

**Consciousness does not directly depend on microtubule properties**

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**Abstract:** This article is to describe about the **Consciousness on microtubule properties**. A digest of emails received between 23 to 25<sup>th</sup> of Dec 2015 is enclosed herewith. Brief comments are provided below each as and when necessary. Please feel free to give your suggestions.

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**Keywords:** Consciousness; depend; microtubule; property

Re: Consciousness does not directly depend on microtubule properties, Dec 23  
Sandeep,

I think understanding is the key. If we can better understand how exactly we came to be, we can better understand how we are best. This answer I feel comes from a combination of science and religion. Or, more accurately, a culmination of the information provided by each. Genesis 2-11 gives a very specific timeline based on the ages given in Genesis 5. You can actually chart out the events of that story along a timeline that spans 2000 years that goes through the flood and the Babel story. Once it's realized the Adam/Eve story is taking place in an already populated world I think it'll become much more clear to many exactly when the events of Genesis 2-11 are happening. The creation of Adam happens right around 5500 BC. The flood around 4000 BC, and the Babel story 3900 BC. The creation of Adam and Eve are not the creation of humans. They're the introduction of free will. The creation account actually sets the stage quite well. The natural world becomes what God wills. God's will is one and the same as natural law. Matter and energy adhere to those laws and become all that the natural world is. The creation account also depicts life as being driven by God's will. Natural law. It was commanded to "be fruitful and multiply" and to "fill the Earth". Which is exactly how it happened. The humans created at the end are naturally evolved humans. We recognize them today as indigenous humans, all but pushed from existence by the descendants of Adam and Eve. That's what we are. That's why there's polluted air and water. Indigenous humans live in harmony with nature. It's the introduction of free will that makes us what we are. That's when humans first began to bend the natural world to our will. That's when we became acutely self-aware and began to prize what we possess. Began to

prize land as something we can own. The psychological change that free will brought about is documented and mapped across human history in Saharasia by James DeMeo. It's also tied along with the emergence of "Fall" mythological accounts by Steven Taylor in 'The Fall: The Insanity of the Ego in Human History and the Dawning of A New Era'. The natural world, our biological bodies, are biological machines brought about by natural processes in this natural environment. Our ego, however, is something else. Introduced about 5500BC in Southern Mesopotamia. Our history is the account of how this new species, much more aggressive, pushed back and wiped out the indigenous cultures of the world. It's what brought about science and mathematics and civilization. The events depicted in Genesis are describing this event. It's the origin of the modern human world.

Jeremy Christian

**Comments:** The Vedantic understanding is that the total age of the universe is about  $3.1104 \times 10^{14}$  years. But within that period there occurs many partial dissolutions of different degrees. At present the total age of the universe is about  $1.5503 \times 10^{14}$  years. From the last period of partial dissolution which is called the night of Brahma, the age of the universe is  $1.97 \times 10^9$  years or 1.97 billion years. There may be further smaller partial dissolutions within this period also.

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Re: Consciousness does not directly depend on microtubule properties, Dec 23

Respected Sir (Mishra Sahab)

Although you have very clearly explained almost everything in your above response, I quote few lines from Dr. Deepak Chopra which are self explanatory:

"The cosmos that you and I are experiencing right now, with trees, plants, people, houses cars, stars, and galaxies, is just consciousness expressing itself at one particular frequency. Different planes of existence represent different frequencies consciousness." This supports my view (definition) on consciousness: 'Everything which exists is Consciousness'. Regards and best wishes.

Anirudh Kumar Satsangi

**Comment:** Matter is a symbol of undeveloped consciousness. Consciousness develops in Nature through the different life forms from the lower stage to the higher. But consciousness is not a product of material actions and reactions. Consciousness is the plane of attachment. The living entities are called marginal energy in Vedanta. If consciousness is attached to matter, it is called material consciousness and if consciousness is attached to Spirit, it is called spiritual consciousness. The two potencies are *achit* (not conscious or matter) and *chit* (conscious potency). Both the *chit* potency and *achit* potency belong to the Absolute Sentient. That is the Vedantic understanding. When the universe is agitated from its primordial state, the process involved charging the primordial material energy called *pradhan* with the *chit* potency. Otherwise the universe would not breed life.

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Re: Consciousness does not directly depend on microtubule properties, Dec 23

It is not correct that scientists do not know their limitations. On the contrary the spiritualists assume their omniscience and yet keep avoiding presentation of what exactly they know. So far the omniscient spiritualists have not given their definition of life or consciousness which they have asked so often. What do they mean by saying that science (the reductionist, the materialist) has fetched nothing. They should make an introspection. All the campaign they are having against science is through the tools produced by science. You cannot have best of both the worlds. You should instead use an entirely and purely spiritualistic medium of communication if you can. I am not for compartmentalizing science from spiritualism but these groups do. It is unfortunate that this will lead us nowhere. For me one transcends into the other and none can make sense without the other. Please do not indulge in conspiracy of halting the quest for knowledge. There were numerous thought provoking and serious presentations in this series but they have often been marred by predisposition of the proponents themselves. We are in realms where shunya is indistinguishable from ananta and then we keep talking of limits if it suits us. I think we are not being fair. Best wishes,

Pramod Yadava

**Comments:** In the last digest of emails, a definition of consciousness was given. Still we repeat it here. Consciousness is the externalization of Spirit. Consciousness is the symptom of the soul. Consciousness always means consciousness of something, either external or internal. Consciousness contributes to everything. When we say an object, that object requires our thought to describe it. The object was separated from the observer in mechanistic science like Newtonian physics. But Goethe had protested it even at the time of Newton and had developed a system of science based upon the phenomenological approach to Nature. In Quantum physics, it has been shown that observer is necessary to collapse the wave function. Although QM cannot deduce consciousness yet consciousness is necessary to explain the results. Thus the mechanistic approach has been shown to yield in QM to the necessity of inferring consciousness. The substantial being of consciousness is the thinking, feeling and willing being. It is always a subject and object simultaneously. Further in the email of Sripad Bhakti Madhava Puri Maharaja, PhD more elaboration is provided.

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Re: Consciousness does not directly depend on microtubule properties, Dec 23

Enlightenment is the solution. Having a scientifically valid method of leading people into an enlightened state, a method that can be tested and verified. Then things fall into perspective.

Burt

**Comments:** Reality is not within our fist. What can be controlled by man is something finite and something mechanical. But we can't control so many things like our own death, birth of living entities in nature, the environment, time etc. Science is to be appreciated for its contribution but its limitations also should be appreciated. We can't manufacture a single blade of grass. We all know we are conscious and we have free will. We will not like to be pushed around but our science cannot accept free will. The very activity of doing science requires some free will or liberty for the scientist. Yet Science cannot explain the free will. Therefore Science cannot explain the Scientist. We have to become humble in the attempt to study Reality. Knowing our limitation is important in making progress in science.

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Hard problems and easy problems Dec 23

It seems to me that a major difficulty in some of our communications is mixing up very hard problems with simpler problems. The topic of consciousness is very hard because we are familiar with it based on our own complex subjectivity. There are also much simpler problems like the orbits of planets for which Newton had some deep insights. But Newton's laws

turned out to not be full accurate. The new replacement is quantum mechanics (QED) and general relativity. The simplest quantum system that I know of is that of a single electron interacting with photons. The magnetic properties of the electron have been measured to 13 decimal places. Those properties have been theoretically predicted also to 13 decimal places and the theory and the experiments are in great agreement. The accuracy is equivalent to measuring the distance of the earth to the moon to within the width of a human hair! Some of the history of this calculation can be found at: <http://www.oberlin.edu/physics/dstyer/StrangeQM/Moment.pdf>.

I would think that this list should acknowledge this triumph of measurement and mathematical calculation. Many of the properties of electrons and molecules and transistors are pretty well understood, and I don't understand why members of this list seem to reject those understandings. That rejection places a barrier in communications between different groups of scholars. On the other side, regarding subjectivity, I don't understand why most biologists seem to reject the idea that we have no decent understanding of consciousness. Improved communications would be healthy for our civilization's healthy future. I think both sides should be a little more cautious before claiming their point of view covers all the vast realms of our world.

Stan

**Comments:** The successes of measurement are important in making inferences about electron and its applications in different fields. But the problem is that when someone assumes that these can explain life and consciousness, questions naturally arise. What combination of the fundamentally measured quantities like charge of electron, mass of elementary particles, velocity of light and Planck's constant (e, m, c, h) can explain life and consciousness. On the other hand nature abounds in life and its symptom consciousness. Moreover life does not follow mechanical laws. Life is its own principle. Therefore the limitations of mechanistic sciences have been exposed whenever the question of life comes up. This has happened with Darwinism, mechanisms and linearity of causation. Life is a chicken and egg problem even at the level of individual atoms and molecules. Therefore we can't start with electrons to explain life. We have to have life already to explain life. Therefore Reality is very complex. We can't simplify life. It will always follow the organic law of the whole coming from the pre existing whole. In this regard Hegel wrote in his encyclopedia of Nature, "It would, however, be a superfluous and thankless task to try to use such an unmanageable and inadequate medium as spatial figures and numbers for the expression of thoughts,

and to treat them violently for this purpose. For the specific concept would always be related only externally to them. The simple elementary figures and numbers can in any case be used as symbols, which, however, are a subordinate and poor expression for thoughts. The first attempts of pure thought took recourse to such aids: the Pythagorean system of numbers is the famous example of this. But with richer concepts these means became completely unsatisfactory, since their external juxtaposition and contingent combination are not at all appropriate to the nature of the concept, and make it altogether ambiguous which of the many possible relationships in complex numbers and figures should be adhered to. Besides, the fluid character of the concept is dissipated in such an external medium, in which each determination falls into the indifferent being outside the others. This ambiguity could only be removed by an explanation. The essential expression of the thought is in that case this explanation, and this symbolising is an empty superfluity."

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RE: CONSCIOUSNESS links the Part to the Whole (show original) Dec 23

Thanks andris- some of this aspects are discussed comprehensively by Dr Ervin Lazlo. Love and peace  
Joy

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RE: Consciousness does not directly depend on microtubule properties, Dec 23

What is finite and what is infinite? Aren't these human perceptions?

Professor Dr. V. S. Mani, Director, Seedling School of Law and Governance, Jaipur National University, Jaipur, INDIA, President, Asian Society of International Law, Singapore (2011-2013)

**Comments:** Only The Absolute is the True Infinite. Finite is an idea that has a limit beyond which we can't find the being of finite. For example we can't find the being of a table beyond the limit of its edges. But Absolute implies that beyond the limit also the Absolute only exists. A detailed description is given by Sripad Bhakti Madhava Puri Maharaja in [his essay](#) which was written to explain Hegel's idea of True Infinity.

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Re: Consciousness does not directly depend on microtubule properties, Dec 23

Robert Colwell's posting shows us what humility and openness sound like. I'll repost his comment on "Ways of knowing".

**Ways of knowing:** Science is one way of knowing, understanding, and (yes!) explaining that has served humanity very well in many ways (thanks for the internet, by the way), but I could not agree more readily that science is not the only way of knowing

(see above). I respect the wisdom of great teachers in all traditions, and often find meaning in their thought, but I am repelled by anyone's doctrinaire insistence that science cannot lead us to an understanding of nature and its processes. I have seen too much discovery in my own lifetime to react otherwise. Let us know ourselves, our planet, and the universe in every way we can, and integrate those ways when it makes sense to do so. Thank you Robert for your wisdom on these complex issues. In your final section on consciousness you said:

I have learned much from reading the postings, here, about concepts, views, and theories of consciousness. Definitely not my expertise, and I am eager to learn more. There is indeed wisdom in these discussions about aspects of consciousness. It is awesome that our conscious minds have learned so much about nature. But in all humility I would think it is good to admit we still know so little. That admission seems missing from many of the postings on this list. What we presently know about consciousness seems like a small drop in the bucket. Yet so many of this list's discussants claim to already understand consciousness with all its complexity. In a previous posting I suggested that at least three quite different possibilities are still open for understanding the subjective aspects of consciousness (qualia):

- 1) qualia is emergent from brains
- 2) qualia is emergent from big bang
- 3) qualia (mind, consciousness) comes before big bang.

It seems the latter (#3) is the dominant belief on this list; but shouldn't we express some humility and admit that the first two may also be possible. That sort of humility could help heal some of the conflicts taking place in our present world.

Stan

**Comments:** We agree with Colwell when he says that "I am repelled by anyone's doctrinaire insistence that science cannot lead us to an understanding of nature and its processes." Science is a process. Science can be both material as well as spiritual. Therefore the study of nature as a scientific enterprise can be a spiritual process when we become more scientific and thoughtful. But when we insist that mechanism can explain life then surely that need to be questioned. It has been questioned by Kant, and again with the acceptance of the idea of consciousness, we are again realizing the limits of 20<sup>th</sup> century conventional biology. Therefore Science is being encouraged through our institute works in the form of conferences, publications and dialogue to explore the axioms: (i) Life comes from Life, (ii) Matter comes from Life. The experience of Louis Pasteur in the form of Biogenesis and others like McClintock who discovered that central dogma was partial and

information transfer occurs even from protein to the genome has changed the entire outlook of biology. Therefore topics like sentience, intelligence, sensory response, identity, cooperation etc have become evident and we have to look beyond mechanistic science by the sheer weight of evidence.

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Re: Consciousness does not directly depend on microtubule properties Dec 23

I think it the other way around. Matter and energy are powered by consciousness or more to the point - there is only consciousness - matter and energy are concepts created in consciousness around experiences in consciousness. Consciousness is that in which all experience occurs, in which all experience is known and out of which all experience is made.

Deepak Chopra, 2013 Costa Del Mar Road, Carlsbad, CA 92009

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Re: Consciousness does not directly depend on microtubule properties, Dec 23

Stanley,

I appreciate your following comments: "Shouldn't we have some humility and say that at this point we don't know which of the three alternatives is correct?"

- 1) qualia coming with brains
- 2) qualia coming with big bang
- 3) qualia (mind, consciousness) coming before big bang."

Thank you for your concise summation of the possible means by which consciousness may form, and for presenting the perspective that leads to civil discussion. I would like to add a 4th possibility: All three scenarios you list are possibly true. Although this might appear to be both contradictory and impossible, I believe that there is reason to entertain its possibly. My reason is based upon the reported experiences of mystics, those who experiment with their own consciousness. They report a state of consciousness which transcends time and space, and they also report experiencing a state of infinite being. If their experience is real, then consciousness transcends matter, energy, and even space-time.

If the mystic's experience is true, that would support the notion that consciousness exists prior to the Big Bang. If so, how could it be possible that consciousness also emerges from an evolutionary process? The answer lies with a modern-day mystic's explanation. Meher Baba (1894-1969) reports that in the state of infinity, infinite consciousness and infinite unconscious exist simultaneously. It is the pull between infinite consciousness and infinite unconscious, between infinity and nothingness, which initiates the process we observe as the Big Bang. The evolution of the universe is an evolution driven by the

unconscious towards consciousness. Initially unconscious, space-time emerges from the big bang. Then energy and matter evolve, and they possess low levels of consciousness, the evolution of life forms continue in order to evolve higher degrees of consciousness. Through this evolutionary process complete consciousness emerges in the human brain. In this scenario consciousness is an emergent property of brains.

Furthermore, it is possible for a human being's consciousness to transcend the physical realm and to experience an infinite and eternal reality, a state of pure consciousness. The experience reveals that consciousness has always been a property of the eternal infinite being. Thus we have consciousness as both an emergent property of the brain, and consciousness existing prior to the big bang.

Richard Blum

**Comments:** The logic of life is that life comes from life. The single cell zygote has the potential to become the fully differentiated living organism. When it gets the proper circumstance it develops into the full organism. The same logic applies to all living organisms from single cell life to plants, animals and humans. We need to search what is the concept which makes life possible. The brain is there in human and other mammals. But there is no brain in *ecoli* or plants. But they all exhibit sentience and consciousness of varying degrees. Therefore we see consciousness in all life forms. If it were an emergent property then it could be seen in some complex arrangement of chemicals starting from raw chemical in the laboratory. But we have never seen any successful experiment which could prove that consciousness is an emergent property of matter.

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Re: Consciousness does not directly depend on microtubule properties, Dec 23

Respected Sir (Dr. Anirudh Satsangi)

When you say: "Everything which exists is Consciousness", and quote Dr. Deepak Chopra to prove your point, it presents a confusing picture. He is quoted by you to say: The cosmos that you and I are experiencing right now, with trees, plants, people, houses cars, stars, and galaxies, is just *consciousness expressing itself at one particular frequency*. Different planes of existence represent *different frequencies consciousness*". If the cosmos is consciousness expressed at one particular frequency, and different planes of existence represent different frequencies, then he must be referring either to different universes (multi-verses, about which there is no proof) or different levels of consciousnesses that are not revealed to us. Then which of the alternatives is correct and how do we know the truth? In case both represent the same thing, it will be self contradictory,

as number is the perception of a characteristic of all objects that differentiates between similars (संख्या सर्वस्य भेदिका): one is absence of similars (एक इता संख्या) and many is the presence of similars, which can be 2 (द्वि इततरा संख्या), 3 (त्रि तीर्णतमा संख्या), 4 (चत्वार चलितसमा),...n. Hence kindly educate us: how do you define consciousness. Regards,

basudeba

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Re: [Sadhu Sanga] Consciousness does not directly depend on microtubule properties (show original) Dec 23

Respected Madam (Dr. Shyamala Hari)

Your statement that: "science cannot explain how thought is created by the brain" may not be correct. According to Vaisheshika of Kanaada, thought (भावना) is the inertia of mind. This is explained as follows:

Inertia starts only after an initial action. The initial action leads to the decoupling of the substance from the space occupied by it (क्रिया). This also cuts the substance off from the initial force applied (क्रियातो विभागः). Without any coupling, the body results in free fall due to its weight (विभागात्पूर्वसंयोगनाशः). Since the spatial directions such as up-down, right-left, and forward-backward etc. are all relative and not fixed, the substance resorts to free fall in the direction of the initial movement (ततो उत्तरसंयोगः). This results in inertia, which repeats itself till it is destroyed only due to special conjunctions (अभिघात).

Thought can be generated only after some past experience. This has been elaborated by Patanjali and we have discussed it on several occasions. During the period when we were experiencing the event, which subsequently became the subject of our contemplation, our agencies of sensory perception were in contact with the objects that constituted such event. This contact generated some impulse, which was carried by our mind to ultimately become our memory. When we come across another event at a different time having similarities with the previous event, we recollect the previous event. This recollection is ignited by the contact of our agencies of sensory perception with some objects that are present at the time of the contact. However, soon our mind starts experiencing the memory of some events related to some past events and continues the experience progressively by conjoining it with other related past events.

Since the experience relates to past events, but can be felt at the present time, the objects of experience cannot have a physical presence as substances exist only in present time. They memories can remain in mind related to the past and as predictions for the future only as effect and cause respectively for their present state. For describing the state (स्वरूप लक्षण) of something bound in time and space, it is necessary to describe two boundary conditions (तटस्थ लक्षण). For example, even a seemingly unchanged substance undergoes constant change at the elementary particle level. Its present state is determined by its past state. Thus, the past is the cause of the present. Entropy is well established – syntropy is not yet proved. Similarly, the present is the cause of the future. The state of something can be correctly described only for a moment, which precedes future, but succeeds past. Our two year old picture is not we.

This is a scientific linkage between an action (changing shape), with time, as time is action suggestive (क्रियाव्यङ्ग). Thus भावना relates to activities, which have no material presence. This puts important restrictions on भावना. It does not have the clarity that is associated with physical perception, which is possible only at present. Yet, it is clear enough to generate internal perception of some presently non-existent and unreal substance from obscurity to manifest reality without external association

(अस्फूटत्वात् भूतमिव अर्थम् अभूतमिव स्फूटत्वापादने न भाव्यते यया). Since mind follows laws of action, भावना, which is generated by mind, also follows the laws of action. Strictly speaking, भावना, is generated at Chitta, which reflects consciousness, superimposed by the intellect. However, since it always works through mind, for simplicity भावना is referred to as the inertia of mind.

Like all actions, भावना acts in four steps as follows:

1. संवेदना - This is the first stage of the creative contemplation process, when the agencies of sensory perception are joined with the objects of perception and an impulse is generated by the fundamental particles of the external object with the particular sense organ having similar properties. This impulse is subsequently carried by the mind, which has a positive charge, initiating the action process (क्रिया). Without the conjunction of mind, this impulse could not be carried to the brain. Hence in such cases it is not felt

in our consciousness. This process of conjunction of the external object with the specific sense organ and conjunction of the sense organ with the mind may be repeated, which gives rise to successive impulses.

2. भावना – This is the second stage, where each of the above external contact(s) cease(s) and the impulse(s) is (are) carried by the mind to the brain for further processing (क्रियातो विभागः). This process may be repeated, which gives rise to successive भावना. At this stage, there is no contact of the mind to the external objects, which exist only in the present (due to ever changing nature of the cosmos, substances remain as cause or effect in the past or future respectively). Thus, this stage transcends the limits imposed by time, i.e.; it can be associated with past or future while remaining at the present. Thus, we can think about the events of the past or the future without being physically associated with it.

3. वासना - This is the third stage, where the intellect in the brain (बुद्धि – which is also an insentient substance like mind that follows the laws of action) analyses the imprints left by the above contact. बुद्धि carries a negative charge and is the complement of the mind. Since it has no contact with external objects, it transcends the limits imposed by time. It is also the agency that reflects consciousness. Thus, all conscious actions are determined here. After the impulse is analyzed and determined by बुद्धि, the mind is given the response back to be carried to the agencies of sensory perception for execution. This is reflected through the positron emission by the brain. Repeated conjunction of intellect to the object and other objects related to it exclusively getting detached from other objects leads to a perception in totality, which may be different from each individual perception (विभागात् पूर्वसंयोगनाशः). This leads to the individual specific perception called अवधान (the mechanism and the reasons for this will be explained later). अवधान leads to the reaction called कृति, which is passed on to the various agencies of action. This leads to the execution of the command, which is seen as visible action or reaction to the perception.

4. कलना - This is the last stage of the thought process. This stage leads to continuous creative contemplation based on वासना till it is destroyed due either to i) knowledge of the object, or ii) execution of the desire coming out of the वासना and कलना, or iii) pain, which disconnects the mind from the intellect. In this process, the net imprint on intellect

remains dormant as स्मृति (memory) but arises from time to time when the media of sensory perception come in contact with an appropriate substance (ततो उत्तरसंयोगः).

The perceptible effects of भावना are creation of a memory (उत्पादय), consolidation of all similar thoughts or memories (आप्य), development of the consolidated memory (संस्कार्य), and lateral use of this memory in other related fields (विकार्य). Thus, it fulfils the criteria for an action. Hence it is an action. However, unlike an action, it generates further contemplation on similar line, which generates yet further chains of contemplation. It is always generated after an initial contact of an object with the agencies of sensory perception in external igniters or contact of the mind with memory in case of internal igniters. Similarly, it is destroyed by special conjunctions. Thus, it is not an action, but a संस्कार - inertia. It is destroyed due to knowledge (ज्ञानम्), execution of the desire that arose due to such भावना, or pain (कष्ट), which disconnects the mind from the intellect. These can be verified in laboratory experiments. Regards,

Basudeba

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Re: Consciousness does not directly depend on microtubule properties, Dec 23

In Chalmers' article "consciousness and its place in nature", he points out that consciousness maybe consists of the intrinsic properties of matters in the Type-F monism, where matter has physical properties as well as phenomenal properties (intrinsic properties). I agree with Type-F monism to some extent and, therefore, I proposed a timeless and spaceless theory of consciousness to reflect this philosophy (J F Li, a timeless and spaceless quantum theory of consciousness, Neuroquantology, 2013).

In my theory, matter, time, space and consciousness emerge at the same time altogether. Before that, everything is just some entity that exists but cannot be described; because if you want to describe Everything you have to describe it through the relations of Everything with some other things outside, but there is nothing outside Everything. With observers or consciousness, then it is able for observers to prepare the basis of the quantum state to describe matters. If we take everything that including all consciousness as an apple, then the consciousness acts like a knife cutting the apple from some particular angle; if you cut the apple from different angle, you see different world but all is actually in one apple. If

you found that Everything can be described, then the apple has actually been sliced and it must have been described in some basis of states prepared by some consciousness.

Certainly, in some other consciousness' eyes, there exists some matter that "produces" your consciousness or, in other words, you can relate some matter to some consciousness. Actually, I am going to prove that you will eventually find that some matter turns out to be an elementary particle with huge inner freedom (I will write a paper on this). But it is likely that someone cannot find the matter directly related to his own consciousness even though he can find that related to other people's consciousness.

Dr Jianfeng Li

Department of Macromolecular Science, Fudan University, Shanghai 200433

**Comments:** When you say that "Before that, everything is just some entity that exists but cannot be described" it is already a statement having a contradiction. You are making a definite statement about that something which cannot be described. So it is already a description. Srila Vyasadeva has told that "It is not that the Truth cannot be described." The Truth can be described even in infinite measure. But we must get the help of the infinite. According to Vedanta Absolute Truth is Sentient. Truth is not impersonal. Hence we have to just make a rational inquiry into the nature of Reality and Science need not be exclusive to the process.

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Re: Consciousness does not directly depend on microtubule properties, Dec 23

Dear Basudeb Mishra,

You say: Thought can be generated only after some past experience. So, how is the first experience generated? Does any of the present day sciences explain how the first experience is created? My point was that all mental contents: thought, desires, emotions, etc. are all not directly accessible to senses or even indirectly accessible to them by means of measuring devices. So far developed sciences depend upon material instruments for verification of their theories. If anybody says or does anything by ESP, it is not considered science at present. Regards

Syamala Hari

**Comments:** Goethe had made some observations to illustrate the limitations of Newtonian concepts of light and color. For Newton the color corresponds to a frequency of light in the spectrum. But for Goethe color is experience in which the organ of eye is so integral. QM is establishing through the problem of measurement that we can't even talk about matter without the observer. Somehow the properties of what we call matter depend upon the observer also. So we can't separate the experiences from the experiences.

The new science of consciousness has to study the form of consciousness as which is more fundamental than matter and which existed in the universe all along.

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Re: universal mechanism underlying conscious systems Dec 24

Dr.Keppler;

'It may be hypothesized ' is a good way of saying ' well I guess, but I just don't know ' What is that superconscious field of background energy which the Upanishads label as Brahman? How is it constituted and what are it's limits if any? Theories cannot really help us when the supersubject goes beyond the mind and intellect. There must be a capacity within us to know as the Upanishads urge us in that direction. But there needs be primarily humble submission in the wake and realization of our stark ignorance and inadequacy in my opinion.

BV Avadhoot

**Comments:** The living entity is essentially a minute spark of consciousness, *anu-chit-sakti*. It means the living entity's essential nature already contains an inherent capacity to acquire knowledge. Thus consciousness is not a result of the material interactions that are going on inside the body of the living entity. The living entity constantly interpret its internal conditions as well as the environment and makes choices by which it can sentiently respond to stimuli. Von Uexküll is regarded as the father of zoosemantics. Uexküll defines the term *umwelt* as the perceptual world in which an organism exists and acts as a subject. Causality in modern science has no place for will or the goal or purpose. But in Vedanta the principle of Causality begins from the Causal Ocean and that is an ocean of conscious quality. The insentient material energy in the primordial form is unexpressed and lies in only one corner of the Causal Ocean. The primordial material energy is made active only by the glance of the Lord of the Causal Ocean and unless the sparks of living entities are charged into it the material energy cannot bear life. The essential quality of the living entity is free will. Although it is a servant, when it desires to lord it over, its originally pure consciousness is covered and it is thrown into various kinds of miseries in the material energy. And in this an illusion arises in the form of material body. The world is far from the soul. The consciousness of the soul is originally pure, untouched by matter. But when it comes in contact with the field of material energy, it misinterprets itself as a being made of those elements of the material field.

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Re: Consciousness does not directly depend on microtubule properties Dec 24

Respected Sir (Mishra Sahab)

Thanks for your very enlightening and critically analyzed response. Different galaxies are considered as an independent universes. Max Planck view on consciousness also reflects same meaning. Max Planck has stated, "I regard consciousness as fundamental. I regard matter as derivative from consciousness. We cannot get behind consciousness. Everything that we talk about, everything we regard as existing, postulates consciousness". Regards and best wishes

Anirudh

**Comments:** The different galaxies are not independent universes. The material eye cannot penetrate the universal coverings as it lies beyond the material ego. However there are infinitely many universes floating on the causal ocean according to Vedanta.

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Re: [Sadhu Sanga] Opinion on Life & Evolution. Dec 24

One of the possible explanations for all of our individual and collective experiences, conscious, semi-conscious, sub-conscious or otherwise (whatever this may be!) could be embedded in the concepts of Leelaa, Maayaa, Dharmaa, Karmaa, Yogaa, Aathman, Parama Aathman, Mukthi/Moksha and the persistent beginning-less and endless cycle of the Universe's existence as believed in Sanaathana Dharmaa. Here are a few questions that could also be easily transformed into hypotheses. Please accept my *a priori* apologies for the long sentence that follows (my limitations of written expression).

Could life and evolution be a game (Leelaa) of eternally continuing consciousness, one that we (*Aathmans*) choose to play with and against ourselves, individually and collectively, continuously and completely, over time, forever and ever, with all the time-outs and breaks in a field of almost eternal illusion and delusion (*Maayaa*); a game which involves transcending *Maayaa* through the experiential discovery (*Mukthi/Moksha*) of the very rules of the game through Science or otherwise, but only by using the principles of *Dharmaa, Karmaa and Yogaa*?

Perhaps, the central operative principle of this game could be that each piece of consciousness, i.e., each one of us, consign ourselves to playing it until we discover the rules, or would it be THE RULE OF ALL RULES, the Eternal, Universal Consciousness (EUC) of all pieces of consciousness, the meta-rule (*Parama Aathman*) which completely governs all the rules of our game through specification, integration, coordination, control and closure across time and space. Could it be that we are the players, the coaches, the managers, the promoters, the referee(s), the field, the playing equipment, the spectators/witnesses, the



Press and Media, and the entire game itself with all its ramifications, while being fully associated with and subscribing to the EUC, individually and collectively? The last part ought to ensure that we will always attempt to play by our own rules. Therefore all our actions will automatically lead to Karmic consequences, deterministic as well as probabilistic, to ensure the overall integrity of the game across time and space.

Evidences and Proofs are personal, subjective (*ab initio*) and shareable only via faith and understanding, and not otherwise. Subjectivity starts even when there is a single human, and more so when there are at least two. Unfortunately, Science does not seem to have any way to deal with this truth about subjectivity. This is a binding limitation (self-imposed?) of Science despite all its revelations, hopes and glory. After all, Faith exists (or "lies") at the edge of Science. Because:

a) "something cannot be created or made out of nothing, nor can something be made or transformed into nothing",

b) "nothing is impossible" (please read at least two meanings, the more routinely used cliché, as well as the deeper philosophical one), and

c) "doing nothing is impossible",

please let us: (i) play our games, (ii) do, enjoy and be excited and intrigued by Science, until *Asathomaa Sath Gamaya; Thamasomaa Jyothir Gamaya; Mrithyormaa Amritham Gamaya; Om Shanthih! Shanthih! Shanthih! Thath Thwam Asi! Aham Brahmaasmi!*

LSG.

**Comments:** Firstly, soul is essentially constituted of the quality of freedom. Therefore we are ourselves responsible for our situation at any given circumstance. The distinction between life and non-life is that life possesses freedom and non-life possesses no freedom. This freedom is the greatest gift of God to the living entity. Lord does not interfere with our minute free will. He only informs us about the proper utilization of the free will that has been given to us. Secondly Evidence is the first topic that we should discuss before we can discuss any other topic. We should not think that Science is based on evidence which is objective and in Vedanta evidence is subjective. Rather evidence covers all aspects of Reality. Therefore even the objective proofs confirm the Vedantic axioms, (i) Life comes from Life, and (ii) Matter comes from Life. No one has ever shown that life can be explained by the laws of thermodynamics, or the ordinary concepts of information theory. Schrodinger asked, "What is the characteristic feature of life? When is a piece of matter said to be alive? ... a living organism continually increases its entropy—or, as you may say, produces positive

entropy—and thus tends to approach the dangerous state of maximum entropy, which is death. It can only keep aloof from it, i.e., alive, by continually drawing from its environment negative entropy." Schrodinger felt that the development of Quantum Mechanics reveals a basic Oneness in the universe. Since we cannot observe that matter can generate consciousness and the Vedantic idea further affirms that matter comes from life, it proves that the Oneness of the Universe can be realized through the study of life and Consciousness. Consciousness existed even before the manifestation of the material elements. However the Vedantic truth is not monistic. It posits the truth of an infinity of conscious entities. Therefore we have to not just stop at the individual pencils of consciousnesses but we have to study the Absolute Truth in its full fledged development.

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Re: the extended dual-aspect monism framework,  
Dec 23

Dear Paul,

Interesting idea. Since our primary subjective experiences (such as redness) are irreducible, they should at the least potentially pre-exist (embedded in related neural-networks during developmental period), in analogy to a tree potentially pre-exist in its seeds.

For their realization, we certainly need some brain-mechanism that involves interactions of neural signals, which is the physical aspect (that has matter/energy) of a state of a mind-brain system. In anesthesia, that mechanism is temporally not functional; therefore, experiences that are the mental aspect of the same state of the same mind-brain system also returns back to their potential state and we become unconscious.

Here, the term 'we' is related to our selves. A self is the subjective experience of subject and is the mental aspect of a state of the self-related neural-network (such as cortical midline structures) of the same mind-brain system. The above elaboration is based on the extended dual-aspect monism framework (Vimal, 2008b, 2010c, 2013, 2015f, 2015g), which is a middle way between materialism (matter is fundamental and mind is derived from it) and idealism (mind/consciousness is fundamental and matter is derived from it).

Kind regard,

Rām Lakhan Pāndey Vimal, M.S., Ph.D.

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Re: Consciousness does not directly depend on microtubule properties Dec 24

Dear Sandeep,

You have been very critical with modern Cārvākas (materialistic scientists) because they do not have scientific evidence for "life comes from matter". This is fine. However, you are not critical with

Achintya-Bheda-Abheda (inconceivable one-ness and difference) Vedāntists who do not have scientific evidence for “matter comes from life”. The examples Achintya-Bheda-Abheda Vedāntists give are untenable because there is no ‘real’ scientific evidence as they can be argued out; they are grounded on (logic-based) pseudoscience. Only strong evidence we have is ‘matter comes from matter’ and ‘life comes from life’. Thus, cross-causality does not have strong ‘real’ scientific evidence, in addition it makes category mistake.

This problem was already known to Ramānujāchārya (1017–1137 AD) who initiated Viśiṣṭādvaita (qualified non-dualism) Vedānta. He addressed this problem by assuming Brahman (the primal entity) has both material and mental aspects as qualifiers, which led me to propose the extended dual-aspect monism (the eDAM, Dvi-Pakṣa Advaita Vedānta (Vimal, 2008b, 2010c, 2013, 2015f, 2015g)), where the mental and physical of a state of an entity is inseparable and the degree of manifestation of aspects from primal entity (the dual-aspect Brahman) varies depending on the entity and the context. However, it is unclear why both modern Cārvākas and Achintya-Bheda-Abheda Vedāntists are silent on this. Regards,  
Rām Lakhan Pāndey Vimal, M.S., Ph.D.

**Comments:** On the contrary to what you say Dr Ram, the philosophy of *Achintya Bheda Abheda vada* is the most developed system of philosophical presentation in all of the Vedanta. This was conclusively proved in the assembly of the king of Jaipur when the Gaudiya vaisnavas were challenged by the followers of Ramanuja Acharya. Srila Baladeba Bidyabhushana gave the Vedantic commentary of the Vedanta Sutra and defined the philosophy as *Achintya Bheda Abheda vada* and thereby silenced all the critics of Gaudiya vaisnavism. After that the followers of Ramanuja Acharya developed a deep respect for the *Achintya Bheda Abheda* philosophy. The evidence for matter comes from life can easily be obtained by doing accurate mass and energy balance experiments with organisms like Trees, mouse etc. We already know that all the biomass is coming from the living entities and the amount is of gigantic proportions. Already nutrition experiments indicate a discrepancy in accounting these balances which can be as much as 8 to 23% difference between the input and output under certain circumstances [1]. Webb who did these experiments says, “A careful examination of Atwater and Benedict’s classic monograph shows that they had recorded a discrepancy between fuel oxidized and heat loss plus work in a few experiments involving exercise and undereating, but no notice was taken because the average for all experiments showed nearly perfect agreement. In some of our own early experiments with the suit calorimeter and ventilated

mask, I had seen a similar discrepancy. I published an analysis of all the energy balance studies I could find up to 1980, highlighting the discrepancies. Other problems have been found in trying to determine exact energy balances during weight gain or loss during walking, pregnancy and human growth [2].”

[1] Webb, P., James, F. A., Troutman, S., Energy balance in man measured by direct and indirect calorimetry, *The American Journal of Clinical Nutrition*, pp 1287-98, June, 1980.

[2] Webb, P., The measurement of energy expenditure, *American Institute of Nutrition*, 1991.

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Namaskaaram! Vanakkam! Thank you all for the wonderful learning experience through the riveting, insightful postings and sharing of knowledge, logic and viewpoints. The senses and their results, plus our registering and recognizing (beyond our physical senses) love, compassion, knowledge, doubt, truth and falsehood, excitement, dreams, deep sleep, memory and their complements and every other set of human feelings, emotions and experiences, including all their simple as well as complex combinations, is via our consciousness.

So, Consciousness= Sensory + Other human experiences + ???, and therefore clearly transcends our senses and their results and, in fact, provides us with evidence of our existence. Please read and understand the “=” as equivalent to drives, leads to, enables the operation of, registering and recognizing... Certainly, i do not know what “???” is or could be. I’ve used it to represent both knowables, unknowables and not-to-be-knowables(?). “I think, therefore i am”, and “I am, therefore i think”, are both TRUE. Thath Thwam Asi, and Aham Brahmaasmi, are both true.

LSG

P.S.: Is it necessary for rules in our Universe to be deterministic? Or, could they be an uncanny combination of deterministic and probabilistic?

**Comments:** We are not directly able to know the world. Closer to the world is the senses. Senses have to be focused and hence need the help of mind. But mind can be controlled by intelligence. Or the impulsive nature of mind can be mediated via thoughtful intelligence. But it requires our thought to be focused inwards to recognize our identity as self or “I am”. When we are conscious of the self, that consciousness is called self-consciousness. Therefore we are closest to our thoughts. We are closest to our thinking being and world of matter is very far from us. We need the via media of thoughts and perception through senses to come in contact with the world. Consciousness or thinking in this way contributes to everything, but that very thinking being is the least understood of all. But it is not that only I exist and no one else exists. The I exists and the other ‘I’s also

exist. The self has a capacity to know itself and also it has the capacity to let itself be known to other selves. In this way the *atman* has a form, which exists only in a potential state in the undeveloped stage. When the consciousness of the *atman* gets the association of material energy, it develops a material consciousness and is deluded to think that it is the body. But when it gets spiritual knowledge due to mercy and association of the enlightened souls it develops its spiritual consciousness. Therefore the potential to develop in either direction (material or spiritual) exists in the soul. The teaching of Ramanuja and Madhva establish that the individual soul is not equal to the Absolute Sentient. Therefore one must also study the non-monistic schools of Vedanta before coming to imperfect conclusions on Vedanta based upon the commentaries of Sripad Sankaracharya only, which was simply meant to be a temporary means to reestablish existence on the principle of eternity in the then voidistic intellectual atmosphere.

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Re: An intelligence based materialistic explanation to evolution Dec 24

A note/"idea".

Emotion - what we feel sense, as generally understood

It if from the word (French... to) move.

Emotion/sensation is betrayed by the slightest movements - of eg EOM

Affect is a verb - transitive. The examiner (mental health...) is often the object, observer...

Where is an idea/sensation "not" associated to a movement of some kind?

ALLautin

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Re: Consciousness does not directly depend on microtubule properties Dec 24

Respected Madam (Dr. Shyamala Hari)

You have misunderstood our statement. We did not say: "Thought can be generated only after some past experience". We said perception is possible only if we had prior experience (otherwise it will be non-determinate). Thought is possible only after some initial action, i.e., after some impulse is received. It is just like inertia of motion, which is generated after some action.

Though "all mental contents: thought, desires, emotions, etc. are all not directly accessible to senses or even indirectly accessible to them by means of measuring devices", still there is plenty of scope to scientifically verify the inertia of mind generated by some action through objective reaction. In fact this is regularly practised in animal experiments. The only requirement is to emulate similar experiments with human thought process. Regards,

Basudeba

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Re: Opinion on Life & Evolution, Dec 24  
Respected Madam (Dr. Syamala Hari)

Is there any definition for observer in QM? If science must be mathematical, is there any equation for the observer? What is meant by "intelligent observer" relating to the collapse of a quantum system from superposition of states to a fixed state? In view of the measurement problem, what is the proof that there really is something called collapse different from the macro systems? We would like to know your views in the context of the present discussion. Regards,  
Basudeba

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Re: Opinion on Life & Evolution. Dec 24  
Dear Sir (Jeremy Christian),

You are right that "The creator of the 'causal chain' can't also be a link within that chain". But did you ever ponder over the fact that when God said let there be light and there was light, what was illuminated by such light? For something to happen, there must be a conscious "being" with knowledge of meeting the requirements and such "being" must use some technology for the required state to appear. If God is the "being" at the moment of creation and creation be the requirement, the all knowing God must have used His knowledge and technique in His domain, i.e., there cannot be anything beyond His domain. At least Vedas, which are texts not of Hindus alone but the Universal book of knowledge, say this (there is no reference to Hindu in the Vedas). Regards,  
Basudeba

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Re: An intelligence based materialistic explanation to evolution Dec 24

I happened to come across this item by Stuart H. a few days ago: "*As the late, great Karl Pribram said, 'don't bite my finger, look where I'm pointing'*" Since not everyone on this list knew the great Karl Pribram, it is useful to point out what Washoe, the famous language chimpanzee to him The following is a quote from a Pribram biography relevant to biting fingers: <http://newsok.com/article/1973653>.

*"Pribram said Washoe twisted and bit the middle finger of his right hand, mangling it to the point that it was necessary to amputate the damaged digit at midknuckle."*

A point to be made here is that one can easily be wrong in looking to where someone is pointing, with insufficient care being taken about data supporting ideas to which one is pointing. My transition from physics to neuroscience was done at Stanford in Pribram's lab because of his holographic brain ideas. During my year there my work with Charles Stromeyer, a postdoc with Pribram, provided evidence against that holographic brain (narrowband spatial

frequency channels) idea that had been gaining popularity in the early 1970's.

Stan

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Re: Consciousness does not directly depend on microtubule properties Dec 24

So is the Bhagwat Gita, *vyaktavyakt praleeyante*. Manifest is dissolved in unmanifest and it reappears from it. This change is the time or experience of distance between two events. Here is how matter is recognized out of consciousness (non matter). How do we recognize a matter or anything? I often quote that recognition is rejection. Matter or object is perceived by an observer only when it rejects light, and this rejected or reflected light lets us recognize things. 'Matter exists' means matter is a perceivable object because it has this 'consciousness' ability to reject, choose, react or return things. An employee in an organization is recognized by his/her ability of rejection or reaction for which he/she gets known. A trusted employee is although present 100% but is unnoticed for example, he/she can be a CEO of a company and sitting in another country. Moon appears to us only by rejection of light from the sun whereas the sky which is filled by light is without any visibility, and sun is too invisible.

Matter or energy or space or time is recognized because each of it has a certain conscious choices and exercise that choice against some observer. Buddha is choiceless and therefore has no rejection and therefore not perceivable by senses and cannot be classified in definitions of matter or energy and so on. A saint does not recognize a dacoit. because saint cannot recognize a dacoit nor so dacoit a saint. They are fellow companion. Matter exists and does not exist at the same time. Matter is an obstacle for some and not an obstacle for some. Scientists can explain how certain waves penetrate matter and for that, matter does not exist. Regards.

KG

**Comments:** Matter is a symbol of undeveloped consciousness. Everything depends upon our angle of vision. But materialists cannot produce a single blade of grass from chemicals. The sentient principle comes through an already existing sentient principle. Our angle of vision must be broad enough to develop the congruent concept of life which we do not have in materialism. Life is its own principle. Humility, tolerance and giving honor to others are the saintly qualities and the Scientist also must inculcate them in his/her practicing scientific life.

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Re: Consciousness does not directly depend on microtubule properties Dec 24

Deepak, Basudeb Misra,

I am responding to all your messages in this thread, in this one message. Yes all experience comes from Self. Since Self itself is beyond scientific explanation, how individual experiences arise from Self or how the manifest gross matter is created by and from Self/Consciousness is also beyond scientific explanation. That does not mean that there is no explanation; only that there is no scientific explanation. Sages of ancient India provided explanations in various ways and often and using examples. I assume that various ancient descriptions of how the manifest comes from the unmanifest have differences when one looks into their details. But one thing common to all of them is that the mind consisting of ego, memory, even intellect, etc. is not conscious just like lifeless gross matter and that both matter manifest to senses, the senses, and the mind which is subtle are created by or arise from Self/Consciousness of its own will.

Dear Misra, In my reply to you, I copied the sentence "Thought can be generated only after some past experience" from your message and there is nothing wrong with it. Most often, than not, our perceptions, experiences, thoughts (in spite of whatever differences they have) are all based on past memory. Unbiased perception, unbiased thinking is what we are advised to practice.

Now, you talk about verifying the inertia of mind generated by some action through objective reaction and that it is regularly practiced in animal experiments. In all experiments done in cognitive psychology which are done with animal as well as human subjects, they formulate their theories by looking at the objective "reaction", but not the direct agent of action. Since they formulate theories one may call it cognitive science and another may say that it is not a science. It is a matter of opinion.

The point is that the hard problem is not yet solved in the following sense: when you and I see a blue flower and a red apple, you and I both say that the flower is blue and the apple is red (these reports are reactions) but Chalmers says your experience of red and blue are not known to me and similarly those of mine are not known to you although both of us agree in our expression! Regards,

Syamala

**Comments:** Mind is a material element, as is intelligence and material ego. The individual self or the soul is identical with Absolute and yet different. Therefore the self is not the absolute. Mind, intelligence and ego are the subtle material elements. *Jivatman* or soul is not a material thing and it is not even a thing. But we must begin by studying the thinking being. In fact it takes a 'think' before we can have some conception of any 'thing'. Modern science is only concerned with the **positive** or the **appearing**

**energy** but it misses the **Reality** of that which is appearing or the **essence**.

Sripad Madhvacharya introduced the concept of *visesa* or difference in unity to explain the nature of Reality. The Substance and its property and not entirely unconnected. Substance is not merely something bare and devoid of qualities or an abstraction. A substance is a synthetic unity and is capable of inner distinction of its different parts as well as aspects and is expressible through thought and speech. Madhva's *visesa* can be taken as the counterpart of identity-in-difference of the western philosophers. This *visesas* is ubiquitous in all things, including the non-eternal as well as eternal categories. It is Madhvacharya's very unique contribution to Indian Philosophy of Vedanta to explain the problem of substance and attributes in India's contribution to Ontology.

Consciousness arises from the soul. Hegel explained "Consciousness awakes in the soul; consciousness posits itself as reason; and subjective reason frees itself for objectivity through its activity." A soul is a finite center of conscious experience and each soul is unique. The soul is an individual and the essence of this individuality is that the soul cannot possess the immediacy of the experience of another individual soul. Each soul is a distinct personality. The soul is characterized by the tree qualities of thinking, feeling and willing. Though the soul is eternal, its being is essentially a dependent being. The soul thus is constituted of the quality of self-luminescence or self-consciousness. Thus there is also an otherness which must be accounted for. In this regard Hegel says, "For self-consciousness, then, otherness is a fact, it does exist as a distinct moment; but the unity of itself with this difference is also a fact for self-consciousness, and is a second distinct moment." This idea of Hegel can be supported from Sripad Madhvacharya's concept of *visesas* or difference in unity. Sripad Madhvacharya was very strong in finding elucidating the limitations and errors of the monistic philosophy which had then gripped India. A quality is distinguished from a substance through the category of *visesa*. By means of the category of *visesa*, it is possible to account for the world of distinctions. It is through the functioning of *visesa* that there is difference or *bheda*. The difference is not a result of illusion as claimed by the impersonalists. The concept of *visesa* is to be applied to the substance and its attributes, qualities, activities and nature. Consciousness is the activity of the soul. Hence we must study how this consciousness is spread all over the body when life exists.

Consciousness is a field, but the *jivatmam* or the individual soul is one of the knowers of that field. Therefore the soul is essentially a 'knower' and consciousness is a field that is known. Thus *ksetra-*

*ksetrajna jnana* or the *Vijnana* of the science of knowers (the science of the soul and supersoul) of the field of activity (comprised of 24 elements) is *sa-vijnana jnana* or the beginning of Science of self-realization or real knowledge of reality [R3.1]. This subject is well elaborated in the thirteenth chapter of the *Bhagavad-Gita*, which is entitled, *prakrti-purusha-viveka yoga* or the yoga of predominated and predominator. Srila Bhaktivinoda Thakura gave a most enlightening commentary in Bengali language there. Here three *tattvas* or concepts have been explained, (1) *ksetra* or field, (2) *jnana* or knowledge and 3) *jneya* or knower. There it is described that the *prakrta ksetra* or material field constitutes the following 24 elements: *panchamahabhutas* (earth, water, fire, air and sky), the *ahankar* (false ego), *mahat-tattva*, *mahat-tattva's* cause which is *prakriti* or nature, ten external senses (eyes, ear, nose, tongue, skin, voice, hands, legs, anus, and genital), one internal sense (mind) and five *visayas* or objects of senses (form, taste, aroma, touch and sound).

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Re: Consciousness does not directly depend on microtubule properties Dec 24

Respected Madam (Dr. Syamala Hari),

In spite of apparent differences between our views, we do not find substantial disagreement on core issues. Yes, "Thought can be generated only after some past experience", but only after an initial impulse that searches memory for similar past experiences. Without past experiences, such search will remain inconclusive; hence indeterminate. The fact that we said thought is the inertia of mind shows that there must be some instant prior action to generate inertia.

But Self does not "act" or "experience". That is the Vedic principle enunciated in all scriptures including Gita. We have repeatedly discussed this in these columns and elsewhere. According to Gita 18/18 & 19, the knower, knowledge and the object of knowledge motivate action. All these have the three Gunas, which make them a part of Prakriti and not Purusha. In various earlier statements; specifically in Chapter 7/4-6, the Gita says that mind, intellect, ego, etc, belong to Prakriti, which is sustained by Purusha, which is Omnipresent according to Gita 2/24 (*sarvagata*). You have also admitted it in your post. In case you have some reference, kindly quote it. Self is not perceptible directly, but it can be perceived indirectly through its effects. Indirect evidence is also accepted in modern science, about many of which you are aware.

Similarly, through indirect evidence like similar or predictable "reaction" in similar situations can be used to verify the Vaisheshika "theory" of Kanaada. The view of Chalmers confirm not contradict our

statement. If two independent expressions agree on any reaction, and if this pattern repeats sufficient number of times, then there must be some substantial connection between them. Regards,

basudeba

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Re: Consciousness does not directly depend on microtubule properties Dec 24

Dear Basudev ji

Thoughts fabricate mind. Thoughts give mind a capability to process information inputs received through senses. Thoughts are threads or circuits in network design or network of neurons in brains, and depending on circuitry, processing of sensory inputs into actions take place.

Children have fluid network and for this reason, they process information at higher levels and not become too logical or fearful or rigid. In other words, thoughtless state is a super conscious state. As children grow in age, they become defensive by external dependencies, their thoughts too become rigid and defined or programmed.

Vichar or vikar are synonymous. Mind is counter productive because of its enertia. You said it too. Mind is presuposing things and cause doubts. Children have no doubt because of their non-mind states. Regards.

**Comment:** A child has some innocence that is appreciated but the child lacks developed rationality. Unfortunately in modern education the subjects concerning life are taught from only materialistic view points. A human being can develop fully developed consciousness by which he can rationally conceive the truths from a more spiritually developed reason. We agree with you that thought is the most basic ingredient and it contributes to everything and yet it is the least appreciated or understood in modern thinking.

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Re: Consciousness does not directly depend on microtubule properties, Dec 25

"There is no evidence to think that some how consciousness (without life) alone existed then it somehow united the biomolecules. I do not see such a thing: consciousness without life: exists in nature."

That right there is the issue. "I do not see such a thing". What do you expect to see? We all know consciousness exists somewhere, we assume in the brain, yet we can't see it. The only reason we know it's there is because we experience it. The lump of matter in our skulls is the only lump of matter we experience so directly. So what do you expect to see?

Our physical bodies are finite. Made of matter. And matter came into being with the big bang. All physical matter is the result of it. Whether or not consciousness existed apart at any point, or is also a product of the big bang, or isn't, cannot be determined.

Consciousness does not exist spatially. It's not material. We assume it's an emerging property of matter, but if that's the case then there's apparently quite a lot physical matter is capable of that we're completely unable to detect or observe.

Jeremy Christian

**Comment:** Both idealism and Realism are reductionist concepts. Idealism tries to reduce everything to an indeterminate notion of consciousness where there is no distinction whatsoever. On the other hand realism tries to reduce everything to matter. Materialism is not able to account for the substantiality of consciousness. Idealism cannot explain why there is a plurality of individual conscious entities. The physical bodies are not formed by an additive process (addition of chemical elements). Rather they are formed from the seed which is but a stage in the concept of species. The species continues in the form of the individual by the process of reproduction which is a wholistic and organic process. The parts of the organism are more intimate and are not really parts and therefore philosophers called the organs as members. The concept of the organisms lies within the organism. But the concept of the artifact lies in the thoughts of designer. This is a major difference between the chemical/physical system and a living organism.

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Re: Consciousness does not directly depend on microtubule properties Dec 25

Thanks Lee for that thought experiment. I look forward to hearing responses. For those not familiar with Lee's friend, the philosopher's zombie, I strongly suggest that you have a look at: [https://en.wikipedia.org/wiki/Philosophical\\_zombie](https://en.wikipedia.org/wiki/Philosophical_zombie).

Or with a google search you can get lots of other discussions on the topic. The big question is whether the zombie is conceivably (logical or metaphysically) possible vs. whether Lee's friend is actually (physically) possible. There are many who claim the former is true but not the latter. However, it seems to me that to say Lee's friend is NOT actually possible shows a lack of humility since how can we be so confident about future silicon microminuturization of neurons or microtubules or whatever is needed for that zombie to appear human. My own opinion is that I can't think of a reason why Lee's friend wouldn't be able to be constructed in another 1,000 years or so. I say this after having seen the new Star Wars movie a few days ago (with R2D2 and C3PO) Well, maybe it will take 3,000 years. I look forward to hearing responses to Lee's question.

Stan

**Comments:** The logic of zombie, whether mechanical or quantum is not a very logical one and actually does not become the equal to the logic of consciousness.

Hence a machine will never become conscious or thoughtful. To contact consciousness, there must already be consciousness. For example human give birth to human, dog to dog and bacteria to bacteria. But we never observe chemical give rise to life. The idea of proto consciousness is also a speculation. Consciousness develops from the life principle and not through matter through a proto conscious stage.

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Re: universal mechanism underlying conscious systems Dec 25

Dear Joachim and other honoured contributors

I think there's a lot of confusion over the nature of the word 'consciousness'. Whether it is biological, physical, chemical, philosophical and so on? We should now try to find some more suitable substitute word for 'consciousness'. Regards, best wishes and a Merry Christmas to all.

Anirudh Kumar Satsangi

**Comments:** Consciousness means capacity to know. In Sanskrit it is called *chit sakti*.

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Re: Consciousness does not directly depend on microtubule properties Dec 25

Dear Dr. Basudeba

Thanks. Children in my opinion are spiritually evolved because they do not have rigidity of thoughts, and similarly in saints. Gautam is an example of thoughtless or biasless observer. He could write on thoughts and its merits and demerits. Thoughts arise like wave upon a stone hitting surface of water. This is not a normal state of mind but it is a natural, spontaneous or autonomous reaction. Mind in normal state is always peaceful like a deep lake or few minutes after stone hits surface. Thoughts VICHAR arise as reaction and therefore I called it VIKAR. Mind is not made peaceful by effort or action of thoughts because it would be like extinguishing fire by pouring petroleum over it. I respect you and Gautam about study of mind and, words which explain thoughts. Pls treat my reply as not in conflict. Regards

KG

**Comments:** Mind is the impulse which passes through the senses. When the senses come in contact with the objects of sensory perception, unless the mind is attentive to them, the senses do not have any effect on the thoughts. On the other hand thoughts can be rational. Thought can think through itself. In other words thought is more fundamental than the senses. They can be a reaction to the external world. But they can also be a pure movement of thought itself without the input of senses. These subjects are dealt within the *Bhagavad Gita* elaborately.

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Dear Shri Dipak and Hari

Consciousness of self is nondual (one in all) and is without a need of interaction and therefore is thoughtless. Mind or consciousness is peaceful in its normal state like a deep lake. Thoughts arise due to threat like waves produced upon stone hitting surface of water. These thoughts are temporary and after inquiry into threat completed the mind gets calm as it earlier was. Now the process of inquiry or actions of thoughts have seven steps.

Information - incident of desire or threat

Imagination - various possibilities and most preferred

Experience - sensory verification of inquiry which ends the incident for the moment. Like eating mango.

Memory - memory of mango or any experience which is potentially recalled

Knowledge - logical interpret or modeling for forecast that ends utility of memory

Swabhav or subconscious state or dream - this is a nature built upon knowledge like thoughtless car driving while thoughts can be at some other place

Intuition - self awareness or truth of self.

We perceive things by a combination of any one or more of these seven and therefore perceptions of same object is seen different by different observers. For example, I know Deepak by colors of information and imagination. Some one who knows Deepak by experience and memory will perceive him different than what I perceive. This is how thoughts or reactive errors take place and perception differs. There are long explanations of these but in brief these words are sufficient for understanding in us. Regards

KG

**Comment:** The Absolute in the non-dual truth. But non-dual does not mean that plurality is denied. Rather to say *advaya*, the *dvaya* or many is also necessary because *advaya* is the process of negating the many. In this way many is also necessary for the Absolute. An example is that a cow is eating the grass. That does not mean that the grass is annihilated. It only means what posed as existing for itself (i.e. the grass) is now negated (that is its existence for itself) and is now made a being for the cow (the grass is now developed into the various processes inside the being of cow). So *advaya* means that the Absolute has its own purpose and everything exists for the purpose of the absolute. The so called independent existence is only a pose and through the *advaya* process the Absolute makes the existence of many as a purpose onto itself. Thus the many is not denied but preserved in this process of *advaya*. That is the meaning of the Absolute truth as the non-dual reality.

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Re: Consciousness does not directly depend on microtubule properties Dec 25

Hi Subrata,

Your idea of 'imaginary space' and 'retrieving back from imaginary space' is interesting to me. Perhaps, you can elaborate it further. Let me know if I understand correctly. If I understand your term 'imaginary space' as virtual reservoir for potential proto-experiences (precursor of our experiences such as redness when we view ripe-tomato), then they might be embedded in the related neural-network (for example, V8-NN for color) during developmental period and sensorimotor tuning or so called neural Darwinism.

The process of retrieving back from this 'imaginary space' may involve matching selection mechanism. My hypothesis of matching and selection is based on the interaction of neural signals, which are causal and local. For example, let us consider color related V8 neurons for the experience of redness when we view ripe-tomato. The three major signals are: (1) stimulus (tomato)-dependent feed forward neural signals from V1/V2 (extrinsic activities); (2) cognitive feedback signals related to (long-term) memory for previous viewing of tomato (intrinsic activities); and (3) self-related signals from cortical midline structures and brain-stem (intrinsic activities). Matching is between the local and causal interaction between (1) and (2). The selection is due to the local and causal interaction between (3) and the 'matched resultant of (1) and (2)'. This is further elaborated in (Vimal, 2010c). I hope that we can discuss further. Regards,

**Rām Lakhan Pāndey Vimal, M.S., Ph.D.**

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Genomics and meaning of life Dec 25

Dear Sadhu Sanga members,

I am reading your messages with great interest, I agree with Prof Robert Colwell - we are ignoring a lot of knowledge from great body of work done by biologists, particularly in the genomics era. For example at Genotypic, we have sequenced 100s of samples from holy plants, herbs and spices and holy animals too. If there is anything called as soul DNA is the closest. If God is present anywhere and everywhere, yes religions are right, it is most likely "space" that is present everywhere. There is partial rebirth and second life and continuation - allowing recombination and segregation to play a role. Happy holidays and a prosperous new year 2016.

Dr Raja Mugasimangalam, Founder & CEO  
Genotypic Technology (P) Ltd,

**Comment:** The work done by biologists is certainly to be commended. But biology that was being pursued in the 20<sup>th</sup> century in the form of Mendelism (which Dawkins calls as digital genetics) and central dogma are no longer sufficient to account for the logic of biology. The information is not fixed in the genes. The genome itself is subject to change not only by errors in

the replication process but also in the normal activities of the cellular processes. The cell can edit its own genome and Shapiro has coined the term Natural Genetic Engineering for it. We have no mathematical expression that can contain the information flow that is occurring in life. The causal structure is deeply rooted in circularity, purpose, sentience, decision making, choice, identity at the individual level as well as at the community level. Not only is there competition (as Darwin proposed) but also there is cooperativeness. The biological being is surrounded by life throughout with which it forms a symbiotic form. The organism has its own inner world and interprets that inner world and also the outer world and preserves its identity as the organism in the process of eating, resting, procreating and defense. Frontier Biology in 21<sup>st</sup> century pursues the cognitive concept.

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Re: Consciousness does not directly depend on microtubule properties Dec 25

Dear Lee and Sandeep,

I think that by giving examples we can get to a common understanding. This is why defining Life is not a central issue in biology (IMHO), as we know living entities by examples. It is a central issue in Astrobiology: if we meet something on another planet/moon we need to know if it is alive or not. I would definitely call Lee's silicon friend conscious. My biology training somehow rebel against the notion that he is alive, albeit I would not be able to tell the difference. So in the end I might need to admit that he is alive. As for Sandeep's question: It won't change my perception of them. I would still consider them alive and conscious. best wishes,

Ádám

**Comment:** Wherever there is life there must be consciousness. There must be perception, thought, feelings and willing.

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Re: Consciousness does not directly depend on microtubule properties Dec 25

Dear Basudeb Mishra,

Glad that you could finally make up your mind about "Thought can be generated only after some past experience". Anyway, in Bhagavadgita, Krishna who is Paramatma, the Supreme Self also says that He will incarnate Himself in the world to protect the righteous and punish the evil ones. So He does act whenever He thinks it is necessary (there are very famous verses conveying this). Do you see that there is no contradiction between Self "not acting" and Self "acting" to save the world from evil? Regards

Syamala

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Re: Consciousness does not directly depend on microtubule properties Dec 25

As we are, after all, a blend of four beings: emotional, thinking, spiritual and animal, perhaps it is not unexpected that we should find it easier to communicate and rationalise via one or perhaps two of these entities simultaneously. All four? Rarely I would suggest.

Terence Kee

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Re: Consciousness does not directly depend on microtubule properties Dec 25

The human existence may be quite bland and 'mechanical' as you say? But (!) I am not sure by what logic you conflate bland with mechanical so readily (if you do so)? Suppose this "mechanical" (your emphasis) is way, puts man on the Moon and Mars in 100 years. Then and therefore, Homo mechanicalist, would be exchanging holiday greetings across ~ 40 million miles: Does not such "mechanical" achievement combine human ambitions, aspir(IT)ations ?

Homo habilis - perhaps our direct ancestor - this name was suggested by Raymond Dart, and means "handy man," in reference to this hominids supposed tool making prowess. What a (mechanical) tool belt, this creature would have wished to have had - and his "great... .. grandson/nephew did squire. Seasons greeting across the lands

AL

**Comments:** Human existence has inherent purpose. It is not an externally designed mechanical process. Determinism cannot explain the dynamics of metabolism of living processes. Mechanical means which is produced from matter by addition of smaller units. Life is Organic. It is produced wholistically from the seed or the cell. Plus thought, perception, feelings, desires are not explained by the mechanical robot. The robot only calculates and registers a change, a reaction due to the action of forces implied by an externally unifying concept.

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Re: Consciousness does not directly depend on microtubule properties

I agree with Lee that we must clearly pre-define our terms to avoid confusion and to discuss meaningfully and intelligently. Yes, the strong solid evidence is the 'judge' and a simple contradiction can reject the hypothesis. Personally, I do not see any solid evidence for cross-causality such as experiences such as redness can create matter-in-itself (NOT its appearance) such as related color-neural-network-in-itself or *vice-versa*. For me, the assumptions matter-in-itself is fundamental and consciousness (experiences) is derived entity and *vice-versa* have serious problems (Vimal, 2010d).

The extended dual-aspect monism (eDAM) does not have such problems and is consistent with both 'life comes from life' and 'matter comes from matter' that have solid evidences. In the eDAM (Vimal, 2008b, 2010c, 2013, 2015f, 2015g), the mental and physical aspects of a state of an entity are *inseparable* and the degree of manifestation of aspects from primal entity varies depending on the entity and the context.

**Rām Lakhān Pāndey Vimal, M.S., Ph.D.**

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Re: Platonic philosophy and OrchOR on how reality depends on consciousness

Ram and Bob,

This is getting very interesting. Ram could you clarify how extended dual-aspect monism (eDAM) connects qualia to its neural correlates, once we learn what those neural correlates are. And even more interesting (since we don't yet now those "easy problem" NCC) would be for you to give your thoughts on which of the 20 or so very different interpretations of quantum mechanics are closest to the metaphysics you like.

And Bob, could you respond to those same questions for your Platonic "idealism". Do you think qualia will require a modification of QM? Like a psychon needing to join the electron and photon for the Feynman rules? The question is what are the laws by which consciousness interacts with the electrons and photons. The present laws of stringy laws of electrons and photons are so beautiful and elegant and in agreement with all objective experiments that it is hard to see how consciousness fits in.

And a happy Christmas to all. It's nifty that Jesus was a prophet to Islam as well as a great Jewish revolutionary. I hope Jesus is also well appreciated by Hinduism and Buddhism and atheists for his wisdom of how the world should be a more humble place.

Stan

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Dear Bob,

Thanks for the email. As you might know that term consciousness has over 40 meanings assigned to it as elaborated in(Vimal, 2009b), which were categorized in to two groups: experiential and functional sub-aspect of consciousness. Kindly define the terms 'consciousness' and 'reality' used by Plato, Aristotle, Plotinus, Leibniz, Hegel, and Whitehead. Then we will be in the same page.

If you think Platonic idealism is close to the eDAM, then it is a great news for me. If you have some more information, kindly email me. In the extended dual-aspect monism (eDAM), The *optimal* definition (that has the least number of problems) of consciousness is: *consciousness is the mental aspect of a state of a brain-system or a brain-process from the first person perspective; consciousness has two*

*sub-aspects: conscious function and conscious experience* (Vimal, 2010b). Spinoza provided extensive arguments for double aspects (neutral monism) (Spinoza, 1677). Russell was a double aspect theorist too (one aspect known “by acquaintance,” the other “by (scientific) description”) (Russell, 1948). Feigl elaborated double aspect theory and structural realism (Feigl, 1967). Bohm’s implicate/explicate or enfolded/unfolded framework (Bohm, 1980, 1990; Bohm & Hiley, 1993) is consistent with a dual-aspect view; he is explicitly a double-aspect theorist. Pauli suggested that physics and consciousness should be considered as complementary aspects of the same reality, which is a dual-aspect view (Pauli, 1952). I found two concepts of matter:

1. First is the *Yājñavalkya-Bādarāyaṇa*-Aristotle’s concept, where matter has a rūpa/form and the *potentiality* for experiences. Thus is what I have used.

2. Second the *Kaṇāda*-Democritus’ concept, where matter is made up of atoms or a particle that implies matter is non-experiential. This is used in science.

I am trying to understand Leibniz’s *Monadology* (Leibniz, 1714) and Whitehead’s “occasion of experiences” (Whitehead, 1929/1978) and their relational ontology. Both seems consistent with the eDAM to me, but Prof. Jonathan Edwards (Jo) says they are different. Therefore, I am reading them at present time. I am CCing to him; perhaps you may like to discuss with him. Let us keep on discussing further to settle the issue. Regards,

**Rām Lakhan Pāndey Vimal, M.S., Ph.D.**

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Lee, good point. If Sandeep or others of his persuasion would provide concise descriptions of what they mean it would be very helpful. As far as eternal soul, the meaning of the term "eternal" is important.

Here's a quote from Cicero: "It takes great intelligence to withdraw the mind from the senses and divert thought from habit. For my part, I think there must have been many is so many centuries, but as far as the literary record goes, it was Pherekydes of Syros who first said that the souls of men are eternal." What I find interesting is the conjunction between the first and second sentences. It might even be taken as a non-sequitur, except that it seems unlikely that Cicero would have made that sort of error.

## References

1. Bhakti Niskama Shanta (2015) Life and consciousness – The Vedāntic view, *Communicative & Integrative Biology*, 8:5, e1085138; DOI: <http://dx.doi.org/10.1080/19420889.2015.1085138>.
2. 'Science and Scientist' Annual Conference Series <http://scsiscs.org/conference>.
3. Support & Participate in the Scientific Sankirtan Seva: <http://scienceandscientist.org/donate>.
4. Download Newsletter The Harmonizer <http://scienceandscientist.org/harmonizer>.
5. Bhakti Vedanta Institute of Spiritual Culture & Science.
6. Princeton, NJ, USA: <http://bviscs.org>.
7. Sri Chaitanya Saraswat Institute: <http://scsiscs.org>.
8. Darwin Under Siege: <http://scienceandscientist.org/Darwin>
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