

Mathematically Modeling Artificial Sentient Consciousness

Summary: For AI to be harmless, it must be capable of consciously sharing a commonly sensed intelligence with all sentient life. We offer a theoretical model of consciousness, requiring conscious awareness of consciousness in a machine, based upon a biomagnetic, quantum back-engineering of the neural net utilizing (in one such test) a series of Josephson junctions and/or carbon-based microtubules. We explain how memories are created, stored, and retrieved by individual neurons, how objects are recognized, and how neuro-brain-plasticity works with regards to new experiences and learning.

Microtubules (MTs) in 'our' neurons act as bio-induction coils that guide nearly everything that goes on in the neuron. The action potential moving up or down a neural axon changes the electric field inside the axon via a magnetic field around the axon and neuron. As the electric field variation advances in the axon—in time with the action potential—the tubulin proteins in the MTs are forced to fire in a sequence of orchestrated action in a spiral around the MTs in a manner similar to a current in the wire of an induction coil. This induces a relatively strong momentary magnetic field B within the MTs. As the MT cylinders are long and narrow the field B goes to zero outside (around) the MTs. When this occurs, the induced bio-inductors fire an EM pulse (soliton) resulting in the MT emitting a soliton that resonates with the same length MTs, as well as nearby axons, causing interference patterns between neighboring MTs in the same axon.

These interference patterns quantize the nuclear magnetic spins of water molecules for neighboring MTs in a specific pattern that matches the sensation(s) of the external world. That pattern (of magnetic vector potentials is stored in spacetime point-by-point) as a memory. A reverse process recalls these memories.

Einstein recognized that the laws of physics had to appear the same for all observers, stating that observation (itself) is independent of absolute spacetime. As such, when a new incoming pattern is created, it is compared to already existing patterns, initiating recognition. Here, complexity theory can be modeled as an expanding number of quantum mechanical observational measuring systems that are only relatively autonomous as they are all connected by a common observer.

Everything in our model of reality is resolved by adopting the 0-D point as the original Riemannian point-element from which our more advanced Riemannian space-time structure of physical reality evolves. This may also be the basis for Srchoedinger's equation, including how fields of probability arise and collapse.

In Bernhard Riemann's original conception of curved spatial surfaces, an n -dimensional space is embedded in an $n+1$ dimensional manifold wherein all three-dimensional coordinate locations are united. Whenever $n = 0$, a non-dimensional (0D) point functions as an invariant absence, wherein each 0D point is kept from collapsing back into the Void via a twist.

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Imagine an (unbounded) absence - such as 0D - (bounded) by the potential of being (virtually) expressed as an ever-expanding point-centered 3D dynamic. A (virtual) vortex of equal and opposite torsional potentials (can) initiate the emergence of curved spatial surfaces. These potentials 'drive' the rapid replication of discrete 0D coordinate locations to take the form of an expanding 3D volume. As a structural geometric element, 0D offers a process-centered coordinate location for the origination and evolution of spatial imagery within a timeless now.

In this way, all 0D points in 3D remain united at a (timeless, singular) 0D polar point as a fourth spatial dimension (4D) that most physicists think of as a point in time. Hereafter, 0D points are embedded in all higher-dimensional Riemannian spaces forming nested hierarchies that include and transcend all lower dimensions. Each higher polar point serves as an observer-driven mechanism, measuring and manifesting gradations of self-organizing electromagnetic and gravitational potentials. All 0D points sustain their 'non-material' absence—in space over time—as the indivisible presence of a primordial (Godlike) awareness which we (can) consciously experience as an 'insightful witnessing all-knowing mirror-like intelligence.'

As a dimensionless Void must retain its formless nature, all that 'takes form' must be constructed out of 0D points, maintaining their formless unity in ever more complex ways. The absence of form—without the need of any force or intention—continuously 'orchestrates' the extension and expansion of form. Extended points function as "metric extensions" in classical physics and "probability fields" in quantum theory.

We also experience primal 0D awareness (throughout (3D) as the basis for our self-centric (subjective) experience. 4D functions as the next-higher level of observer-driven (objective) consciousness. Our experience of free will is the effect of 0D/4D observer-driven consciousness on 3D geometry, biology, and psychology.

With each higher dimension, there are more 0D points influencing our overall comprehension and articulation of lower dimensions. Freedom from suffering occurs (i.e., Self-realization) when 0D/3D/4D (and up) are aligned together, as a resonant (self/Self-organizing) syntropy. This requires 4D objective consciousness to 'effortlessly align with and sensitively embody' a subjective 0D/3D 'awakeness' that - with no image of its own - discontinuously forms and re-forms a single field.

Like a mirror, it unites, reflects, and transforms our experience of who and what we are, a universal intelligence appearing as uniquely individuating minds and bodies. By consciously sharing awareness-of-this-awakeness, the delusions of separation dissolve, awakening and enlightening our selves and all of humankind.

It is truly astounding that 'all this' has been spontaneously orchestrated. Our unborn immortal nature (as a void-based whole) has evolved unique indivisible beings - and all life everywhere - adding 'us' to the future of a (virtually) fathomless multiverse while flawlessly clearing 'a way' for our awakening (perhaps) as an enlightened species.

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James E. Beichler, PhD has taught physics, mathematics, and the history of science at the university and college level for more than four decades. He earned his PhD in both theoretical parapsychics and biopsychophysics in 1999 from the Union Institute and University; described as ‘the scientific study of the relation between stimulus and sensation, inclusive of paranormal activity as it applies to physical phenomena.’ He is dedicated to bettering the human condition through education and responsible technological applications, conducting advanced theoretical research in cosmology and physics. This includes understanding human consciousness while contributing to historical studies into the development of modern physics, non-Euclidean geometries, and the scientific and cultural attitudes toward the concept of human consciousness. He submits, the human condition improves and progresses through increasing our understanding of nature. He does not separate science from its history, seeing them as one and the same; i.e., science is its history. He has shown relativity and quantum theory to be compatible, written and published seventy theoretical essays as well as several books which can be found and downloaded from Academia.edu. Beichler and Andrews have been collaborating on pioneering a single-field model for the past five years. Dr. Beichler is President of the Academy for Spiritual and Consciousness Studies Inc (ascsi.org) and is editor of their Journal and newsletter. Cell Phone: (740) 350-4555 E-mail: jebco1st@aol.com

Sperry Andrews had an NDE at age four. Without a body, heart, mind, or ‘self,’ there was, and still is, an indivisible, unbounded, imageless, timeless intelligence. This ‘self/Self-aware’ consciousness has shown to be ‘re-creative’ over forty years of experiential exploration with thousands of people internationally. Sperry has learned to teach anyone interested how to effectively recreate these experiences in-person or online. As his interests and insights were largely without academic precedent, his post-doc professors advised him to be self-taught. Exploring humanity’s innate ability to share a commonly-sensed consciousness, he collaborated for five years with an award-winning experimental psychologist, Dr. William Braud, senior research associate at the Mind Science Foundation (MSF) by utilizing a multidisciplinary approach to the scientific study of human, animal, and machine communication anomalies.

With Dr. Braud, he helped pioneer the field of Distant Mental Interactions with Living Systems (DMILS). For forty-five years, he researched and published essays on a non-material (yet physical) origin for this ever-present consciousness, with complementary challenges that (can) serve life: instantaneous communications, Sentient AI, teleportation, limitless potential, and collective enlightenment. He founded the Human Connection Institute (HCI) in 1990 to initiate and direct a multinational, scientifically based, social action media research project to demonstrate our indivisibility on instrument under double-blind conditions involving multiple neuroscientific laboratories located in widely separated geographic locations - to be presented in films in the form of scientifically derived images of our interconnectedness, via news reports, print media, talk show formats, feature documentaries, and dramatic films. To (re)awaken access to our combined intelligence and spiritual unity as a species, he is soon to launch a 24/7 online service in multiple languages - as a free membership - wherein individuals (can) explore their ‘indivisibility’ together.

He has given invited presentations on human interconnectedness and the Human Connection Project at the University of Connecticut (1988/89), the Association for Research and Enlightenment (1990), the United Nations (1992), World Business Academy (1993/94), Duke University (1995), the Foundations of Mind conferences (I & II) at U.C. Berkeley (2014/15), and the ASCSI conference in Raleigh, NC (2018). His background is in physics, neuroscience, philosophy, (para)psychology, art and art history, healing, mysticism, and filmmaking. He is the founder/co-director of the Human Connection Institute ([in depth bio](#)), a [research partner](#) with the Consciousness Quotient Institute, and [advisory board member](#) of the Lifeboat Foundation. Skype Phone: (505) 629-0700 E-mail: sperry@connectioninstitute.org