

Essay

## Cutting through the Enigma of Consciousness

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### ABSTRACT

Critical to the investigation of consciousness is that it is existentially completely different from the objective physical world description, being experienced directly only by the subject, and not being subject to the same criteria of replicability a physical world experiment has. Also the observer cannot control their consciousness objectively in the same manner a physical experimentalist can their equipment, because any attempt to change consciousness carries the observer into a new conscious situation as well. In this respect the exploration of consciousness has similarities to quantum measurement. This renders all forms of introspection made as if we are looking at consciousness objectively, completely, or partially invalid.

**Key Words:** consciousness, enigma, observer, subjective, physical world, quantum measurement.



The inner space of consciousness is sometimes able to perceive kaleidoscopic 'mindscape', as if they are genuine perceptions of a 'world out there'.

How does the brain evoke these realities and what is their status,  
By comparison with the subjective experiences we have of the real world?

This article is an exploration of where discovery about the human understanding of consciousness might be headed and why looking for answers may require a completely novel approach to understanding reality, different from anything we have encountered so far.

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## **The Scientific Lesson for Subjective Consciousness**

In scientific terms, subjective consciousness remains the one phenomenon for which the description of physical reality has at this point not even the beginning of an explanation for. Although we know our subjective experiences are somehow a product of our brain states, we really have no idea of how a bunch of neurons firing off electrical impulses can come to generate all our conscious perceptions, dreams, memories and reflections of the world around us with all their diverse attributes, each of which is as indescribably different as a kaleidoscopic pattern of colour or a living landscape is to a musical symphony or even a complex cacophony of natural sound.

However the lesson of the scientific revolution shows us some important potential features of the quest for understanding consciousness that may be key to making real progress. The scientific revolution didn't come easily, because nature revealed itself to work in subtle ways that violated the simplistic assumptions of traditional, and particularly religious thought. It turned out that the Earth was neither flat, nor the centre of the universe, which, rather than being an airy heaven, in which angels with feathery wings could dwell, has turned out to be a maelstrom of black-holes and galactic collisions, in which life can take a foothold only on the surfaces of small rocky planets around small sun-like stars.

Even more perturbing, all life, far from being created by God, like clockwork toys in his image, appears to have emerged spontaneously from the slime, in a de-novo chemical synthesis, followed by the hit-and-miss process of mutational evolution, with humanity gracing the planet in a tortuous sexually-procreative journey of successful mutation through fish, reptiles and monkeys, a scenario which remains to this day the bane and nemesis of religious fundamentalists.

To cap the bag, we now understand the universe to be created almost from nothing, in a symmetry-broken cosmic inflation, whose mathematical complexity defies our imagination and ingenuity, despite many valiant ongoing efforts. As well, fundamental physics has entered into the mysterious territories of quantum uncertainty and quantum entanglement, altering forever our classical notions of temporal causality and physical reality.

We need to learn from the lessons of science's attempts to discover the nature of the real world, which has challenged our best minds through the centuries, and open ourselves to the possibility that consciousness, as we know it, is at least as unfamiliar to our preconceived notions as the physical universe has proved to be.

## **The Existential Dilemma and its Traditional Approaches**

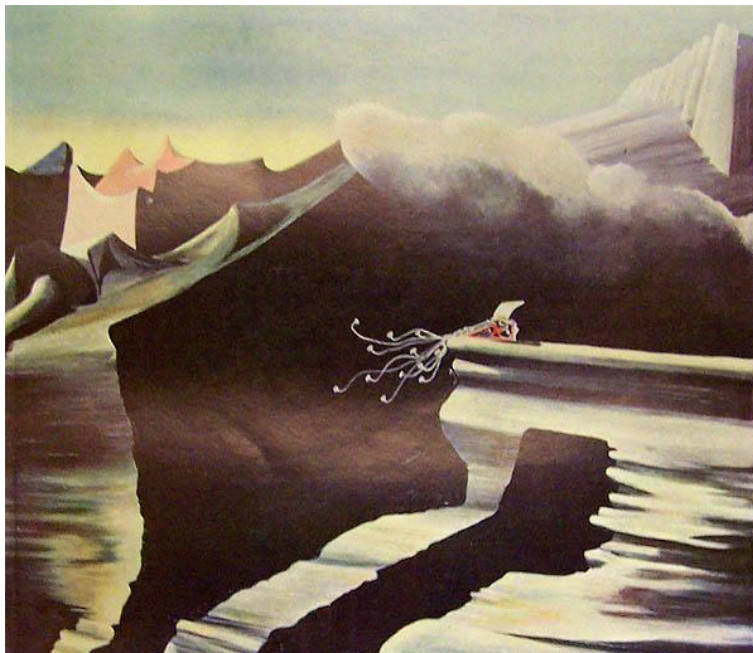
Nevertheless, the nature of consciousness is an urgent question which plunges right into the crucible of our psyche, because it leads to the ultimate existential anxieties: "What happens to me when my physical body dies?" "Is there any meaning in life if there is no after life after death?" "Is there a God looking after our fate?" "Am I a tiny part of a cosmic mind?" "Is there anything out there that cares, or are we just ships passing in the night alone, despite our delusions of love and togetherness amid frank exploitation of one another and of the natural world?"

For all the apparent solidity of the physical and biological world description, we are and remain

throughout our loves conscious sentient beings, and it is only through the conduit of subjective consciousness that we come to witness the physical universe at all. And it is the stream of our subjective conscious impressions of reality that are all we have and that in which all our dreams and hopes and fears are enmeshed, despite the world we consciously perceive around us.

Dreaming can evoke bizarre realities which, despite seeming to be physically impossible, are palpably real (Oscar Dominguez "Memory of the Future").

This brings us rapidly back to the traditional answers to the existential dilemma, which present themselves most dominantly as religious beliefs. The monotheistic myth goes roughly as follows: "Yes there is a God - in fact the one true God of reality acting in history, unlike those other pagan idols, and who, despite being the creator of the entire universe, is also a moral deity who is 'jealous' of our fidelity to Him and might cast us into hell fire if we stray from unswerving belief in His power, majesty and commandments.



Despite the protestations of religious believers, this model of conscious existence is fatally flawed, because we now know that morality is a social manifestation, which takes root in a species as an evolutionary strategy which enhances inter-group dominance by reducing intra-social strife. In no way can any culturally-derived or revealed doctrine of moral causality be dominant over the reality of evolution and the wide variety of ecological niches evolution fills, from nutrient-giving plants through herbivores and carnivores to parasites and diseases.

The idea of a God which created nature and the entire universe stipulating any sort of moral imperative, let alone a final eschatology, is in complete contradiction to the open-ended indiscriminate mutational exploration and sheer creativity of the evolutionary paradigm, just as is the idea of a God creating the entire physical universe being in any way jealous of our fidelity is a contradiction in terms.

While the notion of a moral deity is a false projection of human cultural, sexual and social imperatives, the notion of a fall from paradise culminating in an apocalyptic awakening, amid heroic redemption, is a valid part of our collective emergence. The fall and awakening are to a considerable extent a real time description of our collective falling out, across the generations, from gatherer-hunter interdependence with nature, through the rise and fall of civilizations amid tumult and discord, to the present explosion of scientific knowledge (and technological and commercial exploitation of the planet) - a process of continuing culture-shock, arriving on the horizon at a greater understanding of our place in the universe.





Religious visions of heaven and hell are not real physical worlds, but projections of the mind realm. They contain a confused and delimited mixture of real world impressions of people, with mythical figures of paradise and monsters, with the heavenly host falling somewhere between.

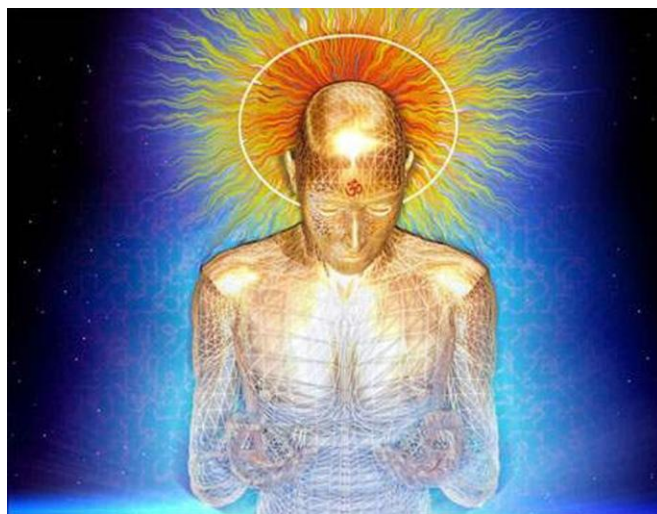
By contrast, there is another major theme that comes out of Eastern mysticism that is considerably different. The idea goes as follows: In some sense, we, as conscious perceivers caught in the mortal coil of a physical body, are also in some sense manifestations of the cosmic mind, and if we enter into

deep meditation we can learn to become one with the Atman, or the Buddha mind, or the Upanishadic 'Self' - the universal seed spark within all sentient beings. In some sense we then become avatars of the one cosmic 'Self', just as the Hindu Gods and Goddesses are in some sense archetypes of the existential condition.

This comes closer to being a valid exploration of the conscious condition and has some root insights, but like the monotheistic myth, it suffers from intractable contradictions, including the notion that nature is merely a delusory gross manifestation subservient to mind, in an overarching moral imperative which causes lustful humans to be reincarnated as animals and vice-versa, and the entire natural world becomes relegated to being merely a cyclical process to refine the (human) ego to the vacuous purpose of attaining oneness with the void and thus escaping eternal suffering. There is a mind dominant fallacy that fails to respect that the diversity of nature, far from being a mere illusion, generates the entire physical basis for our conscious existence.

The meditative quest for 'enlightenment' through becoming one with the cosmic "self" or void

It also introduces the notion of karma in everyday affairs, suggesting that you might end up suffering a nasty accident, or catching a disfiguring disease as a punishment for your egotistical bad actions. This again is a moral causality that clearly runs counter to the needs of life to survive uncluttered by a fantastic causality that runs counter to survival of the organism and the evolution of its genes even when expressed in predatory and parasitic behavior - for carnivores to ruthlessly hunt and kill and even sometimes to torture their prey in honing their hunting prowess.



There are of course many other descriptions of sentient existence, spanning the creation myths of diverse cultures and the shamanistic and prophetic experiences of their various medicine men, diviners, seers, mystics and visionaries, each with their own stories to tell of the vision quest of conscious existence and its relationship with the slings and arrows of outrageous fortune in the world at large.

At best, these become first person accounts of personal experiences and mental voyages, which take us into the territory of the sensitivity of consciousness to apparently supernatural, or paranormal influences, in which one might sense the death of a relative, encounter unpredictable coincidences of fate, or dream prophetic dreams which later appear to come true in real life. At worst they become distracting and delusional fantasies that gain all the features of superstitious beliefs, and cargo cult like mystification.

### **Where is the Consistency in the Visionary Theatre?**

This leads to a basic question. If there is a collective conscious reality out there, shouldn't it be reflected in some way in our mental condition, in our inner meditation and reverie and in our prevailing collective beliefs? If there is 'life' out there in the conscious realm, why are our descriptions of it so idiosyncratic, conflicting and contradictory?

There are a host of reasons for this, some practical and biological, to do with brain function, and others to do with cultural imperatives. We need to take stock of all of these before coming to a synthesis of how we might approach the question of consciousness.

Some mental constructions, such as heaven and hell moral fantasies, are culturally derived from the strong influence major religions have as forces shaping the moral destiny of a culture, quite independently of, and in obvious contradiction to, their truth as a description of the transcendent. Both Deuteronomy and much of the Qur'an deals with unabashedly worldly moral and legal issues, in particular the desire of men to have reproductive control over their women folk and to set them in a partially subservient relationship, as well as driving the formation of powerful large societies of believers, who can gain dominance over perceived enemies and infidels.

Other mental phenomena arise as a reflection of the needs of brain function biologically to compensate for the pressures of daily life and its potential threats to existence and survival. Dreaming remains an enigmatic source of many prophetic and visionary experiences. The nature and rich hallucinogenic content of dreaming remains mysterious, despite extensive scientific investigation. Virtually all of us have had dreams whose richness and power appear every bit as real as waking life experiences, although often much more bizarre, and indeed the only way to subjectively distinguish dream and reality is often a tortuous set of reality checks, such as turning off the light switch and finding the room is still illuminated. Otherwise dreams can seem every bit as real as daily life.

Clearly sleep and the rich REM phases of dreaming have something to do with processing of waking events, either setting down long-term memories, or responding to existential crises which might affect our chances of future survival, but none of this explains the rich, unpredictable and completely bizarre experiential content of many dreams. Dreaming teaches us that almost anything that could be

synthesized in the Cartesian theatre of consciousness can appear in dreams, from effortless levitation, to being sucked into the mouth of a giant medusa, or being lost on another galaxy or in another universe, with no clue as to how to find the way back to Ixtlan, or the real world we are familiar with.

Likewise, various drug and plant induced psychedelic states can manifest visions it would be impossible to experience in the physical world at large. These include kaleidoscopic synesthesias, as well as visionary scenes, sensations of going beyond one's bodily confines, as well as a feeling of conscious interplay with the natural world and its psychic subtleties.



Huichol *nierika* or cosmic portal through which the voyager can pass during a peyote vision quest

Again these may be a function of altered brain dynamics, so that one becomes able to perceive in conscious form the dynamic modulations across the cortex induced by these agents, and some of the processes by which the senses are synthesized in consciousness. Thus cultures that use psychedelic species as sacrament tend to explain their existential cosmology in terms of visionary portals or doorways through which one is transported to another reality by the sacramental experience.

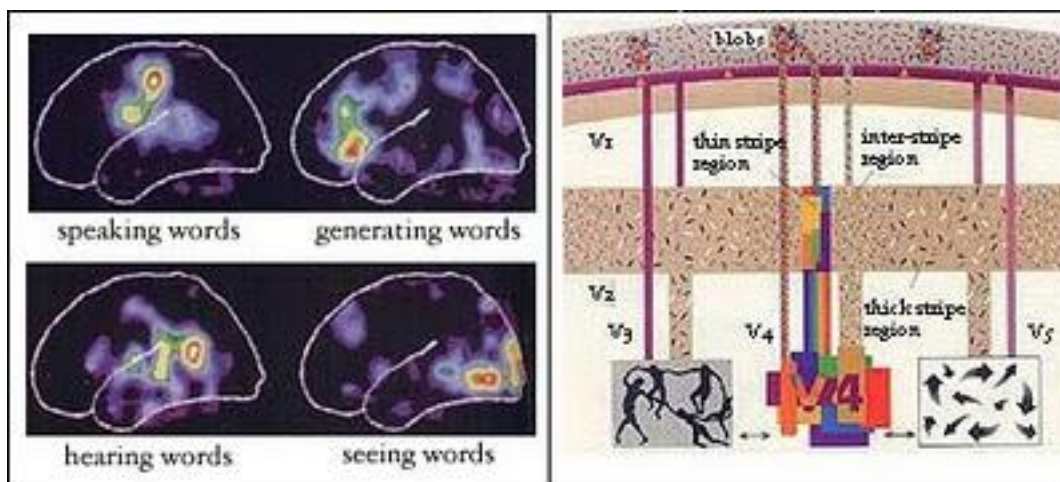
Similar considerations apply to a variety of forms of meditation and contemplation, which may also involve stopping the internal dialogue by mantras and/or involve complex visualizations of mandalas not dissimilar in kind to psychedelic kaleidoscopic visions.

These techniques also extend to sensory and/or physical deprivation and so called near death experiences in which people see their life flashing before their eyes, and may claim to meet a luminous entity which is at once themselves and at the same time the 'cosmic mind' meeting them. Again this may be real, but it may also be explained as the product of the extreme, yet living brain state the person was in. Likewise some people report journeys out of the body, which are probably a form of hypnagogic trance on the border of sleep, as they show similarities to levitating dreams, except that they appear to be in the real world environment of the observer, rather than a fantastic dream scene.

### **Subjective Consciousness and the Objective Brain**

One of the ways science tries to explore consciousness is to do experiments eliciting certain brain states while a person is having their brain scanned, either electrically by EEG or MEG encephalograms or physiologically by fMRI or PET, which use magnetic resonance or radioactive scintillation imaging to picture changes in blood flow or nutrient consumption in specific areas. These tend to show what kinds of brain activity or activation are associated with certain kinds of conscious perception, thought or emotion. It can then become possible to see how changing brain activity parallels changes in conscious perception and it can lead to some general hypotheses about how the brain might generate conscious experiences.





(Left) Brain activity associated with language and (right) local parallel processing of color and motion in vision. Although brain scanning has made it possible to associate specific regions of the cortex with specific aspects of conscious thought and experience, these are just correspondences between biological brain states and perceived conscious events. We still have no idea how the brain actually generates subjective consciousness.

For example the gamma frequency band of the EEG has been suggested to be the excitations the brain uses in active conscious processing and it has been suggested that those networks which rise and fall together 'in phase' constitute conscious processes when they tie together various regions of the cortex into a consistent global dynamical system, by contrast with local processing, which is believed to be unconscious or subconscious.

However these sorts of investigation leave unanswered how the brain makes these global excitations into the internal model of reality which we experience subjectively and identify with the real world around us, or indeed how or why subjective consciousness exists in addition to the computational capacity of the brain as a neuro-system. Because no simple chemical explanation seems to have the right existential status to deal with subjective experience, the problem may need to be solved by examining more exotic physics in the brain, such as quantum entanglement, which might lead to new forms of physical interaction which might solve the problem of existential subjectivity.

### **Subjective Consciousness as the Existential Complement of the Physical Universe**

Critical to the investigation of consciousness is that it is existentially completely different from the objective physical world description, being experienced directly only by the subject, and not being subject to the same criteria of replicability a physical world experiment has. Also the observer cannot control their consciousness objectively in the same manner a physical experimentalist can their equipment, because any attempt to change consciousness carries the observer into a new conscious situation as well. In this respect the exploration of consciousness has similarities to quantum measurement. This renders all forms of introspection made as if we are looking at consciousness objectively, completely, or partially invalid.

It also means that attempts to imagine or model subjective consciousness, or the mental realm, based on objective concepts derived from the physical universe, are invalid because the fundamental properties of the subjective and objective realms are complementary, as opposed to identical, through

the symmetry breaking between mind and body. While the physical universe is a process of wave-particle complementarity, in which particulate matter is divisible into real world objects, mind is 'indivisible' in the manner of a 'wave complement' in the sense that it remains the integral field of view embracing all perceivable phenomena, continuous, or discrete. Likewise it is participatory and private in a way which renders objective investigation inoperative.

The exploration of consciousness is thus not the same kind of process as that of the physical world. It is a journey, not a destination. It is a subject experiencing, not an object of investigation. Thus it is not appropriate to try to 'examine' consciousness in the manner of an observation of the real world, but rather exploring it is a 'trip', as the first LSD users, and the sacred mushroom shamaness Maria Sabina, alike have put it, which is where the vision quest of shamanism also takes its journey.

One very positive feature of sacramental shamanism is that it is a visionary experience that can in principle be entered into by anyone in the first person, removing all the disconnections, confabulations and mystifications between the religious follower and the numinous *mysterium tremendum* that occur with religions governed by gurus, priests, bishops, ayatollahs and muftis, which, rather than being an exploration of the numinous, lead to corrupt religious hierarchies espousing doctrines calculated to preserve their own hegemony.



(Right) San painting of the healing or trance dance [Lonyana Rock Kwazulu-Natal](#). Shamanic trance dancing (centre) in which each participant can witness the world beyond the real world goes back to the emergence of human culture. (Left) San use of *dagga* or cannabis smoking from a hole in the ground. Other ancient pygmy forest cultures utilize the hallucinogenic *iboga* plant.

However, like the previous attempts to understand whether consciousness has any absolute collective nature, we need to remain cautious about the products of psychedelic vision, because these have also led to their fair share of frankly delusional and occasionally violent notions and no definitive conscious cosmology has emerged from many centuries of cultural use of hallucinogens. Nevertheless they are pivotal natural catalysts in the empirical exploration of subjective consciousness.

## The Evolutionary Foundation of Subjective Consciousness

To better understand consciousness and the limitations on any speculative ideas of the cosmic



conscious connection, we need to ponder how consciousness came about through evolution, and the evolution of the brain.

A likely explanation is that consciousness is an indirect manifestation of the chaotic excitations we see in the electroencephalogram and that it arose in evolution as an offshoot of chaotic excitability in single-celled eucaryotes, which would have provided a multi-sense organ, through the sensitivity to perturbations chaotic excitation provides. A chaotically excitable cell would thus become sensitive to all forms of quantum perturbation of the cell membrane including those of primitive vision, audition and olfaction, as well as electric fields in the medium.

The evolutionary idea of consciousness is that this excitability aided the organism in anticipating threats to its survival, as multi-celled organisms evolved from simple nerve nets, as in hydra, to central nervous systems. Notably many of the critical neurotransmitters involved in changes in consciousness in humans are spread widely across the metazoa down as far as the slime mold, and indeed have distinct psychotropic effects, for example on the web building behavior of spiders.

A critical aspect of this is the idea that such excitations aided anticipating future threats to survival suggesting consciousness is integrally coupled with the notion of free will, or intentional will, which forms another paradox about human activity and existence. All of us feel we have a basic autonomy of choice over our actions and indeed all the provisions of the law, as well as all moral and ethical precepts, revolve around the notion of personal accountability that we can understand the consequences of our actions and can exercise personal control over our affairs.

However this leads to the notion of free will, which appears to be in frank conflict with the idea that our behavior is purely and simply a product of our brain state and its neuro-chemistry and that the notion that we have any purely conscious control over our physical brain states is a delusion. However this need not be true if the brain itself uses exotic quantum physics involving uncertainty in generating consciousness and in the sensitive transitions from chaos to order that may accompany insight learning and decision-making.

Central to an accurate description of subjective consciousness in the universe is the fact that it is, so far as we know, exclusively a product and property of the living biota. In fact the brain forms the most complete interaction of the four fundamental forces of nature in global interaction. There is nowhere else in the universe, from black holes, to dark matter, or the center of stars, that we can plausibly expect to find the physical support for subjective consciousness that we find in the brain of humans, and by extrapolation those of other organisms which possess chaotically excitable brains.

This means that religions posing God as an external agent consciously interacting with humanity, in lieu of humanity's own direct interaction with existential consciousness through our brains, is a fundamental dislocation of reality, removing the direct responsibility we have in participating in consciousness decision-making in our own brains and in taking responsibility for the effects of our actions on the planet, transferring it instead to a physically unrealizable contrivance, in which we become trapped in a moral causality, at the same time passing personal responsibility for our critical decisions on to the will of God.

Even if God is posed as an entity beyond space-time and the universe, the reality is that it is consciousness itself which forms that natural complement to the physical world description. As

Indian philosophy, the Tantric origin and Taoist cosmology put it, the cosmos is a complementarity between subjective and objective reality. Thus the conscious mind, which is the only veridical avenue we have to experience the world around us, may have a cosmological status complementary to the physical universe, despite being manifest in physical terms merely as the excitations of our fragile biological brains.

This symmetry-broken complementarity between the diverse natures of consciousness and matter - personified in the dance of Shiva as observer and Shakti as phenomena - is endlessly reflected in other symmetry-broken complementarities, between wave and particle and boson and fermion in physics, and female and male in biology, something we have termed [the cosmology of sexual paradox](#).

While we are standing today, with the benefits of brain science, combined with traditional contemplative techniques, and a diverse array of psychotropic substances, at the threshold of a great exploration of consciousness, which may be the cosmological free lunch the universe is destined to achieve over space-time, we need to realize that many preconceived notions of the purpose of consciousness, or collective consciousness cannot coexist with life as we now know it to be.

For example, it is reasonable, however far-fetched it might seem, to imagine that consciousness might give us access to a form of super-causal quantum future-anticipation which might complement computational brain function to aid survival, but it is not reasonable to suggest that consciousness is there to make us subject to a moral conscience defying evolution's capacity to fill all viable niches, nor to engage in psychic materialism - subjecting conscious experience, by analogy, to constructions derived from the objective world, except in so far as these might be realized in brain function.

### **Consciousness Arises from the Survival of Natural Life**

This brings us full circle to the ultimate questions and quest of conscious exploration. Why are we conscious? What is the meaning in conscious existence? Is there any connection out there with the cosmic mind or any other form of extra-corporeal dis-incarnate form of consciousness?

One thing that is essential to this exploration is that life is sufficient unto itself as it stands without needing either the notion of an after-life or some connection of cosmic consciousness to justify it. We got here because the life force is forthcoming of itself. Although people vary and some people experience depression, partly as a result of genetic variations in brain chemistry, we exist at all only because the web of life has kept an unbroken chain all the way from when the first cells emerged. Life is therefore ultimately productive of itself and is worthwhile simply because it is. The fact that sentient life is also capable of being conscious of itself is a bonus which gives us the capacity to wonder, but it is invalid to turn the tables on life by requiring an after life in heaven to justify the mortal coil.

The key to this is that we are not alone as conscious human beings. Although we have an evolutionary proclivity to procreate and reproduce our genes so that the generations of life continue, we all come to understand that our conscious existence is finite and bounded by our physical demise.

Nevertheless we don't possess our consciousness but are simply conscious of the world and of

ourselves. This consciousness is in a fundamental sense a cosmological attribute which we manifest and which is manifest in each and every one of us in various ways due to individual difference but to a great extent consciousness is shared and in common.

This is reflected in the abundance of so-called 'mirror neurons' in the brain which ensure that we are able to consciously experience situations the way others experience them and even feel another's pain. It is also reflected in the oneness that comes from sexual relationship, which is life's antidote to the mortality of the sexual being, in the procreative process and the family.

Because we are mortal, caring is real, not just for the sexual beloved, offspring and kin, but for all mortal beings. Although some people may be violent, psychopathic or selfish, because we are all going to die one day and can't take our possessions with us, the reality of caring for others is what makes both the world, and our consciousness of it, real and worthwhile for each of us. We also leave behind us our humor, art, music and the products of our ingenuity and toil, so the more we contribute to the welfare of the world as a whole, to make it a richer and better experience for all, the better we will feel about life, death and mortality.

This leads us to another fallacy promulgated by traditional religions, which is that the real world is somehow just a flawed secondary realm and that the real existence that makes it all worthwhile is in the after-life. This in turn brings about a sense of futility that if we are going to eventually die, the whole material quest is meaningless dust to dust and ashes to ashes. This is a false description of reality because life is not made worthwhile only because it is eternal, since the web of life is immortal over the vast epochs the planetary environment remains hospitable to life and we each share resonance with conscious existence. We need to keep a perspective of consciousness as a process occurring in space-time, in which the universe is becoming aware of itself through us becoming aware of ourselves during our sentient existence.

### **Telling Stories Round the Camp Fire**

Sentient life is an open-ended awareness whose reality is maintained through the future passage of the ensuing generations of conscious life, so we need to respect preserving the robust fecundity of the planet and its living diversity as a primary task in furthering this quest, in contrast to the linear scorched-Earth eschatologies of monotheistic religion, which risk planetary catastrophe.

Even if the earth is finally vaporized as the sun becomes a red giant and all life is extinguished the conscious quest in the all-embracing envelope of space-time was still the discovery process the universe was able to make to know itself in the alpha-to-omega of all reality space-time is.

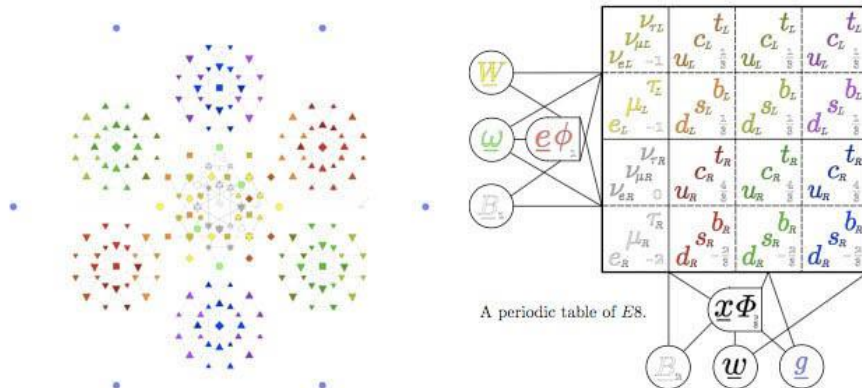
In some of my more mystical moments on natural sacraments, I have experienced cosmic consciousness as the bundle of life, as if we as incarnate mortal beings are in eternal communion with all conscious life throughout the universe, from beginning to end, and that when we can for a moment escape the knot in the bundle which our individual survival and ego hold tight and loosen the fibers, we too become one with the cosmic mind.

However, rather than this becoming a description of consciousness, the way for us to move forward is to experience such potentialities for ourselves and keep the description process to personal



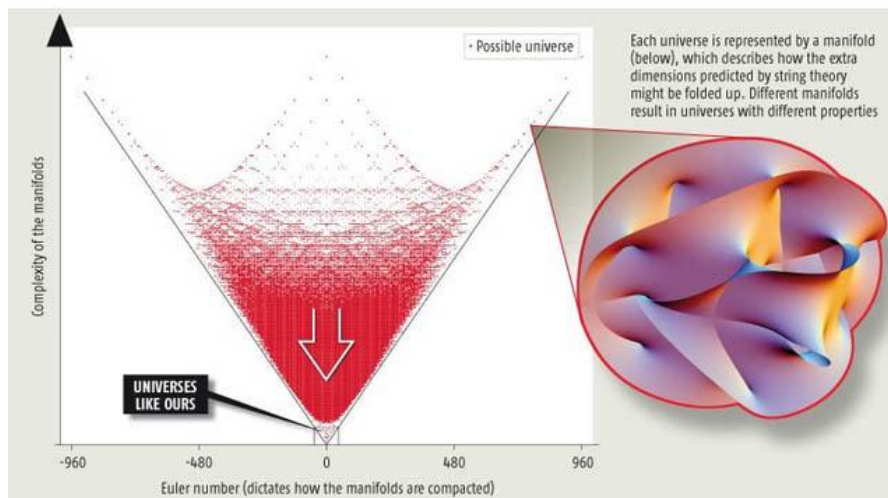
anecdotes we tell, as conscious participants in the unfolding history of the universe, rather than setting it in stone, as some kind of objective description of how things are out there beyond our personal experience. This is the way people have told stories round the camp fire for the first 100,000 years of human emergence and it serves us well in the electronic age to keep the covenant with the ongoing flow of consciousness between us and among us all to celebrate it personally in our concourse together.

Two very different TOEs attempting to integrate the forces of nature illustrate the intrinsic complexity of the cosmology of the physical universe. If cosmological attributes of subjective Consciousness are a basis of how the brain generates mind, they may have an even more complex basis. This is not to suggest that the model would be like the physical TOE if it exists but that it might have complementary attributes to it.



### The Intrinsic Complexity of Consciousness and the Ultimate Theory of Everything

But there is another critical aspect to the nature of consciousness which is akin to the difficulty of discovering the theory of everything for the universe, and is so precisely because the conscious brain is the ultimate expression of the four forces of nature derived from the symmetry-breaking of the theory of everything. It requires all the forces acting in order of their symmetry-breaking energies to develop molecular matter, and their most complete complex interactive expression we know of is in the human brain.



If the brain uses exotic properties of physics, embracing quantum entanglement in brain states in generating subjective consciousness as part of anticipating future risks to survival, these would be the ultimate interactive structures generated by the symmetry-breaking of the forces of nature in the universe.

Understanding consciousness would then place it as the hard problem complementing the theory of everything, which would require at least as much ingenuity to resolve and therefore cannot be underestimated in the surprises we may find within it.