

In the Beginning:

Evolution physics, consciousness and our physical reality

James E. Beichler, PhD

Abstract: Many scientists believe that any true unification theory of physics must include a concept of consciousness as well as a model for the mind that interprets our three-dimensionally biased and limited sensations of the external physical/material world. And, that number is growing. The single field theory goes even further than that, in fact, well beyond the simple notion of mind and consciousness as mere human bound perceivers and interpreters of the external material/physical world by placing the physical origin of consciousness within every geometrical point in the universe itself. Some higher level permanent 'pattern' structure must be at work in the background of mind to lend more than temporary stability and even 'permanence' to the electrical field patterns that constitute the action of mind, since mind, as such, is ephemeral and would disappear (decohere or destabilize) after a few moments as individual electrical potentials neutralized or canceled each other out, positive for negative. This physical model of creation 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 evolution, revolution and application of physics and science.

Introduction

Intuitives are often the very people who have intimately and directly experienced consciousness, giving them the ability to access consciousness directly at later times. They are typically Near Death Experiencers (NDErs), people who have reached mystical enlightenment and other higher states of consciousness through other means, although a greater number of people have had similar experiences that changed them mentally (rewired their neural nets in a beneficial manner) without ever consciously realizing it. They generally believe that consciousness is an active participant in creating our world rather than just deciding between choices our world offers to us. Their views of the role of consciousness with regard to the inner workings of the world in general greatly differ from those of ordinary people and especially scientists.

Even the word 'intuition' has been looked down upon in science as recently as a few decades ago. Scientists consider their own strictly logical worldview above reproach, believing their insights have been and are presently based upon strict and accurate observations of the external world around them. In general, most scientists have 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 intuitive knowledge of the world, anecdotal or not, can provide valid observations of consciousness and how consciousness interacts with the world at large. So to those few scientists willing to seriously consider information from intuitives, knowledge of the world that did not come from direct observation of the world, it can seem to them as though conservative scientists are missing a large part of the world in their theoretical models. Conservative scientists also seem overly biased if not acting completely in an unscientific manner within the broader meaning and context of science itself by neglecting all intuitive knowledge out-of-hand.

The intuitive Sperry Andrews [1,2] has proposed a speculative theory of how everything in the world originated from nothing and how such theories as general relativity and quantum mechanics might account for a conscious universe if not a fully developed or developing Consciousness space. Andrews has suggested that the solution to the consciousness question can be found in Bernhard Riemann's original conception of (spaces) surfaces with metric curvature, since an n -dimensional space is embedded in an $n+1$ dimensional manifold all three-dimensional points are united at one point in the four-dimensional embedding space or manifold. His

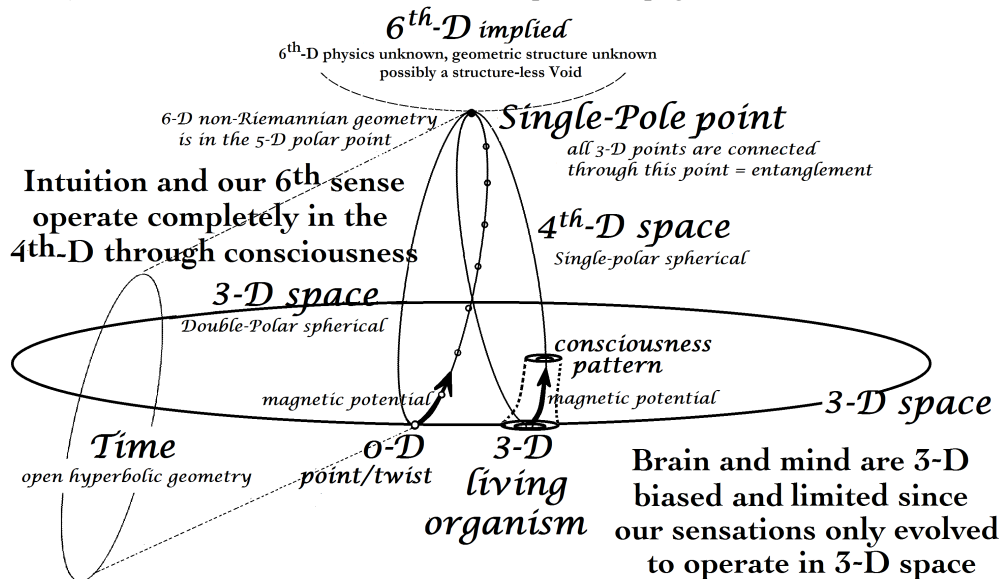
suggested geometrical model corresponds to the Riemannian geometry of a three-dimensional double-polar spherical surface or space embedded in a four-dimensional single-polar spherical manifold (space) as specified in the single field theory. In the case where $n = 0$, the 0-D point (point with twist in single field theory), which still represents a dimensionless Void, could still be embedded and common to all lower- and higher-dimensional Riemannian spaces.

Single Field Theory

The single field theory itself is an extended, and thus completed, version of Einstein’s unified field theory. [3] 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 (CI) and similar interpretations. Within this context, the discrete 0-D point/twists also manifest gravitationally in the space-time continuum as gravnetic (normal gravity’s counterpart analogous to the electric/magnetic relationship) vector potential fields which account 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 the same matter that causes normal (local) gravitational effects and Dark Energy is just the gravnetic vector potential at each point in space. [4]

The non-local gravnetic effect can be expressed by the 1892 Heaviside equation, the gravitational equivalent of the Lorentz equation in electromagnetic theory, in classical Newtonian physics or the anti-symmetric tensor (Einstein & Cartan, 1929 [5] and later Schrödinger [6]) in relativity theory. The fourth spatial dimension, which acts as the embedding manifold (dimension) of our normally perceived three-dimensional reality, can be geometrically modified (to account for point-elements or twists) and defined to allow the unification of gravity and electromagnetism in a five-dimensional space-time framework (Kaluza [7] and later Einstein & Bergmann [8]). So the single field theory is a synthesis of already verified and accepted science that is put together in such a way that it keeps the best of previous theories and throws out their mistakes, resulting in a great amount of new science.

The resulting macro-extended embedding spatial dimension can then be quantized (what some call ‘quantum gravity’ theory) into parallel three-dimensional ‘sheets’ (quantum sheaves of infinitesimally thin parallel three-dimensional Riemann surfaces) with an ‘effective width’ along the fourth spatial direction, literally quantizing the four-dimensional space-time curvature of the continuum. Our three-dimensional material reality thus corresponds to the $n=1$ or lowest energy quantum ground state ‘sheet’. Higher quantum energy or possible ‘excited’ state ‘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 common four-dimensional space-time of experience and the single field density structures that constitute other potential fields, material bodies and life, mind, and consciousness implies a further sixth embedding dimension whose geometry and physical characteristics are yet to be 'specified'.

The sixth embedding dimension could possibly be the 'place' where a 'Cosmic Consciousness', universal collective Consciousness or Consciousness space exists that could directly affect and influence all of space-time in the manner suggested by Andrews, [9] Federico Faggin [10] and others. It is also possible, given the single field model of consciousness, that any such hypothetical and idealistic Consciousness space is presently a partially filled cup that is slowly being filled by evolving consciousnesses, such as human consciousness, within our space-time continuum, *i.e.*, Consciousness space is the ideal or possible future state toward which our universe as a whole is evolving. The universe is just getting to know and understand itself, through us and other sentient beings.

Individual consciousness

At the other end of the matter spectrum, material bodies can be represented in the single field theory as a complex matter/energy pattern (a quantized three-dimensional curved surface that undulates over time). They can be likened to four-dimensional holograms that are projected onto our Riemannian three-dimensional surface or space as our sensed and mentally interpreted physical/material reality. Within this relativistic context, mind can be modeled as a corresponding three-dimensional complex electric field pattern structure within the quantized curvature pattern structure called animate matter. Mind, as such, is ephemeral and would disappear (decohere or destabilize) after a few moments as individual electrical potentials neutralized or canceled each other out, positive for negative, unless some higher level permanent 'pattern' structure were not at work to lend more than temporary stability and even 'permanence' to the electrical field patterns that constitute the action of mind. Such a higher level pattern structure could only be magnetic in nature according to electromagnetic theory.

The individual consciousness of a living being could only be physically modeled by the multi-leveled magnetic (domain) pattern structure made up of vector potential points in three-dimensional space that extend into the fourth dimension of space. Every living organism has a consciousness, not just humans and other highly evolved animals, and that consciousness extends into the higher embedding dimension of our commonly experienced four-dimensional space-time. It represents each living organism's own unique experiential existence within the material/physical context of the whole three-dimensional universe.

The scientific theories that we use to explain our external physical/material three-dimensional world and how it varies over time are constructed within the mental context provided by our mind and consciousness, which are themselves products of the physical structure of the same world which is being perceived. Only consciousness differs radically enough (at the local level) in its individual structure from the overall physical/material structure of the world (the non-local level) that consciousness could only be a physical (and non-material) extension in the higher-dimensional embedding space. Only a consciousness of this type could think of its 'self' separate enough from the material world to interpret and abstract the whole physical/material world while still remaining part of that physical/material world.

In the end, the central problem of all physics is that our minds, limited by their present level of consciousness, interpret our world (space-time) as either point- or extension-based at the most fundamental level of reality. But physical space is one, neither point- nor extension-based alone, but actually neither and/or both simultaneously, a fact with which our minds cannot presently deal. That duality is also beyond direct understanding at the present three-dimensional level of theoretical physics, and physics is merely a logical abstraction of reality that reflects the way we experience, interact with and thus commonly think of our world. Yet unifying this duality is the key to understanding the unification of physics and the single field model, as well as how to demonstrate that evolution and ultimately higher levels of consciousness are as natural to our world as

light, matter and energy. Quite clearly, our mental picture of the world is three-dimensionally biased due to our simple three-dimensional sensations of the physical world and the three-dimensionality of our minds and brains.

This duality is a product of our brain/mind that only a pure reference to consciousness and its higher-dimensional reality can ultimately resolve as a unity. We intuitively perceive three-dimensional space as a unitary or holistic conceptual ‘thing’, not as the dualistic reducible ‘thing’ that geometry and logic tell us it is. So the unresolved problems of unifying physics naturally come back to consciousness and its interpretative relationship with the natural world we perceive and how the natural world is represented by a particular geometrical model of space and time. **We should never project our mental and philosophical biases onto the world in our attempts to understand how nature works.** This means that nature tells us that the quantum and relativity are not incompatible as has long been thought, but are in fact totally and completely compatible and ready to be unified when properly understood.

The Big Bang singularity morphs into a 0-D point/twist Void

Single field theory posits that the whole of our universe is one continuous single field of potential (not energy) in which field density variation structures play the role of the potential fields (gravito-gravnetic and electro-magnetic) and the material bodies, both inanimate and animate, that we sense as our internal and external world. Extending this model to include the discrete geometrical points of space (Riemannian point-elements) raises new possibilities for understanding our universe and its evolution. In the original general theory of relativity, points in space are the source of serious problems and mathematical anomalies, literally holes in the fabric of space and time as well as in our understanding of physical reality. Quantum theory, on the other hand, literally dotes on the concept of discrete points. The Standard Model reduces extended material particles to the ideal of dimensionless points, but having done so it is unable to explain how our extended universe has evolved. **In mathematics these holes are called singularities, point locations where either space, energy or matter density goes to infinity (any number or point amount that is divided by zero).**

In physics, there are three common examples of these singularities: (1) the point center of material particles (particle mass/zero volume); (2) the point center of black holes (large but finite mass/zero volume); and (3) the original singularity from which our universe emerged in the Big Bang (no mass or ‘no-thing’ divided by a spaceless-timeless ‘no-thing’). We can only imagine this absolute Void as a ‘no-thing’ rather than a nothing, because a nothing would be a ‘thing’ with no value, like zero on a number line. The ‘no-thing’ of the absolute Void that is imagined in physics does not even come up to that level of existence or being. **If no-thing else, it was non-existence incarnate.** Yet this is what the general theory of relativity mathematically predicts our present physical/material universe emerged and evolved from.

This prediction causes a severe problem and strict limit to our knowledge of the universe since it implies that something emerged from nothing, which would seem impossible. So modern physics and science can only make accurate predictions back to the moment, or point in time, after the Big Bang when ‘things’ in our universe became measurable and knowable, even though there was no one or no ‘something’ around to measure or know them. **Before that moment of time, all science has to rely on is unfounded speculation, or at least that was the situation before Riemannian geometry was modified by incorporating point-elements and Andrews developed his intuitive notion of a 0-D point Void.**

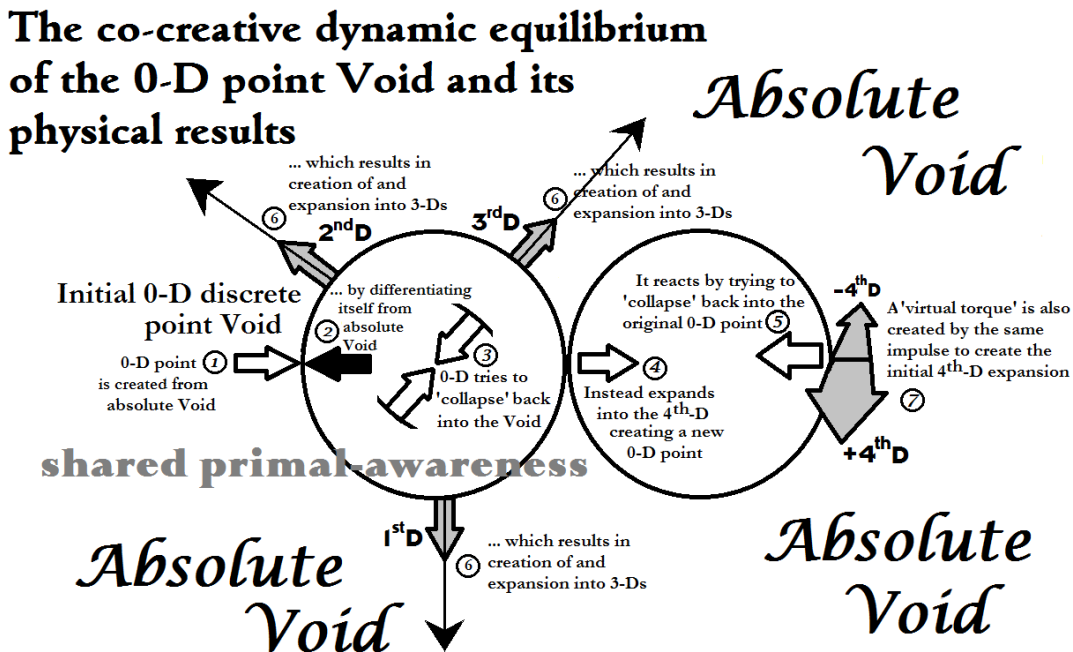
Everything in our scientific model of reality changes by adopting the 0-D point Void as the original Riemannian point-element from which our more advanced Riemannian space-time structure of physical reality evolved. For example, the original singularity in the form of a dimensionless point-centered process from which everything (or every ‘something’) in our universe evolved (according to the Big Bang or other models) has specific qualities that differentiate it from the absolute Void of ‘no-thing-ness’. Establishing how these ‘differ’ defines how the evolution of our experienced material/physical universe has proceeded over its ‘life’, including the evolution of life, mind and consciousness. Even by the end of the cosmic inflation period, when normal

matter, light and energy were first created, no reason existed for life and animate matter (organisms) to eventually emerge, except by chance, as is evident according to normal science.

The newly modified Riemannian geometry that models unification in physics starts with the discrete 0-D point/twist Void as a Riemannian point-element. From this nothing of zero dimension, our three-dimensional matter/field/energy physical reality came into being after the potential of the single field formed a four-dimensional embedding space. 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 that is solely a product of single field potential, and not some form of energy as required by both classical and modern quantum theory. The twist portion of the three-dimensional discrete 0-D point/twist Void maintains and guarantees the integrity of this fundamental unit of moment-to-moment re-creation as it creates the ‘virtual torques’ (pre-force) in the fourth spatial dimension, which are collectively the precursors for the potential and anti-potential of the single field.

Cosmic inflation and expansion

In Riemannian language, a 0-D point/twist Void 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. Its three-dimensional spin, or twist, results from its ‘pre-doomed attempt’ to enfold into itself, creating a ‘virtual torque’ in the higher four-dimensional embedding space. In turn, these new structures in the higher space rebound/reflect back into three-dimensional space to create new 0-D point/twist Voids in both directions along the three normal dimensions of space. This whole duplication/expansion occurs within a single moment of time.



These new 0-D point/twist Voids (two in each direction) would form as equal but opposite reactions 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’. Yet each newly created 0-D point/twist Void would ‘feel’ the same ‘desire’ to ‘collapse’ and thus start a whole new round of duplication in all four dimensions of space, all within the next moment of time. This process would continue, literally ad infinitum, to create our present universe and its future.

The 'twist' not only stabilizes each new duplicate 0-D point/twist Void that is created during expansion, it guarantees the discreteness of geometrical points in physical space. It also creates a 'virtual torsion' in the three-dimensional space (sometimes referred to as 'torsion space' by other physicists) surrounding each and every point. So all discrete geometrical points that constitute our 'real' perceived four-dimensional space-time continuum are discrete 0-D point/twist Voids 'wishing' to collapse back into the absolute Void, but they are prevented from doing so since they are stabilized and rendered discrete in a dynamic equilibrium by their 'twist'. The 'virtual torsion' it creates in three-dimensional space also accounts for the point-centered nature of magnetism and gravnetism in the later evolving material universe.

Since each and every 0-D point/twist Void duplicates itself four-dimensionally with 'virtual torques' in the fourth direction of space, a complete three-dimensional surface of space duplicates itself with new parallel three-dimensional surfaces on both sides of each three-dimensional surface every moment of time that passes. This (action/reaction) co-creative process repeats itself over and over again and thus leads to an explosive expansion (commonly called cosmic inflation) in all four dimensions of space. This process will continue forever, but after the first infinite number of moments have passed true measurable extensions of space (length, area and volume) and time (duration) will have formed. By the time this happens, an infinite number of parallel three-dimensional surfaces (each smaller than the last as they are placed further away from the primary three-dimensional surface of our experiential universe) have also formed in the closed (single-polar spherical) fourth dimension. Quantized groups of these parallel three-dimensional surfaces constitute the theoretical 'sheets' that extend like stacked pages in a book in the fourth direction of space in the single field theory. Only at that moment does the Big Bang clock predicted by general relativity begin ticking.

The first 10^{-36} seconds after measurability begins, which cosmologists wrongly speak of as the shortest amount of time after the initial singularity event, would not even take into account the infinite number of moments before measurability developed. During this time and after, the expansion explosively 'sextupled' the size of the universe in each of its four spatial dimensions to create 'cosmic inflation'. During cosmic inflation the larger part (volume) of our universe could have expanded at more than the 'speed of light', but that is a ridiculous notion since there was not yet any 'speed of light' nor anything else but that which was virtual, semi-physical or just plain potential which could later become something physical and/or material. So, the bottom line is that an infinite amount of time had passed (a few infinites of moments) before time became measurable by the predictions of general relativity, which is based solely upon a Riemannian metric-only geometry and thus incomplete if not inaccurate on this matter. The creation of the singularity, as predicted by general relativity thus occurred an infinite amount of time into our past.

The 'virtual torques' in the fourth dimension collectively emerged as pure physical 'potential' only in the last moment before the event that ended cosmic inflation began. The pure potential that these virtual torques collectively formed was neither energy nor matter, but the potential to later (during and after the cosmic inflation ending event) form matter, energy and light (the first electromagnetic waves) according to both the quantum and geometric restrictions of the space-time continuum. No energy existed before the period of cosmic inflation ended, just as there was no speed of light since the electromagnetic and gravito-gravnetic fields had not yet formed (in and around the first material particles) as internal particle stresses and their resulting spatial strains due to the newly quantized curvature of the four-dimensional space-time continuum.

The explosive expansion of cosmic inflation continued until an as yet undefined moment when either quantum anomalies, some form of anomalous single field fluctuations, or geometric conditions caused a 'blow-out' at some points in the balloon-like expanding three-dimensional surface of our universe accompanied by creation of the gravito-gravnetic and electromagnetic fields. These 'blow-out' points formed the first protons after the surface ('sheet') counteracted and closed (or capped) them off. No anti-particles were created during the Big Blowout (which is why they have not been observed or detected by science) since the 'blow-outs' were all toward

the favored direction (outward for positively curved surfaces) of the fourth dimension instead of inward. The emergence of protons did not completely end inflation and a second round of ‘almost’ or near blowouts, creating electrons and then free neutrinos, all but finished cosmic inflation. Everything physical and material that we normally associate with our universe emerged or was created by the Big Blowout. Even the Cosmic Microwave Background (CMB) emerged at this time in a process similar to the modern process of sonoluminescence. As the 0-D point/twist Voids in the surfaces were compactified and space became denser, the continuously ‘squeezed’ 0-D point/twist Voids reacted by emitting a single particular resonance frequency of electromagnetic waves in the microwave range, like the resonance of a bell when struck by a hammer, to form the CMB.

From primal-awareness to life and consciousness

From the very beginning singularity and onward, there have existed certain immeasurable and vaguely defined ‘qualities’ that eventually led to (or even ‘forced’ or ‘pushed’ although ‘influenced’ might be a better term) the emergence and evolution of life, mind and consciousness. In other words, the potential for life, mind and consciousness already existed in every geometric point in space, whether it was inhabited by matter or not, from the beginning of time. The original 0-D point/twist Void (a ‘some-thing’) was differentiated into existence (and thus began time) from the absolute Void of ‘no-thing-ness’. That differentiation was significant.

The very fact of ‘differentiation’ implies some form of primal-awareness between the absolute Void, the initial singularity and the 0-D point/twist Void into which the singularity evolved before the Big Bang began. That process by which the singularity distinguished itself from the absolute Void, whatever it was or whatever form it took, also created the 0-D point-twist ‘tendency’, ‘desire’, ‘need’, ‘instinct’, ‘memory’, or whatever it can be called, to return to the absolute Void. This means that both the absolute Void and the original 0-D point/twist Void shared a common primal-awareness that differentiated them from each other, while that primal-awareness became a fundamental quality (or ‘qualia’) of all 0-D point/twist Voids for all of the future.

Each newly created discrete 0-D point/twist Void carries with it the same primal-awareness and thus its very own distinction of its ‘self’ from surrounding 0-D point/twist Voids. Each geometric point in space thus ‘senses’ its ‘self’ as not being another such geometrical point or they would all collapse into a single dimensionless spaceless-timeless no-thing-ness of the absolute Void. The twist keeps them from ‘collapsing’ and reabsorbing each other, guaranteeing the discrete nature of the geometrical points of space as well as the physical integrity of the 0-D point/twists themselves. So the ‘sense’ of a primal-awareness is ultimately related to the physical property of ‘twist’ that is associated with each geometrical point. It allows them to remain contiguous but separate so that they can form a continuous extension while remaining discrete within their dimensionless selves. And, just as all of the ‘virtual torques’ of each point in four-dimensional space collectively formed the physical potential of the single field, the collective nature of this primal-awareness collectively formed, or imparted space as a whole with, a pre-consciousness potential in the form of a semi-physical field.

The single field potential is the precursor for all matter, fields and energy in the universe, while the corresponding pre-consciousness field 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 is imbued with a potential for the emergence of consciousness in every infinitesimal geometrical discrete point from which it is constructed. This structural property or quality could be

described as a Consciousness space, universal collective Consciousness, cosmic Consciousness, or even an absolute space that could be characterized as the “sensorium of God”, as Isaac Newton described it. Technically, all of these descriptive words work with the concept to one extent or another and only a better and more advanced physical theory can distinguish between them or offer a better alternative than the single field theory.

Synergy with other conceptual models

All the more speculative models that postulate Consciousness space or some form of super Consciousness are at least minimally compatible with the single field model of consciousness. All such models, including the whole range of speculative models of Consciousness, more-or-less offer a look at the ideal and/or final state of the universe toward which the universe as a whole is presently evolving: An ideal and/or final state of pure conscious being relative to our present state of both being and becoming.

Still other models that claim our true reality is just information, a hologram, a computer program, quantum bits or some other such device are more metaphysical speculation than science. They offer little if anything to science other than a form of escapism and an excuse not to do the real physics necessary to unify modern physics. This category of consciousness models is filled with non-sensed realities (literally non-sensed since our sensations of the material world are themselves material) that are being mistakenly interpreted by our minds as material reality, thus rendering our commonly sensed material reality somehow not real or un-real. These speculative models claim that the material reality we experience is nothing but a mental illusion, a trick played on us by our individual consciousnesses if not some greater universal Consciousness.

Within this context, questions regarding God, a Supreme Being or Supreme Consciousness are often raised, since they take advantage of a logical loophole of sorts in science, *i.e.*, it is philosophically impossible in science to even prove that what we sense really exists, let alone ‘prove’ something beyond science exists. According to a generalization of Gödel’s Principle, science must go outside of any physical system, such as our universe, to prove the actual existence of that physical system: All that can be proven within a system is the logical consistency or nature of that system. So all that can be ‘proven’ about our experienced physical universe is the logical consistency of events in our universe, which is as good a definition of physics and science in general as has ever been made.

The best science can ever hope to accomplish, according to its own doctrine, is a comprehensive logical theory that is internally consistent, explains what we sense (observe) in the external world and verify that theory, but never ‘prove’ it. Under these conditions, the reality of God or a Supreme Being is not within the realm of science, to either confirm or deny, even though almost everyone intuitively senses that there is far more to our world than we normally sense or even can sense through our three-dimensionally limited senses. God is neither definable and thus measurable nor verifiable by any possible scientific standards. The concept of God cannot be reduced to logical explanation by its very nature, but, like consciousness, it can be and is intuitively sensed and perhaps this situation is just as it should be.

The possibility that something exists beyond the comprehension of science is real and that something can still be validly discussed and debated, just not within a scientific context. For example, many people intuitively sense but cannot logically account for some type of a non-material ‘force’ at work in evolution. Being non-material and possibly even non-physical, references to this ‘force’ are not normally considered good science, but according to the single field theory such a semi-physical pre-consciousness potential field is just as necessary as is the ‘virtual torque’ that collectively becomes the single field potential. Being only semi-physical, the pre-consciousness potential field interacts with matter to create a ‘virtual force’ that cannot not move matter through space (as does a real material force), but instead influences matter to evolve into more complex systems, some of which have taken on the specialized characteristics of ‘living’ or animate matter.

An age-old dualism revealed and resolved

Even the hallmark concept of point/extension duality, upon which single field theory is based, has a special place when comparing physical/material reality to intuitive and even spiritual thought. The age old paradox of the duality between transcendence and immanence of God, highly debated in the Middle Ages of European history, now finds its resolution in single field physics. The duality reduces to nothing more than a misunderstanding of how Consciousness, whatever it may eventually signify, manifests itself in our real material world. The debate over transcendence and/or immanence is no more than another facet of the relationship between extension- and point-geometries (metric-element/point-element, relativity/quantum or continuous/discrete) that has served no less than to befuddle (derail attempted unification) and mystify physics over the last century.

Any apparent duality in nature, such as this, is resolvable since nature is a unitary and not a dualistic or multiple thing. Nature is a 'whole' and singular thing. The duality comes from our mental misinterpretation of nature, rather than nature itself, so it can always be resolved at a higher level of consciousness which is more in tune with nature. Just as a universal or Cosmic Consciousness can be both transcendent and immanent, it can manifest itself in two different ways through the 0-D point/twists from which our physical reality initially emerged or as an overarching guiding influence both for and within the universe as a whole.

In common physics the interaction of a potential field (gravity, electric or magnetic) and a piece of matter can be interpreted in terms of a force or an energy, which are themselves intimately related through the work-energy theorem. The action or influence of the pre-consciousness potential field (which is the precursor of individual consciousness) on matter can also be interpreted with respect to both of these physical concepts. It can only 'influence' matter because it is a semi-physical field, but it cannot move or accelerate matter as can a fully physical field. When animate matter interacts with the pre-consciousness potential, it can be interpreted as a 'force' such as the 'evolutionary force' that causes an organism to seek higher and higher levels of consciousness (a transcendent or holistic interaction) through biological evolution.

Experiential consequences of the synergy

An intuitive experiencer, a person who has directly touched, come into contact with Consciousness itself (in the highest-dimensional embedding space or manifold), or has somehow become consciously aware of the higher-dimensional space where individual consciousness is unencumbered by its corresponding three-dimensional brain and mind, may readily recognize this theoretical physical model, but describe his or her experience in a completely different non-scientific and non-logical manner. For example, many NDErs have said that they cannot find the words or language to describe their experience, or what they sensed about their location during their NDE except that it was another 'place', because the geometry that they sensed (experienced) is different from the geometry of our three-dimensional material world. The difference in geometry and/or the inability of our language to describe the experience is primarily why science has only been able to access the higher-dimensional world in any way other than mathematically. Science thus finds it necessary to speculate, to some extent, on the physical nature of the higher dimension and the Consciousness which occupies it.

Those who have attained a higher level of mystical awakening, whether spontaneous or studied, due to some (usually tragic) event, or through deep meditation and spiritual/mystical practices, also find it difficult (if not impossible) although seemingly necessary, 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 our higher-dimensional reality do not normally fit the logical (neural net) structure of the brain that we have each inherited, but the neural nets are primed to rewire themselves through new learning and experience. This makes attaining higher levels of consciousness both difficult and rare, but not impossible, let alone bring them into conscious awareness after they have been experienced, since our normal mind is presently limited at birth to interact at all times with the three-dimensional world of experiences.

In other words, we have the ability to learn and literally 'change our minds' by rewiring the neural nets to better understand the new higher-dimensional experience and this could eventually affect future generations of

humans through heredity. Our minds automatically place and interpret experiential events within the context of a commonly-sensed physical reality in an external three-dimensional material world as reflected by and within the neural nets that comprise the logical circuits in our brains. So any person who has experienced an NDE, at least one that is strong enough to rise to the level of conscious awareness, will absorb the experience mentally by rewiring some basic neural nets in a manner that changes the personality of the ND experiencer, sometimes quite radically, and allows easier recognition if not direct access to the higher-dimensional space through consciousness.

Others intentionally choose to awaken their individual higher consciousnesses through philosophical enlightenment and/or spiritual/mystical practices, but cannot do so until their neural net has rewired itself through contemplation at a sufficiently advanced level to bring the experience into their waking awareness. Even if a higher level of consciousness is experienced and attained and they reach true enlightenment, they still interpret their experience as a higher 'self' without realizing that the higher dimension of Consciousness they have touched with their minds is just a waking experience or awareness of their own natural physical extension into the higher dimension of reality. Everyone is always in contact with that higher dimension, we already sense it intuitively at a very low level of awareness, but directly experiencing it and becoming aware of that direct experience all the time in the waking state is another matter altogether. Philosophically and scientifically understanding the process may or may not be of help in attaining the goal of direct experience and enlightenment, but it is definitely helpful in understanding and rationalizing the enlightening event after it occurs.

With the notion that Consciousness acts through the individual discrete quantum points (Andrews' 0-D point Voids) to co-create our three-dimensional experience of space, a new interpretation and relationship between quantum theory and relativity is also implied. Single field theory has already accomplished this unification, yet it has not previously taken Consciousness into account as a universal aspect of our common physical reality, although the reality of a Consciousness space is implied by the existence of the semi-physical pre-consciousness field potential. The extended metric space of matter, in which we exist, corresponds to the superposition of all possible quantum Ψ -waves (wave functions) prior to consciousness collapsing an individual wave function to create a specific certainty of discrete (0-D) quantum point events. This superposition of all possible waves is reminiscent of Bohm's concept of a quantum potential field. [11] Henry Stapp [12] has also stated that he is leaning toward such a philosophical conclusion, whereby our universe is a complex superposition of all possible Ψ -waves.

But this 'superposition' can also be (and has been) interpreted subjectively and identified with some form of deity or Supreme Being, ranging from Yahweh, to Allah, Eru Ilúvatar, the Great Spirit or Brahman, and even Plato's Demiurge, characterized by its Cosmic Consciousness and acting immanently and/or transcendentally in our real world of experience. This particular interpretation is made more probable by the fact that immanence and transcendence are properties usually associated with a God or Deity rather than physics. In any case, the possibility of a higher-dimensional space or manifold in which our five-dimensional space-time continuum is embedded is a purely scientific and mathematical notion and could even have nothing whatever to do with religious doctrines. Religious belief is only a matter of personal interpretation and choice, with choice representing the concept of 'free will' as a characteristic of individual consciousness.

Conclusion

In reality our experienced universe is filled with a seemingly infinite number of individual consciousness pattern structures and that number is growing all the time, both in complexity and quality (qualia). So it would seem that the universe as a whole must be evolving toward a point in time when it will become aware of itself, if that moment has not already arrived, given the simple fact that both life and consciousness continually evolve by moving toward greater complexity within the universe. So it is safe to logically (and even scientifically) conclude that a universal or cosmic Consciousness is an evolutionary endpoint, either individually or collectively, and

probably both, without our direct experiential or observable knowledge of that possibility. Hence, idealistic models that posit a separately existing Consciousness space or cosmic Consciousness are not just metaphysical and/or speculative, but at least scientifically legitimate to one degree or another depending on their own inherent scientific practicality as logical descriptions of a possible and perhaps even probable ideal or future state of the universe.

In Andrew's original 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 therefore emerge from a 0-D embedding dimension corresponding to the quantum point at the origin of the space-time diagram. This notion of a six-dimensional embedding manifold could also be related to a cosmic consciousness, collective consciousness, super consciousness or even more specific models such as Faggin's concept of C-space as well as other more speculative theoretical models. It could even be related to metaphysical models and those that deal with spiritual matters such as the Tao, Great Spirit, Demiurge, Brahman and/or Ein Sof. A universal collective consciousness of this type that acts through each and every point in our three-dimensional space of experienced reality could easily correspond to the implied sixth embedding dimension of the single field theory. In other words, the universe is conscious, if for no other reason than because consciousness can and does exist within the universe and it is constantly growing toward greater consciousness of itself through its parts, *i.e.*, humans such as us.

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Abstract = 179 words

Bibliography = 369 words

Everything = 6879 words