

Information encoding that passes from a cell to its descendants can go in many direction

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Abstract: We can't say that physiological processes are mechanical processes. The organs are not assembled structure but they develop in the living process within the concept of particular species. Secondly the information is not in DNA, RNA or proteins, but it is in the process. The DNA explanation has proven to be partial. We can measure the information content in a process by writing it down it as an algorithm. But we face a limitation in explaining the source of this information within all of materialist approach to biology.

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Keywords: physiological processes; mechanical processes; organ; structure; DNA; RNA; proteins

Namaskar. Due to a lot of engagements we have been delayed in posting the digests. We sincerely regret the inconvenience caused to all the enthusiastic participants. Please find below a digest of emails received between 30th Dec 2015 and 2nd Jan, 2016. Please feel free to share your thoughts and suggestions.

You are partially correct about our position. There is plenty of scientific literature on this in our country, which has not been fully explored. What we call "life" is defined as "possession of the vital energy that perpetually functions to regulate breathing" or "possession of sense organs". Since these can function only within a body and the body can remain in shape as long as these exist in it, they are often treated as one. The mass-energy equivalence concept has reinforced this view. However, bare mass and bare charge is fiction. They always come as a packet with each component varying in degrees to constitute everything. Body material including neurons, DNA and all are mass driven by energy provided by the breathing process. Since these are mechanical processes, the body, the breathing energy and the sensory organs are all inert like a computer. Data entry or encoding information does not make even the best computer apply logic by itself. It requires an operator to use these and direct logical action to be performed by the computer. The operator is the first part of Consciousness that is revealed as awareness.

Information encoding that passes from a cell to its descendants can go in many directions. RNAs can be written back into DNAs or a DNA strand can be reoriented by a protein, thereby changing the genetic program. Information polymers are molecules, which themselves are broken apart in water. In replication, cells create copies of themselves using enzymes, which are the proteins that underpin complex reactions, such as digestion. One property that distinguishes living beings from inert objects is their

freewill - capacity to initiate action. Inert objects cannot do this – they only respond to stimuli. The effect of Freewill is either harmonious to our genetic composition (pleasure) or not (pain) based on release of free radicals or not. This determines our response to subsequent impulses ultimately making everything deterministic. The only difference being while one is mechanical reactions that follow a fixed linear pattern till it is modified by other effects (including the apparently chaotic butterfly effect), while the other is action guided by freewill that has the potential to introduce non-linearity in reaction. Obviously there has to be a unifying factor common to all - a Conscious agent to program or initiate everything including the different reactions.

If we analyse the content of awareness, which is treated as a sign of consciousness, we find a unique commonality. It always has the form: "I know that", even though the objects of perception or the mechanism of perception differ. The justification is quite lengthy. To put it briefly, Consciousness is the background structure like the ocean for the watery world within it. Watery creatures appear, disappear, and reappear in different combinations of their body matter as different species. The ocean is everywhere – in and out of the structures, but it does not interact with anything in any way. Where the internal energy exceeds a threshold, the mass becomes flexible in different degrees. These are known as living beings. Where the mass dominates, everything is treated as inert objects. Regards,

Basudeba

Comment: We can't say that physiological processes are mechanical processes. The organs are not assembled structure but they develop in the living process within the concept of particular species. Secondly the information is not in DNA, RNA or proteins, but it is in the process. The DNA explanation

has proven to be partial. We can measure the information content in a process by writing it down it as an algorithm. But we face a limitation in explaining the source of this information within all of materialist approach to biology.

Re: Re: Idols of the Mind vs. True Reality

Thought is the inertia of mind. Like inertia is generated after an initial application of force, thought is generated after an external impulse is received through any of the sense organs and processed by mind. Just like different processors use or interpret the same data differently, this harmonizes Hegel's views. Between the 3rd and the 8th Stanzas of the 3rd Chapter, Gita gives seven different reasons to show that no one can ever exist without any operation and one should perform necessary action for his sustenance, as described below:

1. The so-called freewill is really not free, but is our response to a given situation based on our past experience, which makes it deterministic. Such operations generate differential inertia that disturbs the universal flow dragging us with it (like a person drowning in the sea), which is perceived as sorrow. Mere knowledge of the problem cannot give us relief. So we must do something to come out of it (Gita 3-4).

2. If we are drowning, we must try to swim. Giving up action is no solution to our problems. If we sit idle, we only will suffer (Gita 3-4).

3. There are many bodily functions that continue unabated regardless of whether we are conscious about it or not (breathing, different circulatory and other perpetual functions, etc). Even when we are not making any movement, we are "sitting" or "sleeping", which are also actions. We cannot remain even for a moment without any operation (Gita 3-5).

4. Many of our responses or feelings are caused due to natural principles. We feel hungry or thirsty or sleepy due to natural reasons (Gita 3-5).

5. Even when we try to control our senses and sit in meditation, often our mind goes to other subjects propelled by our senses. It is necessary to control the senses by the mind. (Gita 3-7).

6. If we do not initiate any operation, our problems will continue and propel us with it. It is necessary and desirable to initiate appropriate steps to remedy our problems (Gita 3-8).

7. Simply tonsuring the hair and wearing saffron clothes will not make one a monk. One must give up worldly comfort, desire for name, fame and power, and pursue the Godhead relentlessly for liberation and guide others through one's conduct. If the lion does not hunt, the deer will not come to its mouth. Hence it is desirable to give up work that generates differential inertia and pursue work that leads to universal inertia (Gita 3-8).

Under such a situation, since we cannot remain without action, we must choose the least destructive path, which is the same as the most productive action by us (since we cannot control everything around us). For this purpose, one way is to know everything, which is impossible. The next desirable way is to minimize action using freewill and "flowing" with the stream offering least resistance. This is possible if we behave like a kitten, which leaves the transportation work to its mother, who smoothly takes care of it. If we behave like a monkey and cling to the mother, slight carelessness will bring disaster for us. Hence it is best to surrender to God.

Reality is related to perception which has three components: the object of perception, the observer and the mechanism of perception (includes instrument). The mechanism of perception is affected by two factors: its mechanical functioning and the external factors that introduce uncertainty. Since the external factor is as important as the mechanical functioning of the measuring instrument, reality has to exist independent of observation. Process malfunctioning distorts reality. For example mirages are seen, but are not real. Colour blind persons do not perceive some colours. To know their true state, we must consider a large number of observations and accept the mean value as representative of reality. This is done in most measurements – especially in time keeping measurements. The same principle should apply to reality. Reality is the description that remains invariant under similar conditions during proper perception at all times. This description is possible only if it satisfies three conditions.

A description of objects can't be completely abstract because reality has no meaning unless its existence is perceived as such. The relationship between objects is secondary and can be purely imaginary. When we describe imaginary objects, each individual component of it must exist and have been perceived by us even though a combination of such components may not be possible. If we imagine a flying horse, we must have seen a horse and something flying. Thus independent discreet existence, i.e. confinement is a criterion of reality. When the field set up by our sense organs interacts with that of any object, the impulse is measured - compared with the memory in our brain. If there is a similar previous experience, we describe the experience as similar to the other. In other words, the content of our perception is: "*this is like that*". If there is no previous experience, we store the information (without perceiving it clearly) for future reference. The *this is like that* part, i.e. knowability is a criterion of reality. It plays an important role in the double-slit experiment and entanglement.

Perception is a matter of personal experience. We can describe the object that we have perceived through speech form for comparison with other's perception. The "that" in the above statement is described through speech form. Thus confinement, knowability and describability are the three essential conditions for judging reality.

Regards,
Basudeba

Comment: Free will means self determination and not any external agency. In that sense we can say that the organisms take their own decisions and respond and thereby determine themselves. But this kind of determinism cannot be modeled in terms of forces of physics and chemistry. That's why the concept of *atman* is explained in Vedantic literature. This *atman* is not a result of chemical activity. Hence the substantial truth of free will as well as consciousness is the *atman*.

Has evolution given us too much of what was a good thing? This NY Times item about the flaws of human evolution is fascinating.

<http://www.nytimes.com/2015/12/29/science/book-review-too-much-of-a-good-thing-lee-goldman.html>

Stan

Comments: Chemical Evolution is very simplistic picturization of the history of organisms. They will continue to find anomalies but due to their fixation in Methodological naturalism concept of Science, problem of Evolution will never be solved for them. But the frontier 21st century biology is about the cognitive concept and hence is out of the purview of naïve realist influenced concepts of Methodological naturalism. Consciousness is observed in nature as much as we observe rocks and minerals. Therefore by coining terms like supernatural, they cannot dismiss the evidence that the nature itself is providing and which is recognized by leading scientists and philosophers.

Re: Digest of Emails received between 21 to 23 Dec, 2015

Dear Lee Spector,

You asked, "how would you know that a computer is not, itself, assigning meaning to the symbols that it uses, just as we do? What would allow you to determine that one system (a computer) is not assigning meanings internally, while another (a person) is?"

So you are questioning Searle, who for example, stated in his article: "Is the brain's mind a computer program? No, a program merely manipulates symbols whereas a brain attaches meaning to them." Scientific American January 1990; p 26. Searle knows that a fair numbers of AI researchers believe that by designing

the right programs with the right inputs and outputs, they are literally creating minds. To dispute their claim, after summarizing his Chinese room experiment, he says the following: "The symbols of a program are manipulated by it without reference to any meanings. The symbols of the program stand for anything the programmer or user wants." The programmer's assignment of meanings to symbols takes place in the very beginning when he/she specifies the problem to be solved to the program. The assignment happens via declaration of variables and constants which the problem involves.

Syamala Hari

Re: Systems Cell: a Testable Model for Systems Holism

An interesting article I read today on Consciousness: <http://www.outerplaces.com/science/item/4518-physicists-claim-that-consciousness-lives-in-quantum-state-after-death>

Bhagavat Maharaja

Comment: This idea in the article is relying upon the idea of quantum information. But the truth is quantum mechanics has never been able to deduce consciousness. Further consciousness does not follow a mechanistic pattern. Therefore logically also the idea falls short of the actual concept of consciousness. For example the article states: *Hans-Peter Dürr, former head of the Max Planck Institute for Physics in Munich, posits that, just as a particle "writes" all of its information on its wave function, the brain is the tangible "floppy disk" on which we save our data, and this data is then "uploaded" into the spiritual quantum field. Continuing with this analogy, when we die the body, or the physical disk, is gone, but our consciousness, or the data on the computer, lives on.*

In this explanation, Hans-Peter Dürr seems to infer that brain is cause of consciousness. Further according to him the spiritual substance is a quantum field where the data in the brain is already recorded in terms of wave functions corresponding to the brain state. Therefore even after death that state could be existing and then rest of the story will unfold. So we can understand it is another attempt to push a materialistic concept of life. We should be very careful to naively accept these stories floating around us in the name of quantum mechanics.

Re: Program of Third International Conference "Science And Scientist – 2015": Kathmandu, Nepal

Dear Sir,

As the New Year dawns, I hope it will be filled with promises of a brighter tomorrow. Cheers on the eve of the New Year. May it be a memorable one for you. Happy New Year!!! with regards

V Pala Prasada Rao, JKC College, Guntur

Comments: Thank you V Pala Prasada Rao

Re: Digest of Emails received between 21 to 23 Dec, 2015

I participated TSC 2014 and listened to the debate between Searle and Chopra: <https://ontheoriginofconsciousness.wordpress.com/2014/04/24/third-day-tsc-conference-april-23/>

It showed that there were two different levels of thinking and since they didn't understand each other it led nowhere. To use my terminology Deepak talked about Independent Consciousness (Non Local) and John about elemental mind (brain consciousness).

B. Peratt

Re: Consciousness does not directly depend on microtubule properties

Sirs,

I also think that consciousness cannot exist without life and has evolved with the evolution of life. So, I believe every living organism is conscious to various extents depending upon its evolutionary hierarchy in which humans are at the top at present on earth. Of course, the most contentious issue is how and when life originated. It is a common or layman's observation that life comes from life- everybody knows or sees this in everyday life. How the primordial living cell evolved is still open for debate and experimentation despite of the fact that physics, chemistry and molecular biology have contributed a lot to explain. It still remains a mystery because we have not produced a living cell. Nevertheless, we will be rational and scientific in approach if we avoid bringing in God or Almighty to explain beginning of life. The entire discussion would turn to nothingness if the "Supreme Authority" is brought in to explain. Thanking you all and wishing you a very healthy, wealthy and joyful 2016. Respectfully

Dr. Anek R. Sankhyan, anthropologist

Comment: When someone claims against all evidence that first life came from chemicals, it is natural to question that. We all observe that the Sun rises from the East daily. But if someone claims that it is true that Sun rises daily from East but the first Sun rose from the West, then should that not be questioned for rationale and evidence. Same question about rationale and evidence is applicable to abiogenesis concept that first life arose from chemicals that has been pushed around for the past 150 years or a little more.

As far as the concept of God and soul is concerned they are there in the civilizations for as far as in history as we can tell. Naturally, they are of great concern to rational people. Great scientists like Gödel have also thought about these. Truth is that Science

and Religion cannot remain exclusive to each other. We should follow the evidence wherever it leads.

Re: Consciousness does not directly depend on microtubule properties

Dear All

A dead body has billions of living bacteria and viruses. Is dead body a living system or not? I also wish everyone a very happy and prosperous new year 2016. Warm regards

Anirudh Kumar Satsangi

Comments: After death, remaining dead body is devoid of the life principle. Life is not a result of collective units. Life works on the principle of negation. We eat food (which is the body of living entities) to maintain our bodies. Therefore our bodies are negation of food which is nothing but the bodies of other living entities. When we die, the left over body does not have the capacity to negate other bodies as earlier before death. Rather the dead body becomes negated by Nature and becomes more elementary minerals.

Dear Dr. Shanta,

I have shared your comments with Guy Berthault with which he agrees. In the circumstances, he thought you might be interested in an article he is preparing on his overall research. As it is in French he suggested I translate and send you the section dealing with historical geology. It is attached. The problem seems to be that scientists, quite understandably, have a prior commitment to furthering their own work, often at the expense of closing their eyes to convergent or parallel research of others. In the context of evolution theory there are also the twin obstacles of secularism and indoctrination. The first, excludes metaphysics limiting scientific hypotheses to the physical. The second, indoctrination following decades of teaching based upon fallacious data. The invalidation of the geological time-scale is, of course, primordial. All earth sciences depend on it in some way. Geology, paleontology, the fossil record and disciplines involved in origins research. Stratigraphy, moreover, is the principal tool for measuring evolutionary time in conjunction with radiometric dating. Your present forum is obviously contingent upon evolution being a viable subject for discussion. The question is, therefore, doesn't the inability of the official geological time-scale to calibrate hypothetical evolutionary time largely remove the rationale of the exchange? On the eve of 2016, I trust you and your organization will recognize in Guy Berthault's experimental research the fundamental paradigm shift it represents, and can help influence the mainstream scientific community to do the same. A happy New Year from Guy and myself!

Regards - Peter Wilder

Comments: Dr. Guy Berthault's work is very significant. Its implications on evolutionary timeline are also significant and will go a long way in redefining the concept of evolution. Dr. Bhakti Niskama Shanta has given many talks in different premier institutes of India and informed civil engineers and geologists about these fundamental experiments in sedimentation.

Re: Consciousness does not directly depend on microtubule properties

Dear All

The greatest Wisdom traditions say that no system of thought--religious, ideological, cultural or scientific can give us access to reality. All systems of thought are models of reality & have their value, in a limited sense --providing models of reality. The scientific model is most popular because it provides the basis for technology--divine and diabolical.

The Fall from Grace is just that --systems of thought that separate us from reality --where observer & observed, seer and scenery, you & the universe are a single unified activity of a great mystery. Science at best also leads to a mystery & the mystery looms bigger and bigger with the advance of science. At this time -- the Holy Days--I wish you all -epistemic humility and reverence for existence-and a glimpse of reality beyond all systems of thought--thought itself being a great mystery.

Parts are an illusion -impermanent activities in a unified wholeness

"God's language is silence; the rest is poor translation " Rumi

Deepak Chopra

Comments: The Concept (Reality) is not only about Oneness. Reality is also about the Difference. We cannot deny the difference, if we do so, we will miss the very nature of Reality. Variety is the spice of life. *Advaita* requires Many already in the meaning of The One. The very terminology *advaita* means negation of the Many. So to have *advaita* we also need the plurality. In the process of *advaita*, plurality is not annihilated, but *advaita* proves that everything exists for the purpose of the Absolute. Hegel gave two ideas which our teachers have recognized. (i) Reality is by itself and for itself. That means Reality is its own substance or is *Causa sui*. It does not have any cause outside of itself and that is the meaning of '*Reality is by Itself*'. '*Reality is for itself*' means that Absolute is Personal Truth. (ii) Die to live. This means we have to die in the entire plane of ignorance and we have to awaken in the plane of enlightened reality. We exist for the satisfaction of the center. Just like the stomach enjoys the food. The hands, legs, and eyes they all work for the satisfaction of the stomach. And by that

all these organs become satisfied themselves. In this same way we must give up our separate self interests and live for the interest of the Center. Then we will find satisfaction. World peace, love, affection are all to be found in this process.

Re: Consciousness does not directly depend on microtubule properties

Aren't there clinical cases where a person (or at least most of the cells constituting the body of the person) is living but no conscious?

Sung

Comments: The modern view is that the smallest cell is sentient. We can't conceive a cell without sentience. Sentience is the capacity to respond to external as well as internal stimuli based upon interpretation by the cell and decision making processes, which are characteristics of cognition. Computers and machines are never sentient and they are simply external teleologies. Neither do machines have the power of perception, which is inherent in all living organisms.

Re: Consciousness does not directly depend on microtubule prope...

Dear Fellow Voyagers

Thank you for illuminating this most difficult of questions. Taking Stuart's notion of "orchestration" a bit further, it seems all life is "orchestrated" in a general sense. The more complex it becomes, the greater becomes the diversity and array of sensory instruments, the degree of orchestration and the resulting harmonic resonances that either constitute or access consciousness. I guess the question becomes who is the ultimate conductor God or Gravity?

I'm reminded of the philosophy professor who was asked by one of his students, "why do you wear sneakers?" The professor responded "Let me answer those questions in two parts. First, do I wear sneakers? The answer is yes. As far as the question "why" is concerned, that is a question that has been plaguing for centuries, and I do not begin to know the answer to that question." It looks like the East-West Forum will be quite lively. Happy New Year to all.

Dave Smolker

Comments: Thanks for your happy new year wish. The OrCh-OR is a reductionist idea. It tries to link the origin of consciousness to gravity and some kind of quantum entanglement may be in tubulin qubits. It is basically a chemical idea. We remember Roger Penrose came to India at Saha Institute in Kolkata and one curious student asked him that according to the Eastern view, Consciousness is primary and existed before matter. And Penrose could only reply somewhat unconvincingly that "there is no evidence for that." This idea is not supported in the Vedantic tradition.

 Re: Idols of the Mind vs. True Reality

Dear Jo and Dr. B.M. Puri,

Let us take an example. Let "whatever explains everything" is Leibnitz's God. Let achromats, protanopes, trichromats, [tetrachromats](#) (such as [Concetta Antico](#), some fish, birds, and insects can experience 300-400nm stimuli), Leibnitz's God, and Dr. B.M. Puri's God are looking at a ripe-tomato.

I know, that first three observers have different experiences related to color for the same ripe-tomato: trichromats experience redness, protonopes experience beige color (or grey), and achromats experience dark grey. Perhaps, tetrachromat [Concetta Antico](#) will experience redness as normal trichromat. I do not know what other tetrachromats such as fish, birds, and insects will experience. However, what color do you think Leibnitz's God and Dr. B.M. Puri's God will experience while looking at ripe-tomato in this example? Regards,

Rām Lakhan Pāndey Vimal, M.S., Ph.D.

Comments: Perception is also a valid means of obtaining knowledge. We cannot deny the validity of perception in each and every case. Perception involves the senses and the function of mind.

 Re: Idols of the Mind vs. True Reality

I have seen a distinction being made among at least four perspectives on the nature of reality:

1. Materialism - objects are real
2. Cartesian Dualism - matter / mind
3. Idealism - All is Mind (body is an illusion)
4. Non-Duality. (fn)

I am sure there are more, depending upon the assumptions one makes about reality. I look at these in relation to the study of the indigenous healer. As a model to better understand the nature of reality for the pragmatic purpose of studying the indigenous healer,

[Message clipped] [View entire message](#)

Kurt Grimm via [googlegroups.com](#)
 to Mark, Online_Sadhu_S.

Dear Colleagues,

The aggregated knowledge, intelligence and wisdom being funnelled through this forum is remarkable and fascinating. Thank you all.

I aim to cleave this Gordian knot. The pathway is rather clear to do so. Towards those ends, several questions are given below.

1. May we agree that **the concept/definition of Life** that underlies and overarches thus discussion is **rigidly organismal-genomic**? In other words, is the discussion conceptually anchored in the normative concept/DEFINITION of Life, Life restricted to

traditional healer, meditator, spiritual adept or shaman, and their respective practices in both Eastern and Western cultures, I have borrowed from James Dow's "Hierarchy of Living Things" (fn), as a base to start, and then expanded or modified this model as needed.

James Dow's Hierarchy of Living Things (fn) was used historically by anthropologists and was very limited in the scope of even physical reality, so that quantum and cosmic levels were not included, and any "spiritual experience" or indigenous healing practices were ignored, denied, explained away through as "symbology" or rendered a fluke as an "anomalous" experience.(fn)

James Dow's Hierarchy of Living Things: (fn)

I noticed that the healer often had a more expanded worldview, as it relates to the healing practice, often with understanding of reality ranging from greater and lesser scales, including from the "energetic level" to the "cosmic level", perhaps looking something closer to this:

Indigenous Healer's Hierarchy of Living Things (fn)

Yet, inherent in the understandings of of reality for many healers, was a sense of the primordial nature of things, a concern for where things came from, evolved from, or originated from, as the source or origin of the healing tradition or practice. That is, for some healing traditions the location of "where" the healing power or knowledge came from was thought to be from some from earlier place in time or space.

I then revised this model to include an evolutionary / primordial aspect of reality, which depicts various types of healing traditions co-existing with the various levels of this Indigenous Healer's Hierarchy of Living Things:

(A) Indigenous Healer's Hierarchy of Living Things with Origin of Things (or precursor) and Sample Healing Traditions (DRAFT).

11:31 AM (7 hours ago)

manifestations of a membrane-bound metabolism, with nucleic acid replicator molecules?

2. **Is this DEFINITION falsifiable?** What observations/measurements would allow us to conclude that this DEFINITION of Life was in error, that is INSUFFICIENT?

3. I notice that my previous comments offering a distinctive, robust and falsifiable empirical argument have generated little comment. Stepping away from particulars, **can any suggest why a distinctive empirical pathway might generate little discussion inside this forum?**

4. Do we notice that **familiar arguments are being exercised**, arguments are being cast with a rather implicit knowledge that **on the pathway being followed, these matters are perhaps irresolvable?**

5. A possible solution begins with genuine curiosity. May we recognize the tyranny of **nouny cognition and language** in a dynamical, processing-patterning world? To understand this robust empirical interpretation, Google time lapse clouds and watch videos.

6. May we recognize the cognitive tyranny of an explicit/implicit equivalence of a Life DEFINITION and the organismal state?

7. Beginning with a **DESCRIPTION of Life (the explicit and distinctive process of LIVING)**, that is, if we begin with what Life does, may we do better? Does the scope of perception broaden very significantly?

8. If we are empiricists, is it necessary to very clearly understand what is being claimed/sketched here before refuting it? Alternatively, is there a more powerful rhetorical argument to defeat a novel perspective than ignoring it?

What is sketched in question 8 is central to my decision to leave academia, a tenured faculty position at the University of British Columbia. Among the participants in this forum group, I believe there is the possibility of genuine curiosity and decisive recognizance that accompanies an immediate understanding of the challenges I am facing to win the curiosity of well-informed experts. My earlier comments in this forum summarize some of the rationale and argument; recent conference abstracts are [linked here](https://eco.confex.com/eco/2014/webprogram/Paper48474.html)

<https://eco.confex.com/eco/2014/webprogram/Paper48474.html>.
<https://gsa.confex.com/gsa/2014AM/webprogram/Paper243043.html>.

1/24/2016

If curious, please see also the landing page of my website: drkurtgrimm.com (in preparation, but posted online; words that contextualize the figures are lacking). The slideshows on the landing page are relevant “books”, summarizing a robust empirical synthesis in what may be a new genre.

I welcome genuine interest, suggestions and collaboration.

Sincerely,
Kurt

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