

Unblemished Fossil Record Decoding Consciousness

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Abstract

The question of our origin and what makes us unique has engaged humanity since primordial times. Geology and more precisely, Paleontology are important for studies of evolution and beyond. Fossil evidences provide a record of how creatures evolved during the geological time span and how this process can be represented by a 'tree of life'. Most fossil records have proved to be trustworthy and resilient. There is a general agreement that vertebrates evolved in the Cambrian Period before 520 million years ago show markers for multi-sensory conscious perception as they were perfected with optical design, logarithmic spirals, Fibonacci series and golden ratios. Fossil record documenting properties with incredible details and immaculate precision such as, sensation, locomotion, manipulation and intelligent behavior are pointers of induction of primitive consciousness at that point of time. This paper examines fossils records during the Cambrian explosion that open a new window to discover their role in systemic evolution and act as vehicle for consciousness transformation.

Keywords: *Consciousness; Fossil Record; Cambrian Explosion; Plant Fossils; Golden Ratio; Fibonacci Spiral*

Introduction

Francis Collins, Director of the Human Genome Project and of the National Human Genome Research Institute at the National Institutes of Health in his book, *The Language of God: A Scientist Presents Evidence for Belief* writes "Science's domain is to explore nature. God's domain is in the spiritual world, a realm not possible to explore with the tools and language of science. It must be examined with the heart, the mind, and the soul [1]". The human species is the best living example of achieving both higher order spirituality and consciousness. Scientists believe that spirituality is a complex subjective concept, and it is necessary to quantify it for use in research, however, this has been a major challenge. Developing instruments to assess/measure spirituality and ignoring the fact that finest precise tools are already provided within the human framework calls for a somber deliberation. We seldom make good use of our gifted extraordinary faculties; instead rely on tautology/non-tautological frameworks for understanding spirituality. Rene Descartes, French philosopher pioneered the concept of mind-body dualism that although the mind and body are separate, they do interact. Consciousness has intrigued philosophers and scientists since historic times, experts have a long way to go in our understanding of the concept. Scientists and active researchers endure to investigate the various bases of consciousness in conjunction with the physical, social, cultural, and psychological impacts that enrich our conscious awareness. Lessons emerging from the science of consciousness have changed the thinking of the scientists across the globe. It appears really hard for scientists to seek ultimate truth or ultimate reality. Progressive scientists may take a lead over the conservative ones as the science of consciousness is shifting with new paradigm. Scientists are beginning to unravel a mystery that has long vexed phi-

losophers [2]. Remarkable 'Concentration' by the scientists on their research problems qualifies them to perhaps no less than meditation. In the process of engrossment, scientists invariably experience a spark/intuition as master key revelation to their research problem. Bowers and co-workers argue that clues to coherence automatically activate the problem solver's relevant mnemonic and semantic networks [3]. Eventually the level of patterned activation is sufficient to cross a threshold of consciousness and at that point, it is represented as a hunch or hypothesis. The nineteenth-century German chemist August Kekulé claimed to have pictured the ring structure of benzene after dreaming of a snake eating its own tail. Such sparks/intuitive features/cryptic signals sensed by researchers establish a close linkage between focused concentration, meditation and consciousness. Many scientific discoveries or inventions arise from these types of insights. Therefore, it is important for the scientific community not to shy away in recognizing varied facets of consciousness studies and they must act before it is too late. They have vital role to play in this crucial domain. The problems we regard as hazards/disasters including recent extraordinary COVID 19 pandemic situation are all experiments that the Planet Earth has carried out before, several times. Learning how to read these evidences help us to make decisions about how better to prepare to survive them. Natural disasters are essentially a part of universal order. Scientists now consider "Order of the Universe" as a value system. It reminds us that "this is God's world, not ours." If the human race does not respect principles on which nature operates, its wrath will take over. The repeated natural calamities and disasters are not only a serious threat but also strong message from the Mother Nature to the Mankind. Therefore, it is important for all of us to lead a frugal lifestyle compatible with sustainable habitat as part of a perennial source of inspiration contributing towards better worldliness.

Discussion

Mother Nature is a kinetic facet of consciousness. Nature and consciousness are intertwined and remain a perpetual source of divinity [4]. The Earth is a very small stage in a vast cosmic arena which has already witnessed five mass extinctions. In an extraordinary portray, the nature preserves an unblemished documentation with perfection down the geological timeline. Every rock and mineral is essentially a crafted unit, moulded by the skillful rhythms of the Earth. Rocks, spectacular as they are, hint at the extraordinary potential information they conceal within their domain [5].

Thus, geologists enjoy a unique legacy for driving their passion of Earth exploration and rock reading. For all inquiries, one can take the cardinal principle "The present is the key to the past". Rocks are not just the foundations of our planet but they voice their presence through the layers of time. Evidence linking rocks to life comes in the form of fossils. These fossils carry with them hidden messages about the connections of their being conscious at some point of geological time. Fossil add value to our research and offer a window to look for the signatures of emergence of primitive consciousness. Stromatolites as bio signatures of atmospheric oxygenation are the oldest known fossil records of life on Earth. These organo-sedimentary structures are formed by complex interactions between microbial mat communities and their geochemical environment, thus providing insight into the ecosystem at the time of their genesis to approximately 3.5 Ga ago in the early Achaean. They are originally formed by the growth of layer upon layer of cyanobacteria (single-cell prokaryotic) photosynthesizing microbe. Intelligent behavioural designs have been observed in primitive microorganisms. The first signs of cooperative behaviour in microorganisms are based on evidences and studies conducted in the stromatolites that demonstrate the capability of forming loose cooperative communities as a mode of protection, by formation of biofilms, which are now proposed to be the propagators for multicellular life [6]. Behaviour is represented as conscious moment. There can be no better demonstration of the fossils of algal stromatolites forming colonies of cyanobacteria reported from Salkhan Fossil Park, situated inside the Kaimoor Wildlife Sanctuary, Robertsganj, Uttar Pradesh as concentric rings (Figure 1).

The Cambrian Period records one of the most extraordinary transitions in the history of life. Around 540 million years ago there occurred a dramatic acceleration in the evolution through the "Cambrian Explosion" when a vast array of diversified life emerged (Figure 2). The Cambrian explosion is known for a wide variety of bizarre and novel animal forms. It is the time when most of the major groups of animals first appear in the fossil record.



Figure 1

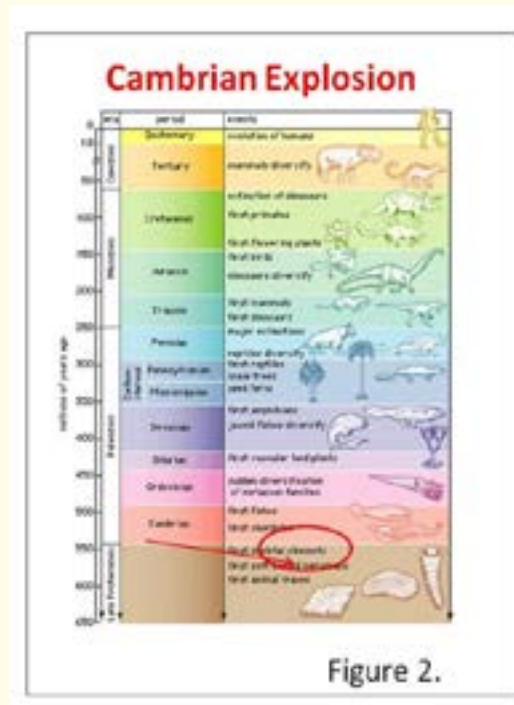


Figure 2

Potential examples from fossils kingdom describe that the evolution attained perfection in the geometry of the shell, regularity of shell coiling and suturing on the cells. Collectively, they offer clue to the fact that during the continued course of evolution process, primitive

consciousness also came into existence. It is now strongly advocated by the scientific community [7] that Consciousness is all pervasive property of the Universe.

Ammonites, which evolved about 416 million years ago, were once the most abundant animals of the ancient seas. Ammonite shells are used today as index fossils. Early ammonites had simple suture lines traced across their shells, while the sutures on species from the Cretaceous period (145 to 66 million years ago) formed intricate patterns that may have given later ammonites greater buoyancy control. The ornamental suture lines in Ammonite fossils resemble leaf of a fern and are reminiscent of a fractal (Figure 3). The Ammonite shell is formed in a Fibonacci spiral. These spirals follow a mathematical formula and their shapes were aesthetically pleasing due to mathematically proportional dimensions [8]. We all know that fractal relationship has lineage amid consciousness and creation. Dualistic nondualism school of philosophy also supports self similar patterns like fractals which are abundant in nature [4]. The exquisite architecture in Ammonites makes it imminent that there must have been some divine design active even in geological past. It is befitting to mention here the famous quote “Science without religion is lame, religion without Science is blind” (Albert Einstein).

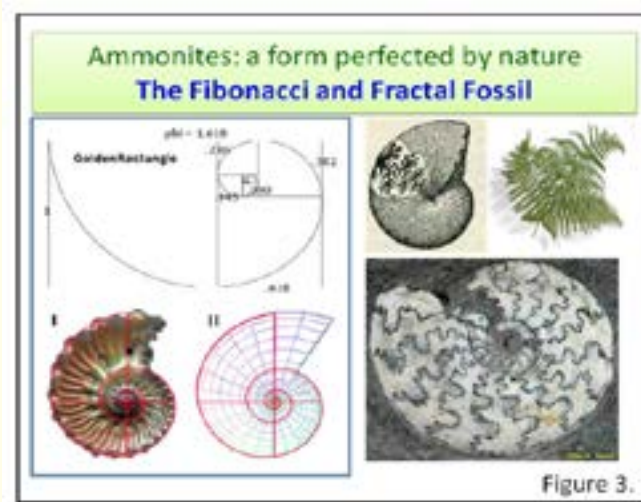


Figure 3

One of the most compelling of nature’s forms is the chambered nautilus shell. The fluidity of its curves and the ever-increasing volume of the chambers delight the eye. Besides, the flawless design in the Nautilus shell contains the Golden Ratio and it grows in a logarithmic spiral manner (Figure 4). Ratio of the length of the short side to the long side is always 1: 1.618. It is a constant ratio found in nature, from pinecones to crystals, to pineapple skins and triton shells. Thus, Nautilus shell is truly in harmony with nature’s blueprint.

Through studies of fossil plants (Figure 5) and marine organisms, paleontologists have been able to reconstruct dramatic changes in the earth’s climate during evolutionary time that has been important in primate evolution. The subject of whether plants own several of the similar mental features as animals, such as consciousness, cognition, intentionality, emotions, and the ability to feel pain, has been pondered ever since the foundation of plant neurobiology.

In 2016, Mount Sinai neuroscientist Todd Feinberg and Washington State University evolutionary biologist Jon Mallatt conducted a broad survey of the anatomical, neurophysiological, behavioral, and evolutionary literature from which they were able to derive a set of



Figure 4



Figure 5

criteria for the emergence of consciousness. The vertebrates, arthropods and cephalopods (e.g. octopuses, squids) were the only animals that fulfilled these criteria. “Feinberg and Mallatt concluded that vertebrates, arthropods, and cephalopods possessed the threshold brain structure for sentience consciousness [9]”. Proponents of plant consciousness draw parallels between electrical signaling in plants and nervous systems in animals. Plants use electrical signals in two ways: to regulate the distribution of charged molecules across membranes and to send messages long-distance across the organism. Plants have similar abilities to generate electrical impulses throughout their structure (which is what nerves do).

About 521 million years ago, the remarkable Trilobites made their first appearance in the Cambrian fossil record. Trilobite eye has been an object of wonder as it represents an all time feat of function optimization (Figure 6). Trilobites are unique among animals in hav-

ing calcite crystal eyes with 360 degree view of their environment. The question is how did they acquire such an optic system? How come calcite lenses were so perfectly installed in Trilobite's eyes? Could all this have taken place by chance or accident as has been iterated by Richard Dawkins in his book "The Blind Watch Maker [10]". His exposition lacks impinge of cognitive science and the fact about percolation of divinity right from macrocosm to microcosm. Striking excerpt by Roger Penrose states that "There is a certain sense in which I would say the universe has a purpose. It's not there just somehow by chance. Some people take the view that the universe is simply there and it runs along-it's a bit as though it just sort of computes, and we happen by accident to find ourselves in this thing. I don't think that's a very fruitful or helpful way of looking at the universe, I think that there is something much deeper about it, about its existence, which we have very little inkling of at the moment". In his intriguing book "The Physics of God", Selbie describes the intersections of science and religion making abstruse subjects within both science and religion and further reveals the scientific secrets of life and immortality with quantum biology's startling discovery that the human body is continuously entangled [11]. He further mentions that the explanations of transcendent phenomena given by saints, sages, and near-death experiences, miracles, immortality, God, and transcendent awareness are fully congruent with scientific discoveries in the fields of relativity, quantum physics, medicine, M-theory, neuroscience, and quantum biology. Therefore, according to Selbie there is promise of unity of science and religion [11].

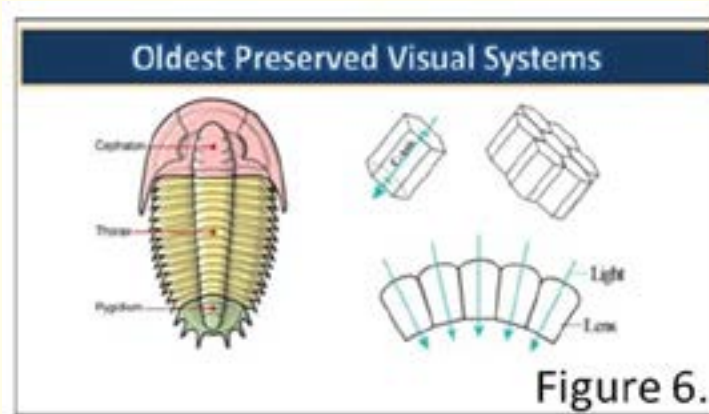


Figure 6

There is consensus that these animals later fossilized were unaware of even simplest mathematical calculations, leave alone optical design or logarithmic spirals or Fibonacci series or golden ratios. Rock reading is an art; you can touch rocks, feel them and they tell tale of their fascinating journey. Flawless and accurate fossil records in these rocks with tender sensibilities and transcendent vision are affirmative markers of primitive consciousness. Growing fossil evidences have enlarged the scope of thinking about the systemic evolution [12].

Conclusion

Consciousness engrosses the intellectuals of a worldwide community of brain scientists, psychologists, philosophers, physicists, computer scientists. David Chalmers mentions that "Experience is information from the inside; physics is information from the outside [13]". The rock's innards "see" the entire universe by means of the gravitational and electromagnetic signals it is continuously receiving. Such a system can be viewed as an all-purpose information processor, one whose inner dynamics mirror any sequence of mental states that our brains might run through. And where there is information, says panpsychism, there is consciousness. Gustav Fechner, an ardent defender of panpsychism, contended that even trees are sentient and conscious. Social and intelligent behavioral designs have been observed in

primitive microorganisms and vertebrates. Conscious behaviours observed in them are unique in their own space [14]. These behavioral patterns are lined with cognitive actions.

Therefore, it can be concluded that there is a minuscule design at each level and a Grand Design of the Omnipresent and Omnipotent Supreme Being. HE is the Lord God of all creation- the monolith of ever blissfulness much beyond ultimate reality - at infinity of infinities- is certainly beyond human comprehension. "Discourses on Radhasoami Faith" written way back in 1909 by Mishra [15], followed by a supplement "Expositions on truth, ultimate reality and supreme being" [16] which prophesied the incredible concepts of "Science of Consciousness" ranging from wormholes, singularity, multiverses in space and time to Black holes is significant. Its narration converges to a point where Plank's scale diminishes and the laws of Physics cease while the spirit force, through the ultra-transcendental meditation is enacted.

Fossils born during Cambrian explosion have shown a ray of hope to the world that they stand out beyond galleries and museums. It is hoped that this article will encourage more representation of these incredible poised beautiful rocks and embedded fossils in them as silent vehicles of learning on the subject of consciousness studies. We have still two missing links in consciousness-guided pattern formation; (i) how conscious will becomes a piece of information and (ii) how information is converted into a productive signal, for which we need further research on Mukhopadhyay's latest proposition (2022) on the Einstein's' abandoned other world: how conscious will manifests in a 4-D world? [17].

Conflict of Interest

There is no conflict of interest with any one in publishing the article.

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