

Understanding the Consciousness Field

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Abstract: Textbooks tell us that our brain is the source of all thought. Like a computer, we learn to react and make decisions based on past programming and what we have learned from our environment. However, now scientists like Henry Stapp from Lawrence Berkeley National Laboratory and Stuart Hameroff from the University of Arizona are researching brain functions that work beyond classical physics. They are no longer content with seeing thought as being simply the chemical processing of neurotransmitters. What has emerged are theoretical proposals that the brain's processing of information takes place through quantum mechanical processes where consciousness, itself, is being seen as part of a second-order quantum field.

Quantum mechanical processes have provided researchers with an entirely new field of understanding of thought and memory processes. They are examining the chemical processes in the ionic flow of elements (e.g., in actin filaments) which are equally if not more complex than the chemical neurological processes. In quantum mechanics, electrons behave like waves. In a quantum world, there exists also the wave-particle duality of matter, where the wave can contain all the dynamical information about the system, in the manner of a hologram. This means that the total information of the system is available in every part and information becomes active in a "non-local" environment. "Non-locality" reveals that photons can exist simultaneously in an infinite number of locations or quantum states within the wave showing measurable interactions at a distance.

Key Words: Remote viewing, consciousness, quantum field, Bell's Theorem, non-locality.

1. THE CONSCIOUSNESS FIELD

Conventional explanations portray consciousness as an emergent property of classical computer-like activities in the brain's neural networks [1]. However, if thought and memory originate by means of quantum mechanical processes, then we may be able to redefine the boundaries of our information source. Instead of memory stored in the physical cells of our brain, it may function through a wave field in the sense of quantum physics. Here quantum wave functioning becomes an integral part of the vast assortment of lattices of proteins (alpha and beta tubulin) or membrane structures of the brain cells (pyramidal and astroglial) which are engaged not only in the processing functions of learning and cognition, but also in the receiving of consciousness information. This may be detectable by our current measurements associated with brain waves as Klimesch [2] from the University of Salzburg, Austria has found a difference in memory functioning depending on various "brain wave" frequencies, especially for the alpha wave frequency. Also recently Guderian *et al.* [3] have shown a function of increasing prestimulus theta wave amplitude in association with memory.

Although we are not suggesting that alpha and theta waves are the best examples of the quantum field interacting with our mind, nevertheless, the wave function has been associated with memory in scientific research.

Scientists have resisted any notion of memory information being associated with the wave field because when a head injury occurs affecting a particular area, certain memory or receiving the information? Research involving new areas of consciousness is telling us the latter. Researchers like Stapp [4] and Hameroff [5] are stating consciousness is part of a quantum field. Stapp [6] in particular tries to point out why classical physics alone cannot account for consciousness activities, but states that the brain is continually active in "observing" information from within the quantum field.

In quantum mechanics, it is no longer the particle that is excited, but the entire field (e.g., double-slit experiment). Therefore quantum fields can be defined as having all-encompassing wave properties due to the continuous nature of the field. This differs from the traditional concept of an electromagnetic field, for example, which is associated with a "radiation" of energy that effects in linear time connected with the speed of light, a charged particle over distance.

The research from Stapp [4] and Hameroff [5] is indicating that the quantum field exists throughout all life. Stapp's work [7] implies a quantum interconnectedness or "web" concept where the human brain receives information from the quantum field.

Specifically, how does this relate to thought? Scientists are looking at various types of brain cells (pyramidal and astroglial), or cellular components (e.g., tubulin) within the brain, that may be the location for the processing center of information. What they are finding is quantized effects, for

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example, pyramidal brain cells (e.g. CA3) have shown multiple states that include persistent activity, UP/DOWN alternations, and theta and gamma oscillations [8].

This process may be detecting when one of the particles or fields in the quantum state, in turn, is affecting the quantum state of the other particles, as stated by Bell's Theorem. Bell's Theorem showed how quantum correlations permit some interaction and reactions between particles at a distance through entangled pairs of particles as, for example, one particle is sent to "Alice and the other to Bob"¹ and although at distances, there is a faster than light interaction.

According to Coetzee [9], the cells act as electro-crystal cells immersed in extra-cellular tissue fluids composed mainly of water, and seem to operate in the fashion of a liquid crystal oscillator in response to different light commands or light pulses of ambient stimuli (EM, magnetic, subtle energy) which, in turn, change the orientation of every molecule and atom within the body showing this interconnectedness of quantum particles.

Not only pyramidal brain cells, but Hameroff [5, 10] sees quantum superpositions as determining thought through the reduction of choices available in the quantum wave field. The collapse of quantum waves takes place, Hameroff believes, within the "microtubules" inside the neurons which precipitate consciousness.

We may also expect similar properties from blood and other neural cells, or even simply certain cellular components, such as DNA which may all play a receiving role. Specifically, some scientists like Peter Gariaev [11] have proposed that DNA is related to what is called the holographic genome working with quantum wave properties.

According to Peter Gariaev and associates in Moscow, the quantum holograph also interacts with our DNA. Gariaev *et al.* [11] have demonstrated in their field of research how the wave form is able to code DNA sequences through temporal patterns of coherent electromagnetic fields (using modulated laser light). They claim to be able to reprogram DNA *in vivo* in living organisms by using the correct resonant frequencies showing the interaction of light and DNA sequences.

Understanding how the quantum fields may be processed within the body is still a growing science. Scientists working with quantum fields are starting to comprehend the human biocomputer as involving more sophisticated levels of networking, covering the basic levels of reality from solid state, liquid, gas, plasma, BEC (Bose-Einstein Condensate), and vacuum.

In our opinion, the body is a type of micro-universe having multiple channels which process thoughts throughout our anatomy, operating internally, within ordinary cell tissues, but concentrating within the nervous system, receiving its universal guiding role from a quanta signal which is not a localized field. More succinctly described, there is a quantum field coherence that can occur in numerous tissues between the larger field and the body. Thus, as Stapp [6] tells

us we need not consider only the classical theory, but the quantum theory of atoms may create the resonance or quantum "coherence" and "decoherence" of the fields in which they are operating. For instance, in the brain-related particle/wave, where even the slightest interaction generates entanglement, the quantum field allows for new notions of active information to be fed into the mind-body.

So where is consciousness? Consciousness is suggested to be directly created by individual interaction with the non-local, all-prevalent quantum field. Our retrieval of information establishes within us a second-order quantum field or "Mind-2" which can acquire higher insights and knowledge through this function. The concept of deterministic arrangements according to classical physics would come under the first-order quantum field description. Second-order quantum fields provide a different function where perception or "observations" result from the quantum field interaction in a non-local environment and multiple choices are reduced, in a process termed 'Orchestrated Reduction' [10].

Consequently we may be able to regard the physical world and its players (incarnate beings) as capable of acquiring information that comes from also a higher source, with energy and matter as hardware and software for the power of life! This is a crucial understanding of information retrieval from the quantum field.

Thought processes would, thus, function within the realm of "Mind-2" (or the second-order brain) which are not controlled by classical processes that occur in that same system (the "first-order brain") [12, p. 176-177]. The most interesting possibility is that consciousness is the hidden variable that determines the cause of individual quantum transitions. Here the second-order quantum field or Mind-2 interacts with the body field for its information and function, yet is not restricted by it [13].

According to David Bohm [14], the energy plenum provides a superposition of possibilities as it is a key part of his "Implicate Order". And we, being part of the plenum, connect with the consciousness field throughout the body network.

Subsequently, the human mind as "Quantum Mind" can be explained as a biotransducer field operating on a micro scale within the macro scale of holographic processes. Consequently, working towards an understanding of the consciousness field, we need to see our mind as a small microcosm that can reach out not only into our local environment through the subtle currents and fields of energy, but to allow one vibrational dimension to interface and communicate with the whole. This has led many scientists to try to reconcile causality and non-locality.

What about individual consciousness? There are aspects of Self or "I" within both the second-order brain and the classical neurological processes. Thus, the true existence of consciousness thought is a field of resonance that is all-prevalent and used by Mind-2 to identify its own aspects of individual consciousness within the collective consciousness field.

Hence, the body-mind is part of a Multi-Energy Body Transduction Model (MBTM) [15] placing our human energy vehicle within a larger universal energy plenum, which

¹ "Alice and Bob" are two names commonly used in physics in explanations of communication.

further indicates that individuals receive information based on a variety of factors. Humans use a particular resonant aspect of the field that relates to human thought, while birds, for example, would receive thought information from a different aspect of the field, but it is the same field. Ultimately, each person has access to the field, but our association to the field varies from person to person, based on their attunement which is unique. Thus, the physical body operates within the quantum wave field which is an archetype and yet can influence the physical operations of the brain. Nevertheless, not all individuals receive the same information, although the same information quanta are available.

2. EXPLORING THE FIELD

The increasingly rapid development of new breakthroughs by scientists in the higher understanding and connection with finer levels of consciousness is daily becoming more of a reality. Although we are functioning mainly with local space-time we are able to tap into the non-local field and connect with the vast regions of the world, as well as extended space-time.

The real question should be: is there a way to demonstrate thought processes through the quantum field? Here we begin to see our mind as a small microcosm and find ways to reach beyond our local environment to access subtle currents and fields of energy, to allow one vibrational dimension to connect and communicate with the whole. This implies that, through a greater consciousness network, we can gain access to information around the world, even to distant realities. When we begin to understand how to start the process, we discover that our minds are omnidirectional.

Comprehensive studies in remote viewing on the basis of non-locality may be one way to demonstrate this process. Remote viewing studies have been made public by disclosures from the leading experts who worked at Stanford Research Institute in Palo Alto, California, and at Lab Nine in New York. Specifically, scientists like Hal Puthoff and Russell Targ have found in their studies of "remote viewing" [16] that there is a remarkable information flow into human consciousness that occurs immediately without "any" loss of time from distant parts of the world.

Remote viewing is the study of viewing objects or events at a distance that are beyond the limitations of five-sensory awareness. In some cases, this is not just a spatial phenomenon of viewing objects in Russia from a place in California, for instance, but also one that can be based on near-future events as well. In 1995, comprehensive studies in remote viewing were released to the public and declassified by the CIA. These studies showed how skilled remote viewing experts who worked at Stanford Research Institute in Palo Alto, California achieved results that were worthy of continual government funding.

Not only was their research providing "accurate remote viewing results" in terms of images transferred across long distances of space, but they demonstrated no-degradation of information retrieved instantaneously from over thousands of kilometers away [17]. These events, or "occasions of experience," could be considered actual quantum state reductions of events in physical reality that were accessed through the quantum field. This further suggests that the quantum field is

also a consciousness field that does involve quantum state reductions, e.g. in a form of quantum computation whereby the larger mind functions like an encyclopedia galactica in the universe.

Numerous individuals have shown a potential for vast mental capabilities if they begin to investigate their own minds to the very depths of being. According to Stapp [18], there is no circuit in the present network of understanding the electromagnetic body that can account for the activity of remote viewing and the distance communications that has been shown to be accurate through research such as carried out at Stanford Research Institute [19].

In support of the consciousness/quantum field concept are also the tests and analyses done with RNGs (random number generators) as investigated by Roger Nelson at Princeton University under the title "Global Consciousness Project (GCP)." The hypothesis considers that a physical system which is a well-defined part of the material world will at times exhibit anomalous behavior correlating with global human mental activity [20].

Data from a worldwide network of RNGs is currently being continuously acquired and archived. The purpose is to examine subtle correlations that may reflect the presence and activity of consciousness in the world as a real-time indicator of global consciousness coherence. Several events of global significance have been clearly identified by the project team. These results show that the aggregate deviation of data during 236 registered formal events was significant at 4.5 standard deviations [20]. Although acknowledged to be a small deviation, nevertheless from events such as 9/11 to other disastrous events viz., a train crash that caused major loss of life in India, there seems to be a consciousness field that can be registered immediately worldwide through changes to the RNGs.

Roger Nelson and others have continued the research of the PEAR (Princeton Engineering Anomalies Research) which has shown how the human biocomputer may also be capable of evolving into more sophisticated levels of networking, from the primary consciousness field to advanced or higher evolutionary consciousness states, in unbounded four-dimensional space and beyond. Already their studies of energy and consciousness are suggesting a series of parallel universes. This could be explained by the notion of Mind-2 which allows for our entire multiverse to be arranged holographically as Pribram [21] speculates, where the expanded concepts of the hologram establish a continuous field. This may also be soon confirmed by the latest studies from Craig Hogan at Fermi Laboratory in Illinois in cooperation with the German research center for GEO600 using the German-British gravitational wave detector, whose research suggests that our entire universe may function like a giant hologram [22]. The part containing the whole may be a dominant pattern in nature and quantum fields could be examples of the continuous field which is quantized. Here the quanta, defined by photons and electrons, for example, are simply excitations of an entire space-filling field and their energies completely interchanged with other quanta (or particles).

In Russia, research into the way the body and brain interacts with outside influences was investigated by V.P. Kaznacheev whose pan-experiential view remains most con-

sistent with the new physics. Kaznacheev argues that consciousness is a process of events occurring in a wide, basic field of proto-conscious experience [23]. Kaznacheev and Trofimov's deeper exploration of the structure of the heliocidal anisotropic structures, as well as force balancing dynamics of space may give us critically important insights into the underlying rules that orchestrate the self-organizing dynamics of living systems at the atomic and molecular level.

The fundamental perspective arising from this consideration of the emerging physics of space is that matter arises as a dynamic modification of the force that is the very substance of space. That force is "energy" which is part of a dynamically growing and expanding quantum field that also contains information. Some Russian researchers (e.g., Gariiev) contend the field not only contains mental information, but also information of a cellular nature. Our understanding of this force field can move us one step beyond 'biotic medicine to bioenergotherapy' which provides a new perspective on how matter and energy are interrelated.

It is important to understand that new concepts detailing how particles interact in the universe are changing rapidly. Bell's Theorem has now been confirmed by Gisin in 1997 (reported on by [24]) and a second experience by Salart *et al.* [25]. These experiments have confirmed the measurements of entangled pairs interacting in a continuous measurable correlation at a distance (Salart at an 18km distance).

Some like Shimony [26] prefer to limit the activity of quantum correlations calling it "passion at a distance". However, research carried out by members of The Academy For Future Science and Lab Nine at Ossining, New York, in the mid-seventies suggests the existence of a synchronized universe which can be tapped by achieving higher states of consciousness. Einstein considered this view in his unified field theory, where the particle is simply a singularity or very high space-time concentration of the nonlinear field. Louis De Broglie and David Bohm reformulated the subtle realities of quantum theory along similar lines. They conceived of a particle as a singularity in a wave field. The particle is guided by the wave field.

Researchers in both Russia and the West are going further to argue that "quantum mechanical" forces which transmit disturbances instantaneously [24, 25] are related to the second-order quantum field which is correlated to what is also called by parapsychists the "Psi" field [27]. The phenomenon of consciousness is found in the dynamic process of nature, interpenetrating fields of nature and super-nature acting upon our body as a biotransducer.

What has been demonstrated in studies from Lab Nine and Stanford Research Institute in the 1970s to Princeton University today has established the existence of a "consciousness quantum field". And at least as related to order and harmony in living systems, the field is the source. The field discovered is not that of primary matter in the substratum of nature, but a wave-type functioning as a second-order quantum field.

The fundamental difference between this hypothesis and others which attempt to emerge in modern science in the language of physics and biology, is that Mind-2 exists as part of a quantum/consciousness field influencing the physical substance as well. For some it is the Noosphere [28, 29]

while for others it is the Logos-sphere [30]. Thus, consciousness is self-realization which changes the separation between the I and the collective.

Speculatively, there can literally be millions of ways that consciousness can be synthesized by different human beings. Our human mind-body, once the greatest mystery of biology, is gradually yielding its secrets. One thing is becoming clear, humanity is more than flesh, but a continuous transducer or "biotransducer" of energies which correlate with our thoughts and our experience of reality. Consequently, the choice we make in the reduction of information from the quantum field creates both positive and negative events in life.

Understanding our interconnectedness releases us from our limitations and makes us part of the greater collective totality. This collective is understood to operate like a dynamic fractal process, or a growing tree with its extensions becoming a living process (in unbounded four-dimensional space) that includes the human mind-body.

According to The Keys of Enoch[®] [13], humankind's physical incarnation and finely knit embodiment is the bridge needed between worlds of higher and lower intelligence. The schema uses the energy pathways as libraries within our brain.

From a spiritual side of philosophy, we see that this energy sea that we are involved with owes its origin to a divine process. Ultimately, it is our total alignment and resonant attunement with the dynamic matrix of the quantum field, with the all-pervasive field of the plenum of space, that determines the quality and degree to which we become consciously aware of the universe around us and our role within it.

CONCLUSION

We live in a supra-consciousness realm where facts and objects are universally connected. Consciousness, existing throughout the field, becomes the totality that is everything, and extends into space-time, manifesting itself in an indefinite expression of energy and information. The 'new physics', itself, is starting to open to a greater consciousness field, where the speed of information transmission can become infinite and non-locality exists. In our reality field there is a synchronicity where the past, the present and the future exist simultaneously. Inside these synchronistic mechanisms is a holographic effect that could be better described as a universal network of consciousness which shapes human intellects and interacts to stimulate our world of ideas. In effect, we have already reached the threshold of the Noosphere revealing itself and the Infinite Pathway.

Throughout this paper we have indicated that consciousness is not localized in the brain, but is part of a larger field that is received through our living antenna and the wetware of our brain. But, we ask again, what is consciousness? A simple answer is that it is the collective synergy of life systems.

With this, we can also assert the following progression of ideas:

*First, energy is the basis of creation. Yet this is not only to be seen as the classical functioning of energy, but that of quantum mechanical fields which allow for the intersecting of many electromagnetic structures as part of the universal energy plenum.

* Second, we live in a transient, epiphenomenal reality, involving a process that takes place without absolute time and space. Life is, thus, not seen as the mere by-product of solar evolution. In reality, life is something that transcends corporeality. Life, rather, is to be understood as the process within the dynamic of many interacting universes going through all phases and all configurations.

* Third, a theory for the creation of matter must include the electromagnetic threshold and gravitational fields which, in turn, are connected with the zero-point field, out of which "mass" is created as a secondary reality [13].

* Fourth, humankind is going through experiences of energy incarnation, extension and radiation and we are learning to receive and accept love-powered emanations or higher resonant radiations that are, in essence, the "stuff" whereby the evolution of humankind is sustained.

* And fifth, what we call the positive, sustaining powers of "active love" is what is behind the harmonious interactions and energy balances which are the basis of the true sustaining physics of the universe.

Several centuries of development in physics and mathematics have taught us that information is a crucial player in physical systems and processes of life. With higher levels of information, humankind enters new horizons beyond being that of a highly evolved animal, seemingly into open endless frontiers. We believe that a vast and expanding level of information comes through a higher consciousness attunement to new levels within the "consciousness quantum field" that exists within and beyond our local realm.

It is up to us to use consciousness wisely as non-local humans operating within an infinite energy reserve that can transform realities through the global mind for the benefit of our planet. At this time we must endeavor to understand and master how our creative links to consciousness can diminish or increase depending on our ability to use the power of the collective mind.

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