Fields of Consciousness

Bob Staretz
www.GrokingWholeness.info
December 2019

Introduction

Understanding consciousness is very different from all other studies of nature because consciousness is not observable. It can only be experienced. I know that I'm conscious – I know what it feels like to be me. Others around me seem to be conscious (e.g. seem to have experience) but it is simply not possible to probe into their minds and observe their thoughts or feelings. This contrasts with observations of the brain, where we can probe and study various physical aspects of its workings such as its structure, function, connections, firings, along with many other physical properties and processes. How these physical aspects of brain functioning and processes give rise to, and correspond to, experiences of the mind (thoughts, emotions and experience) is referred to as "the hard problem" of consciousness.

Can inanimate matter (composed of molecules and atoms) in the form of a brain give rise to experience or does it just filter and process it? Correlation of specific brain functions to activities of mind does not imply causation any more than a specific circuit within a TV set creates the programming that is viewed on the TV screen. Science has been unable to demonstrate how consciousness arises from brain functioning – that is merely an assumption of the prevailing materialist paradigm that no one has been able to prove in fact. The materialist conjecture is that when brain complexity reaches a certain threshold, somehow consciousness suddenly arises, a reasonable sounding hypothesis but one that is not backed up by any hard evidence.

Could it be that consciousness does not arise from the physical brain as the prevailing paradigm assumes? Instead is it possible that some aspect of consciousness transcends the brain where it acts as more as a transceiver and/or reducing filter for a transcendent consciousness? If so, is this transcendent consciousness built from the same fundamental forces, matter and energy as studied by the physical sciences? Can experiences of the mind be externally manipulated in some way science does not yet understand? Is there something else that underlies consciousness, a primitive awareness fundamental to nature, that does not depend on brains or sense organs that accounts for conscious experience, something has heretofore not been recognized nor understood?

Answers to these questions are the subject of this paper. It describes an alternate view of reality where only a single wholeness exists and one where an aspect of consciousness is fundamental and irreducible. We describe how this awareness (which we refer to as intrinsic awareness) is built into the fabric of the cosmos and not emergent from physical matter and energy. Also discussed are some of the implications of this view where consciousness interacts with, and influences, all objective and subjective experience.

Fields, Information, Awareness and Consciousness

Contemporary physics, the study of the most basic aspects of physical reality, is really a study of fields. Every interaction in nature relies on the properties and influences of fields. Fields are ubiquitous and describe qualities of the fabric of space-time where every point in it has specific properties (values). Each unique point within the field can be defined by various characteristics such as a single value like

magnitude (e.g. temperature) or by multiple values such as magnitude, polarity and direction (e.g. electromagnetic field). Fields are especially useful when a physical object is moving through it or when two or more objects are interacting or influencing each other in some way.

An important idea to note here is that fields can be used to mathematically model how various objects act and are influenced within these fields. Models do not necessarily represent how nature actually works but allow us to make predictions as to how a field's influence changes from one location to another. As these models are validated, they can be used to support the development of technologies or processes that can be used to manipulate various interactions of physical objects that appear to follow the rules defined by nature and mimicked by the model.

In quantum field theory, the most fundamental and most accurate model of nature, every kind of particle is associated with its own unique field. These fields even exist when they are not strong enough or coherent enough in a particular place and time to manifest a real physical particle. These virtual particles and the fields that support them are always present and influence or support physical reality.

All fields have a fundamental quantity of energy associated with them, even in the empty vacuum of space. This vacuum is known as the quantum vacuum or Zero Point Field (ZPF). Its energy density is enormous. For real subatomic particles, all interactions between them and all matter that is built from them are supported by the vacuum energy and are mediated by four fundamental forces which are expressed as fields. These forces are electromagnetism, gravity, the weak nuclear force and the strong nuclear force.

When an event occurs at one location in space-time, a disturbance in the field is created where information (patterns of energy or matter) is propagated at the speed of the field. For most particles or forces this disturbance is transmitted at the speed of light – the ultimate universal speed limit for physical matter and energy. For non-local interactions such as between entangled particles the propagation of information regarding the states of the interacting particles is instantaneous. This influence is immediate (e.g. beyond time and distance) regardless of the space between them even for entangled particles separated half way across the universe.

Quantum field theory not only describes fundamental forces and particle interactions but it also describes how these fundamental particles can be viewed as nothing more than oscillations (e.g. vibrations) of particular fields. All the matter that they represent have attributes of both waves and particles at same time (wave-particle duality). Whether looking at matter from either perspective, the field is the fundamental concept. The particle (e.g. matter) is just one way of looking at a field while influences (e.g. forces and energy) that are associated with it is another way of looking at it.

Some fields occupy space and time and store and transfer energy. Other fields operate beyond the normal bounds of space-time constraints. In the latter case they are referred to as non-local fields. All fields also store and transfer information. Information, as described in this paper, is nothing more than energy or matter arranged in patterns. Information by itself does not have any inherent value; it requires conscious experience to assign meaning to it. Without consciousness there can be no meaning and no experience. So in a very real sense fields are responsible for creating and mediating conscious experience and meaning.

In materialist science the study of human consciousness divides reality into two distinct aspects: a subjective component which concerns specific personal thoughts, opinions and feelings of the individual. These are known as "internal subjective experiences" or personal experiences of mind. Internal experiences are also referred to as "first person experience". The other aspect of experience is the third person perspective or "objective experience" which is concerned with the perception and interactions with "external objects" beyond those which reside solely within the first-person experience.

Objective reality is experienced as a common unbiased factual experience where personal feelings and beliefs are absent from the object of the experience. It is more or less the same experience for everyone. All external physical objects are considered to be independent of each other and only interact through the four physical forces and their associated fields of influence.

This view contrasts to subjective experience where the experience is subject to filters, i.e. the beliefs or interpretations of the individual mind as it perceives and interacts with itself. Of course, one can say that objective experience is also biased (e.g. subject to interpretation) but it is not nearly to the extent that subjective experience is. An apple tree is an apple tree no matter who is looking at it. On the other hand the experience of beauty varies greatly from every individual who contemplates it.

In the objective view the internal subjective aspects of mind are thought to have no influence on objective reality nor directly upon the subjective experiences of others. This separation is commonly referred to as a "dualism". In the modern era, a reemerging view is that of a unity, a wholeness and interconnectedness of all things. It includes the merging of subjective and objective experience into one holistic experience. Here everything influences and interacts with everything else. This unified whole view is referred to as "non-dualism" and is consistent with ancient mystical and some spiritual descriptions.

Upon reflection and deep introspection, either by a personal epiphany or by experiencing altered states of consciousness, the dualistic paradigm does not appear to be the way the universe is actually constructed. Instead, we experience it as more like an interconnected participatory web of an undivided whole. Everything including both subjective and objective aspects of our experience is part of a wholeness and every part has some influence on every other part of it. For living systems, these influences include mind to mind, mind to object and object to object interactions. Depending on how strong the influence is between these subjective and objective aspects, the degree of interactions within this unified oneness is determined by the mutual spheres of influence of the interacting parts.

For conscious beings, the notion of oneness includes the ability to pick up information from the local and non-local environments without using normal perceptual and sensory mechanisms. This mechanism is referred to by humans as intuition and also known as our 6^{th} sense. Dr. Edgar Mitchell has referred to this intuitive 6^{th} sense as the 1^{st} sense. His claim was that before life had evolved and developed complex sensory mechanisms (e.g. sight, sound, touch, smell, and taste) along with brains, it probably relied on this first sense to "perceive" what was happening in the environment around it. This intuitive first sense is the scaffolding upon which conscious experience is built upon and emerges from more primitive aspects of reality using the mechanisms described in this paper.

In addition to the physical components of quantum reality (sub-atomic particles and associated fields), the fundamental interactions upon which everything we experience is based upon the following quantum principles:

- Non-locality – the instantaneous transmission of state information between two entangled objects. This transfer of information occurs regardless of distance (e.g. beyond space and time).
- Entanglement – a condition where groups of objects are interconnected in a way such that the characteristics of each object cannot be described independently of the characteristics of any of the other entangled object regardless of their separation in space.
- Coherence - a property of waves where two or more waveforms line up and reinforce each other. This is analogous to soldiers marching in step with one another as contrasted with incoherence or dissonance (e.g. everyone marching out of step with one another).
- Resonance –an amplification that occurs when two or more objects match each other's natural vibration (resonant frequency). A good way to think of this is a tuning fork and a piano string that both vibrate at the same frequency. With multiple tuning forks all vibrating at the same frequency and when all are in coherence with each other, the vibrations will be self-reinforcing and the vibrations will become stronger (e.g. the louder the sound in the case of the piano string).
- Intrinsic awareness – a fundamental aspect built into the fabric of the cosmos in addition to matter and energy. It is the most basic ability to be aware, to know and to experience. It is the ground state of experience and is irreducible to any sub-components.

The first sense is based on intrinsic awareness and the other quantum properties described above which all exist at the most fundamental level of nature. Intrinsic awareness exhibits itself as a field that operates beyond normal space-time and yet also operates with the same quantum principles as that of normal matter and energy. With the development of complex brain/minds through nature's evolutionary process, conscious experience is built upon these principles. It is also here that the information gleaned from non-ordinary perceptions is transmitted non-locally such that the influence happens instantaneously regardless of distance and beyond the bounds of normal space and time. Not only is this information transferred and received by consciousness through this intrinsic awareness, it can also be used to influence objects or other thoughts by intentionality (actions).

As the brain/ mind of living creatures evolved on the earth and especially in human beings, our ordinary sensory perceptual mechanisms and societal and cultural conditioning have overwhelmed our more rudimentary first sense. However it is still present (as that "still small voice" in our heads known as intuition) and manifests in our conscious thinking at various times. It does so especially when the mind is quiet and coherent (as in deep meditation) and also in cases of rapt attention due to emotional duress or intense focus.

Young children experience this first sense often through imaginary friends and voices but, as they reach early adolescence, they have become conditioned to rely totally on ordinary sensual perceptual mechanisms (the 5 ordinary senses) and ignore this inner voice. Could it be that legitimate psychics, shamans and adepts resist this conditioning and have retained this ability which would account for their unusual talents and abilities?

One of the most primitive and strongest incentives for action in human beings is emotion. From antiquity to the present day, nature uses emotion as a learning mechanism to insure survival. Events associated with strong emotions burn those experiences and their outcomes into our memories. It is nature's way of allowing life to remember important events and learn from them. In antiquity and prior to the development of language, memories based on charged emotional content were especially

important to guarantee survival. Re-experiencing these memories at some later point in time often bring out the same emotions and learning experiences that created them in the first place.

Emotions can trigger the transmission of information through a highly charged field where the strength of the field is in direct proportion to the intensity of the emotion. This information can be intercepted by any other mind that is "tuned" to it and can be accessed either subconsciously or consciously depending on the degree of resonance and the strength of the emotional bonds between the two minds. Throughout history, countless anecdotal stories have been described where a mother, sibling or spouse with strong emotional bonds instantly knows that the other is in physical danger or has been involved in a traumatic event even when both are separated by large geographical distances. Their minds have interconnected by the strong intensity of the emotional field emanating from thoughts of such events.

Strong emotional attachments and bonds can also form links between groups of individuals. As the field is amplified in one mind it also gets strengthened as more and more minds experience similar thoughts or emotions. These minds effectively tune into each other and the field is self-reinforcing through group resonance and coherence. The Maharishi Effect, named after the founder of Transcendental Meditation (TM) establishes this principle how individual consciousness affects collective consciousness. The proponents of TM claim that this has been demonstrated by numerous scientific research studies including one where a large group of focused meditators were able to reduce the crime rate in the metropolitan Washington DC area. They contend that when the group mind achieves a coherence with 10% of the population, the intended effect manifests and spreads as a contagion throughout the larger population.

Other stories also describe the same phenomena. When fields associated with group consciousness are focused and coherent they mutually reinforce each other. Furthermore as their numbers increase, the field is strengthened to the point that that it becomes easier for other minds outside the group to pick up (e.g. become entangled and resonate with it) and can therefore be more readily be influenced by the field. By the same token, if a single mind focuses on an object or thought (via meditation, etc.) or is emotionally attached to it, that mind can tune in to and become a receiver of the non-local information that is already in the field.

Every physical object (both living and nonliving) has its own unique resonant holographic memory and this memory is stored in the Zero Point Field (ZPF). This field is the substrate upon which all of reality is based. A record of everything that has ever happened and everywhere it happened is contained in the ZPF. It is a vast information store and is collectively referred to as the Quantum Hologram (QH). The information contained within the QH is permanent, can be accessed non-locally and cannot be weakened or removed. QH Information can be retrieved via the mechanism of resonance as described above.

We can think of any organism's QH as its non-local information store residing in the ZPF that is created from all the quantum emissions of every atom, molecule and cell in the organism. Every objective or physical experience, along with every subjective experience is stored in our own personal hologram space and we are in constant resonance with it. Each of us has our own unique resonant frequencies or our unique QH which acts as a "fingerprint" to identify our non-local information stored in the ZPF. Since the event history of all matter, both non-living and living, is continually broadcast non-locally and stored in the QH, the QH can be viewed as a three-dimensional vista/movie evolving in time

which fully describes everything about the states of the object that created it. Not only does each human have its own unique access to the QH, but living all organisms can tap into it through resonance and entanglement.

In ancient times the Quantum Hologram has been referred to as the Akashic record. Biologist Rupert Sheldrake has referred to this field as the Morphic field. Sheldrake's view is that nature forms habits and these strengthen or slowly dissipate (from lack of use) over time and in the former case influence future generations. Teilhard de Chardin proposed a similar concept of a Noosphere which represents the collective consciousness and in relation to the evolution of the human specious that emerges from the field interaction of human minds.

Psychotherapist Carl Jung often referred to a "collective unconscious" as an information store that is shared by all of humanity. It consists of a collection of archetypes, knowledge and experiences that all human beings have access to when they are born although often unconsciously. His belief was that especially in times of crisis, emotional stress or in dreams, the collective unconscious could be accessed or experienced consciously. Are archetypes, dreams and intuition a result of tapping into the QH?

By whatever name it is given, QH represents a vast permanent information store is a central storehouse of the entire history of all thoughts, emotions and experiences of everything and everyone that has ever existed. This information store exists whether humans or other beings are consciously aware of it or not.

Dr. Willis Harmon, who served as president of The Institute of Noetic Sciences from 1978 until his death in 1997, in his book Global Mind Change, described how great discoveries or inventions often occur in dreams or simultaneously in multiple individuals. The Theory of Evolution attributed to Charles Darwin but simultaneously discovered by Hewett Watson is one such example. Could it be that in both cases these scientists were able to tap into the information they each stored in the QH?

Many cultures around the world have long promoted the notion of reincarnation. The late Dr. Ian Stevenson at the department of Psychiatric Medicine at the University of Virginia extensively investigated and studied children usually at very early ages from these cultures who claimed to have had previous lives. He studied these young children because he believed that the development of language, cultural conditioning and lack of practice as one ages all contributed to the atrophying of these intuitive non-local perceptual abilities to tap into past lives. Could it be that these children have not actually had past lives but are able resonate with and utilize information about these other humans that lived at an earlier time and who's' entire event history is stored in the QH?

A similar explanation also applies to synchronicities. Many of us have numerous meaningful coincidences or experiences throughout our lives. How many times have we thought about someone we haven't spoken with in quite a while and within a time interval usually less than that required to complete our next breath we receive a telephone call or email from them? It seems that merely thinking about other people we care about can establish some kind of mental connection with them. Is this resonance with them occurring through QH?

The web of entanglement with the QH also applies to many non-ordinary events such as: out-of-body experiences (OBEs), Remove Viewing Experiences (RVEs) and Near-Death Experiences (NDEs) to name a few. All these cases most likely represent high states of resonance and coherence with information

from the QH about the remote location or object or person being considered. In other words the experiencer is retrieving and processing the QH information of the object being visited non-locally.

Some meditators, mystics, remote healers, prayer groups and psychics routinely demonstrate that non-local information is perceptible by focusing attention, quieting the mind and allowing this intuitive information to enter conscious awareness. Remote objects can also be manipulated by intentionality (e.g. by directing energy in the ZPF) using similar techniques. Psychokinesis is one example of this while poltergeists are another. In the latter case, they are usually associated with angry teenagers or others who have not learned to control their exceptional abilities at manipulating ZPF energy.

Those most experienced in accessing the QH often experience a oneness, an altered sense of space-time and the dissolution of the self. Within such a state, they are able to access universal knowledge and can even feel a sense of interconnectedness with all of existence or the merging of the self with the object of attention. Along with the experience of oneness often comes a feeling of bliss and complete clarity of mind. Again, it appears they these individuals have entered into a state of high coherence and resonance with the QH and can access all information that is implied by such a unification.

It has been demonstrated in many different ways that the intuitive (non-local) mode of perception can be activated and amplified by appropriate training and various means of enhancement. They include meditation, hypnosis, trance, ritual, repetitive rhythmic activity (e.g. dance, drumming, singing, deep breathing, etc.), use of hallucinogens and similar techniques. All serve to enhance resonance and coherence with the QH. These approaches lift the filters of ordinary states of awareness, social conditioning and beliefs which limit access or bias to these non-ordinary states of conscious awareness.

If a mind is in a chaotic or non-coherent state it is much more difficult to pick up on non-local information as it is easily drowned out by environmental noise. As the mind quiets and is able to focus, the resulting coherence can more readily resonate with the QH. The signal becomes stronger and it becomes easier to perceive the non-local information. A similar situation occurs as new information and experience is added to the QH. In a directed shared activity such as a group meditation, when coherence is achieved between members, the field is re-enforced and strengthened, making it easy for others to pick up or be influenced by the information.

Summary

The hypothesis of interconnectedness and oneness has been espoused by ancient sages, avatars, mystics, spiritual leaders and shamans throughout all of history and by many cultures. In modern times many leading thinkers are also reaching these same conclusions as our knowledge and understanding of nature continues to grow. It appears that our universe seems to be learning and evolving into higher levels of complexity by trial and error. Whatever promotes that interconnectedness and oneness strengthens information in the QH, but that which weakens it is cast aside as a failed experiment. In other words, change, adaptation to that change, and evolution seems to be nature's mandate that is built into the fabric of reality.

As a living, evolving and adapting whole the Universe has been using the information contained within entangled fields of the QH since the beginning of time. Because of this vast information store of experience and information, the Universe is organizing itself, learning and evolving to creating ever increasing levels of complexity and sophistication. We each are integral parts of this learning evolving

whole. We are interconnected with it all, and are not separated from any part of it nor from the whole of it.

Oneness and evolution implies that we are not only in the universe but we are the universe learning and becoming more aware of itself. It also implies that all components and processes must operate in harmony with one another. Dr Edgar Mitchell asserted that this harmony "is the basis for agape love" and has referred to it as "the organizing principle of the universe".

All of creation must constantly evolve or perish. As it learns, habits form and those that lead to useful outcomes solidify and become more prevalent in the QH. These habits also adapt and evolve or fade by trial and error as change occurs. Humanity faces many complex interacting challenges at this point in our history. We have a choice to evolve beyond these challenges to the next level or vanish as one of many failed experiments if we do not learn from our history. There is no guarantee that we will evolve to this next level of sophistication. Since the beginning of life on earth, over 99% of all life that ever lived has gone extinct. The only record of it remains in the QH. The only way that humankind can avoid that fate is to continuously evolve, at this point most likely by an evolution in our consciousness.

Nature has bootstrapped itself into existence and has evolved itself into the current state of complexity that we now experience. We and all sentient beings are able to influence its evolution and consequently our own individual evolution as well as that of society. Our reality is a participatory universe where matter, energy, information and awareness are all fundamental aspects of it. There is only one indivisible wholeness where every aspect of it is entangled and interconnected non-locally in fields of information, awareness and intention. This whole contains fully interacting participants and all of the parts have influence over one another.

Just as modern mankind has evolved from our ape-like ancestors, so to must we now evolve to the next level of sophistication and refinement or be cast aside, and by inference, our civilization as well. As we consciously understand and learn to utilize this entangled web of oneness, perhaps we can do so and evolve our consciousness for our collective betterment. Let us hope that we do it wisely and evolve it to higher levels of understanding and wisdom.

Additional Reading

For a more detailed examination of the topics described in this paper the reader is referred to:

The Quantum Hologram and the Nature of Consciousness, 2011, Volume 14, Dr. Edgar Mitchell and Bob Staretz, http://journalofcosmology.com/Consciousness149.html

Intrinsic Awareness, The Fundamental State of Consciousness, Dr. Weili Lou, Department of Physics, University of Central Florida, Oct 2013, http://arxiv.org/abs/1101.2422

Acknowledgement

The author would like to acknowledge Dr. Edgar Mitchell (1930-2016), Apollo 14 astronaut and founder of the Institute of Noetic Sciences (IONS) for his many original contributions to the concepts and ideas expressed in this paper.