non-embedding space where such points are 'tangent' at every point in the surface to each and every point in our five-dimensional metric (extension) manifold/space (surface). This higher dimension could be thought of as a consciousness space, providing for collective consciousness or cosmic consciousness that is generated by the four-dimensional pre-consciousness potential field, just as four-dimensional space is filled by a single field that yields a physical three-dimensional space.

Such a consciousness space could represent all quantum possibilities for three-dimensional physical space (our commonly experienced material and physical reality) represented by wave functions before their collapse (not just those realities resulting from the collapse which create our classically experienced relativistic world), except for those wave functions that are collapsed by the conscious choice of conscious beings in three-dimensional space. This would guarantee the continued existence of three-dimensional space and all of its material inhabitants even when conscious three-dimensional beings are not witnessing it. In other words, this invokes Andrews' concept of 0-D point Voids as witnessing the unfolding of physical reality without the intervention of human or similar consciousnesses. In this way, a higher-dimensional consciousness space could be thought of as creating our four-dimensional space-time reality, or physical space, through a corresponding discrete quantum 0-D point/twist Void space, generating our perceived four-dimensional (metric extended) reality from the whole 'absolute elsewhere' background (a spaceless and timeless nothingness which would correspond to a Newtonian-like absolute space) by way of some non-Riemannian point-geometry—such as the Amplituhedron suggested by Andrews and others.

Faggin's consciousness units (CUs) would then correspond to the consciousness/mind complexity patterns (within the single field) in five-dimensional space-time, which manifest as the awareness of human consciousness via (magnetic) vector potential patterns (domains), which in turn correspond to three-dimensional material living (animate) bodies in the brain/body/mind in (normal) physical space.



Such a consciousness space need not (specifically) be a sixth embedding dimension for a five-dimensional space-time continuum (as described in normal Riemannian metric/extension geometry) when just a sixth tangent, or perpendicular manifold, that manifests physical reality would suffice. It could act through each and every one of the individual discrete points, throughout the embedded dimensions of physical space within it, without being a full embedding metric space that needed to be mathematically identified and physically justified.

The geometrical physicalness of our experienced world emanates from and is causally ever present in the individual points that constitute an embedding space (similar to Newtonian concepts of absolute space). This would correspond to the background collective ‘absolute elsewhere’ framework (or space) described above. It would be causally ever-present if for no other reason than because each of the 0-D point/twist Voids (that constitute space) are constantly re-creating four-dimensional space through the discrete quantum points as explained by modern quantum theory. For this reason, Andrews’ 0-D point Void could only exist outside of space and time, in 0-D as well as some higher dimension, yet still generate (give rise to) all material ‘things’, events, and that which constitutes physical space-time as defined in classical physics. So Andrews’ 0-D point Void concept or the combined discrete 0-D point/twist Void concept of Beichler and Andrews offers a way by which all phenomena remain indivisible, which supplies a rationale for how an all-embracing Consciousness could have arisen spontaneously.

This model works well (as far as it goes) with respect to special relativity and the corresponding space-time diagram system. But what about the unification of general relativity and electromagnetism as well as their expression in quantum theory in the single field theory? The single field (of potential) occupies four-dimensional space and varies over time, or rather its internal patterns of varying density occupies five-dimensional space-time. The consciousness associated with living organisms in three-dimensional space appears as a complex of multi-layered magnetic domain structures that are physically tied to both an organism’s electric field structure (the Mind) and matter/energy field structure (the Life force or biofield corresponding to the body/brain). So Consciousness, Mind and Life (biofield) are whole body field structures (complex patterns), but only Consciousness has a specific

domain structure since gravity/matter and electric fields do not form domain structures. We commonly, and falsely, believe that Mind and Consciousness 'exist' only within the brain because the complexity of neural nets that form our fundamental logical networks, by which we become consciously or mentally aware—our waking awareness—of Consciousness and Mind, only exist in the brain.

Given Beichler's complete single field structure of individual Consciousnesses, Andrews' theoretical models fit quite well. Andrews' model is a near perfect Riemannian match for Beichler's model, while consciousness models that posit other forms of consciousness spaces, including Faggin's model, could also be assimilated into the Beichler-Andrews model. Beichler's single field is based upon a four-dimensional Riemannian geometry, as is general relativity, but with extrinsic and thus real curvature (of a three-dimensional 'sheet' or 'effective width' of infinitesimally thin three-dimensional surfaces) bent or warped into the fourth embedding dimension of space. Both the fourth dimension of space and curvature are physically real, even though we do not normally observe or detect them. So, they are not just mathematical gimmicks or artifacts that happen to describe gravity fields in three-dimensional space better than Newton's theory.

In summation, our perceived world lies within the curved three-dimensional 'sheet' that is perpendicular to the fourth direction of an overall four-dimensional embedding manifold/space. Our 'sheet' is the  $n=1$  quantized portion of the single field in the fourth direction of space ( $n$  is a quantum number in this case, not to be confused with  $n$  when it denotes the number of dimensions when referring to Riemannian spaces and manifolds). All subsequent 'sheets' ( $n = 2$  and higher) are stacked like pages of a book, in and throughout the fourth dimension of space.

### **Experiential consequences of the synergy**

An intuitive experiencer, a person who has directly touched, come into contact with or has otherwise become consciously aware of a higher-level consciousness, if not Consciousness itself (the higher-dimensional embedding space or manifold), may readily recognize this theoretical physical model, but describe his or her experience in a completely different manner. For example, many Near Death Experiencers have said that they cannot find the words or language to describe their experience, or what they sensed about their location, because the geometry that they sensed (experienced) is different from the geometry of our three-dimensional material world. That is primarily why science has only been able to access the higher-dimensional world mathematically and finds it necessary to speculate, to some extent, on its physical nature.

The majority of those who have attained some level of spiritual awakening, whether spontaneous, due to some (usually tragic) event, and/or through deep meditation and religious practices, also find it difficult (if not impossible) though compelled by necessity, to describe their feelings about the experience because the terminology does not exist within our normal language structures or communicative skills. The concepts needed to describe a higher dimensional reality do not fit the logical (neural net) structure of the brain. This makes attaining higher levels of consciousness both

difficult and rare, as it is considered normal to only align with three-dimensional experiences and interactions within a commonly-sensed physical reality in an external material world. So the person who has experienced an NDE, that is strong enough to break into conscious awareness afterwards, will absorb the experience mentally by internally rewiring some basic neural nets in a manner that changes the personality of the ND experiencer, sometimes quite radically, as seems to have happened for Andrews. Some others who intentionally choose to awaken cannot do so until their wiring is sufficiently enhanced to allow for their awareness to recognize Consciousness.

With the possibility that Consciousness acts through the individual discrete quantum points (Andrews' 0-D points) to co-create our three-dimensional experience of space, a new interpretation and relationship between quantum theory and relativity is at hand. Single field theory has already accomplished this unification, yet it has not directly taken Consciousness into account as universal, although it is implied. The extended metric space of matter, in which we exist, corresponds to the superposition of all possible  $\Psi$ -waves (wave functions) prior to consciousness collapsing an individual wave function to create the apparent certainty of discrete (0-D) quantum points. This superposition of all possible waves is reminiscent of Bohm's concept of a quantum potential field. Henry Stapp has also stated that he is leaning toward such a philosophical conclusion (private conversation in 2008). This notion would also include the background 'absolute elsewhere' as described above.

In the case of an experiencer, rather than that of a scientist, this theory can be seen and interpreted in the mind's eye a bit differently. In the words of one of Andrews' co-authors, Steven Salka, *"an effective way to view consciousness would be as a 'superposition' of existence and nonexistence, producing an indivisible experience of 'nonlocal being', plus who and what we perceive ourselves to be (local observers)."* This relationship between an observer-based localization and the nonlocal whole has been examined and expressed in Andrews' theoretical model. Using ideas from general relativity and quantum mechanics, he suggests how a space-time continuum can also include quantum mechanical potentials and probabilities, arising as complementarities, as properties of consciousness. He investigates opportunities to contemplate the origins of existence, offering falsifiable experiments.

His theoretical model supports the progressively evolving observational measurement processes outlined in David Bohm's model of Soma-Significance, to drive the emergence and evolution of all forms, to re-unite (actively and passively)—in search of equilibrium, in a collectively-sensed overarching Consciousness. Under these circumstances, an observing consciousness would experience its 'self/Self/no-Self' through being a sixth-dimensional witnessing awareness that forms the fifth-dimensional qualia of experience: as feelings, thoughts, memories, urges, instincts, intuitions, and sensations, including love, fear, admiration, hate and compassion, through the three and four-dimensional body/mind of Faggin's physical P-space, Beichler's single field theory, and Andrews' ubiquitous 0-D point.



### Conclusion

Both Beichler and Andrews have come to the conclusion that the physics of consciousness, as proposed here, predicts the ongoing emergence of a commonly-sensed species-wide intelligence. Andrews also suggests how all dimensional structures appear to be continuously calibrated by their (unchanging) point-centered (0-D) context. As if 'this' were not occurring, each observational measurement system would not function interdependently to sustain the laws of probability. An absolute absence (timelessly) ensures the 'existence' of every point-centered process throughout all physical and non-physical phenomena. This is pivotal to the self/Self perfecting nature of sentient life, including the refinement of an over-arching universal intelligence. Instead of creation being determined by a 'supremely' creative observer, all observer-driven creations would be coordinated and sustained by that which is immeasurable and uncreated—which accords with insights handed down by certain sects of Hindu and Tibetan wisdom traditions.

*"The essence is the void, the real condition of the individual and of all phenomena. This base is the condition of all individuals, whether they know it or not."* - Chogyal Namkhai Norbu Rinpoche

The Rinpoche has been recognized, while a child, by H.H. the sixteenth Gyalwa Karmapa and other eminent Tibetan lamas as jointly the reincarnation of the great Dzogchen master Adzam Drugpa and Pema Karpo, the great master and spiritual ruler of Bhutan, a rank similar to that which the Dalai Lamas hold in Tibet. It would seem from this quotation that he has come to a very similar, if not the same, conclusion regarding the importance of the Void.

Beichler expresses his notion of evolution in a different context by expanding the laws of thermodynamics to include not only disorder and entropy, but emergence (formation) and order. Both Prigogine's principle and chaos theory (the emergence of complexities from chaos) are commonly used as a counterpoint and correction to the second law of thermodynamics because the second law is based on thermodynamically closed systems, even though such closed systems appear nowhere in nature. Therefore, Prigogine's principle and the concept of complexities emerging from chaos should be made the fourth and fifth laws of thermodynamics, respectively. When they are put together, they imply a sixth law of thermodynamics which could be described as the natural evolution of ever more complex physical systems. Under these circumstances, biological evolution can be seen as a special case as well as a universal necessity within physical science, rather than a standalone philosophically ridden anomaly in biology. From this viewpoint, evolution rather than entropy is the real 'arrow of time'.

Moreover, the evolution of life in general and the continuing progressive evolution of mind and consciousness in all living organisms after life first evolved from some undefined primordial soup—whatever that initial evolutionary mechanism may ultimately prove to be—has become the primary purpose of the universe. We Homo sapiens are part of the greater universe realizing and becoming

aware of itself, which fits in quite well with the single field theory and his and Andrews' model of Consciousness evolving from a spaceless-timeless Void.

On the other hand, the single field model of a neural net and brain plasticity implies that mind and consciousness can drive evolution (top down), as opposed to the modern Darwinian and genetic models which points to a bottom-up driven (evolution) mechanism, by acting through genetic mutation and genetic drift. The notion that evolution can be consciousness driven (from the top-down) further implies—given the social, economic, cultural, technological, educational and scientific conditions of a chaotic and rapidly expanding information/knowledge base—that the human race is nearing (if it has not already reached) a tipping point for a vast evolutionary leap that will result in the emergence of a new human subspecies at a much higher level of consciousness than now exists. This new level of human Consciousness will allow humans to actually think in terms (and directly experience the effects) of a four-dimensional space. This new subspecies of the Homo genus may even emerge fully enlightened at birth, or so we can hope. A large and growing number of scientists already believe that a new scientific revolution will be as much about the Mind and Consciousness (that perceive and interpret our common material/physical reality) as it is about the physics we will develop to better describe nature. Still, few even suspect that the next scientific revolution will be part of a far more comprehensive human-wide evolutionary leap in consciousness.

### Bibliography

Sperry Andrews (2016). "Free at Last: Being What We Are." *Kosmos Journal: Reader Essays*, May 3<sup>rd</sup>.

Available at <http://www.kosmosjournal.org/reader-essay/free-at-last-being-what-we-are/>

Sperry Andrews and Jennifer Tayloe (2015). "Humanity's capacity to share a common sense: The absence that gives rise to our presence." *Cosmos and History: The Journal of Natural and Social Philosophy* 11, 2: 1-15. Available at

<http://www.connectioninstitute.org/PDF/Sperry's%20C&H%20Essay%2011-24-15.pdf>

Sperry Andrews and Steven Salka (2014). "Mapping the whole in everyone: An Essay On: Non-existence as the engine and axis of existence." *Cosmos and History: The Journal of Natural and Social Philosophy* 10, 1: 15-33. Available at

[http://www.connectioninstitute.org/PDF/1st\\_half\\_of\\_Essay.pdf](http://www.connectioninstitute.org/PDF/1st_half_of_Essay.pdf)

James E. Beichler (1992, 1996). "Bubble, Bubble, Toil and Trouble: A fresh look at relativity, uncertainty and compatibility." *Yggdrasil: The Journal of Paraphysics*. 1996. Available at [https://www.academia.edu/7884391/BUBBLE\\_BUBBLE\\_TOIL\\_AND\\_TROUBLE\\_A\\_fresh\\_look\\_at\\_relativity\\_uncertainty\\_and\\_compatibility](https://www.academia.edu/7884391/BUBBLE_BUBBLE_TOIL_AND_TROUBLE_A_fresh_look_at_relativity_uncertainty_and_compatibility).

James E. Beichler (2012). "The Tie that Binds: A fundamental unit of 'change' in space and time." *Vigier VIII Symposium Proceedings*, 2012. Available at [https://www.academia.edu/7708594/THE\\_TIE\\_THAT\\_BINDS\\_A\\_FUNDAMENTAL\\_UNIT\\_OF\\_CHANGE\\_IN\\_SPACE\\_AND\\_TIME](https://www.academia.edu/7708594/THE_TIE_THAT_BINDS_A_FUNDAMENTAL_UNIT_OF_CHANGE_IN_SPACE_AND_TIME).

- James E. Beichler (2014). "The point of unification in theoretical physics." *Proceedings of the NPA*. Available at [https://www.academia.edu/7674017/The\\_point\\_of\\_unification\\_in\\_theoretical\\_physics](https://www.academia.edu/7674017/The_point_of_unification_in_theoretical_physics).
- James E. Beichler (2014). "The evolutionary imperative of consciousness." Under publication in the *Journal of Conscientology* (IAC). Available at [https://www.academia.edu/12551336/The\\_Evolutionary\\_Imperative\\_of\\_Consciousness\\_Full\\_paper\\_](https://www.academia.edu/12551336/The_Evolutionary_Imperative_of_Consciousness_Full_paper_).
- James E. Beichler (2015). "Finishing Einstein Point by Point: The unification of quantum and relativity." *WISE Journal* 4, 4, 21 December 2015. Available at [https://www.academia.edu/16201568/Finishing\\_Einstein\\_Point\\_by\\_Point\\_The\\_unification\\_of\\_quantum\\_and\\_relativity](https://www.academia.edu/16201568/Finishing_Einstein_Point_by_Point_The_unification_of_quantum_and_relativity).
- James E. Beichler (2014). "Modern Fysics Phallacies: The best way not to unify physics." *Vigier IX Symposium Proceedings*, October 2015. Available at [https://www.academia.edu/7708652/MODERN\\_FYSICS\\_PHALLACIES\\_THE\\_BEST\\_WAY\\_NOT\\_TO\\_UNIFY\\_PHYSICS](https://www.academia.edu/7708652/MODERN_FYSICS_PHALLACIES_THE_BEST_WAY_NOT_TO_UNIFY_PHYSICS).
- James E. Beichler (2014). "Consciousness of Unification: The Mind-Matter Phallacy bites the Dust." *Vigier IX Symposium Proceedings*, October 2015. Available at [https://www.academia.edu/7708681/CONSCIOUSNESS\\_OF\\_UNIFICATION\\_THE\\_MIND-MATTER\\_PHALLACY\\_BITES\\_THE\\_DUST](https://www.academia.edu/7708681/CONSCIOUSNESS_OF_UNIFICATION_THE_MIND-MATTER_PHALLACY_BITES_THE_DUST).
- James E. Beichler (2015). "A physics of Consciousness, psi and survival." *WISE Journal*, 4, 2, Summer 2015. Available at [https://www.academia.edu/10365583/A\\_physics\\_of\\_consciousness\\_psi\\_and\\_survival](https://www.academia.edu/10365583/A_physics_of_consciousness_psi_and_survival).
- James E. Beichler (2016). "EPR-b: Bubble, bubble, toil and Trouble." *WISE Journal*, 5, 1, Spring 2016. Available at [https://www.academia.edu/20110699/EPR-b\\_Bubble\\_Bubble\\_Toil\\_and\\_Trouble](https://www.academia.edu/20110699/EPR-b_Bubble_Bubble_Toil_and_Trouble).
- Federico Faggin (2014). "Consciousness and matter co-evolve." Available at <http://www.fagginfoundation.org/articles-2/consciousness-and-matter-co-evolve/>.
- Federico Faggin (2016). (A private conversation with Federico Faggin). Palo Alto, CA. 25 May 2016.
- Chogyal Namkhai Norbu (1996). "Dzogchen: The Self-Perfected State." Snow Lion Publications: Ithaca, New York, Adriano Clemente (Editor), John Shane (Translator), quote on p. 53 Available at [https://www.amazon.com/Dzogchen-Self-Perfected-Chogyal-Namkhai-Norbu-ebook/dp/B001W02EM4/ref=sr\\_1\\_1?s=books&ie=UTF8&qid=1469822976&sr=1-1&keywords=dzogchen%3A+the+self-perfected+state%2C+namkhai+norbu](https://www.amazon.com/Dzogchen-Self-Perfected-Chogyal-Namkhai-Norbu-ebook/dp/B001W02EM4/ref=sr_1_1?s=books&ie=UTF8&qid=1469822976&sr=1-1&keywords=dzogchen%3A+the+self-perfected+state%2C+namkhai+norbu)