



Advanced Relativity: Multidimensionality of Consciousness and Mind, Origin of Life, Psi Phenomena

Amrit Sorli*[†], Uros Dobnikar**[†], Davide Fisaletti*[†], Vlad Koroli***[†]

ABSTRACT

Evolution of life has its informational basis in higher dimensional Hilbert spaces which also represent the origin of consciousness and mind. The idea of neurology that mind has its origin in neuronal activity of the brain, which is three-dimensional, is here improved with the model that the mind states exist in higher dimensional Hilbert spaces. Mind is multidimensional and has the ability of PSI phenomena.

Key Words: consciousness, mind, origin of life, PSI phenomena.

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1. Introduction

All thoughts, theories and mathematics that the human mind can produce can be observed by the observer, which in Advanced Relativity has its origin in n-dimensional Hilbert space (Sorli *et al.*, 2016). This means that the observer has the highest degree of complexity, which is then followed by mind in lower dimensional Hilbert spaces.

Advanced Relativity (AR) can be considered as an improvement and completion of Einstein's Relativity with the help of quantum field theory (in particular, as regards the concept of creation/annihilation of elementary quanta). In AR the four-dimensional space of general relativity derives from a more fundamental three-dimensional quantum vacuum where time exists only as a measuring system of the numerical order of material changes. More precisely, the four dimensions of universal space can be seen as the effects, at an upper/explicate level, of a more fundamental three-dimensional timeless non-local quantum vacuum defined by reduction-state (RS) processes of creation/annihilation of

particles/antiparticles (with opposite orientations of spins), corresponding to elementary fluctuations of the quantum vacuum energy density. The RS processes are described by a wave function at two components satisfying a time-symmetric extension of the Klein-Gordon quantum relativistic equation

$$\begin{pmatrix} H & 0 \\ 0 & -H \end{pmatrix} C = 0 \tag{1}$$

Where

$$H = \left(-\hbar^2 \partial^\mu \partial_\mu + \frac{V^2}{c^2} (\Delta \rho_{qvE})^2 \right) \tag{2}$$

And

$$\Delta \rho_{qvE} = \rho_{pE} - \rho_{qvE} \tag{3},$$

$$\rho_{qvE} = \rho_{pE} - \frac{mc^2}{V} \tag{4},$$

Where m is the mass of the object, V is its volume,

$$\rho_{pE} = \frac{m_p \cdot c^2}{l_p^3} \tag{5}$$

Corresponding author: Amrit Sorli

Address: Foundations of Physics Institute, Slovenia* School of Light Institute** SpaceLife Institute, Italy† Quantum Optics and Physical Kinetics Laboratory, Institute of Applied Physics, Academy of Sciences of Moldova***

e-mail ✉ sorli.amrit@gmail.com; dobnikar.uros@gmail.com; spacelife.institute@gmail.com; vl.koroli@gmail.com

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is the Planck energy density defining the ground-state of the 3D quantum vacuum (where m_p is

Planck mass, and l_p is Planck length). The wave functions characterizing the RS processes of creation and annihilation are respectively

$$\psi_{Q,i}(t) = \int_{-\infty}^{+\infty} g_{Q,i}(\nu) e^{2\pi i \nu t} d\nu \quad (6)$$

and

$$\phi_{Q,i}(t) = \int_{-\infty}^{+\infty} h_{Q,i}(\nu) e^{2\pi i \nu t} d\nu \quad (7)$$

$g_{Q,i}(\nu)$ and $h_{Q,i}(\nu)$ being the frequency modes characterizing the creation and destruction processes respectively. The occurring of the processes of creation/annihilation of quanta in space is determined by the frequency modes which appear in the wave function of the quantum vacuum through the quantum potential of the vacuum

$$Q_{Q,i} = \frac{\hbar^2 c^2}{V^2 (\Delta\rho_{qvE})^2} \left(\frac{\left(\nabla^2 - \frac{1}{c^2} \frac{\partial^2}{\partial t^2} \right) \left| \int_{-\infty}^{+\infty} g_{Q,i}(\nu) e^{2\pi i \nu t} \right|}{\left| \int_{-\infty}^{+\infty} g_{Q,i}(\nu) e^{2\pi i \nu t} \right|} \right) \left(\frac{\left(\nabla^2 - \frac{1}{c^2} \frac{\partial^2}{\partial t^2} \right) \left| \int_{-\infty}^{+\infty} h_{Q,i}(\nu) e^{2\pi i \nu t} \right|}{\left| \int_{-\infty}^{+\infty} h_{Q,i}(\nu) e^{2\pi i \nu t} \right|} \right) \quad (8)$$

Which makes the 3D quantum vacuum a fundamentally non-local manifold.

In AR, the 3D quantum vacuum consisting of an enormous amount of RS processes of creation/annihilation of particles-antiparticles with opposite orientations of spins can provide a unifying view of gravity, electromagnetic fields and quantum behaviour of matter as different aspects of the same fluctuations of the quantum vacuum energy density. In particular, as a consequence of the evolution of RS processes, spacetime is filled with virtual radiation of frequency

$$\vec{E}_\tau^{zp}(\vec{r}, t) = \sum_{\lambda=1}^2 \int d^3k (\Delta\rho_{qvE} V / n\pi^2)^{1/2} \hat{\varepsilon}(\vec{k}, \lambda) \cos \left[\vec{k} \cdot \vec{r} - \frac{2\Delta\rho_{qvE} V}{\hbar n} t - \theta(\vec{k}, \lambda) \right] \quad (11),$$

$$\vec{B}^{zp}(\vec{r}, t) = \sum_{\lambda=1}^2 \int d^3k (\Delta\rho_{qvE} V / n\pi^2)^{1/2} [\hat{k} \times \hat{\varepsilon}(\vec{k}, \lambda)] \cos \left[\vec{k} \cdot \vec{r} - \frac{2\Delta\rho_{qvE} V}{\hbar n} t - \theta(\vec{k}, \lambda) \right] \quad (12) \text{ (Fiscaletti and Sorli, 2016).}$$

$$\omega = \frac{2\Delta\rho_{qvE} V}{\hbar n} \quad (9).$$

In the light of equation (9), each elementary fluctuation of the quantum vacuum energy density in a given volume produces an oscillation of space at a peculiar frequency. This means that each material object corresponds to oscillations of the 3D quantum vacuum given by equation (9).

The frequency (9) may be considered the origin of the electromagnetic effects of the 3D quantum vacuum in the sense that the electromagnetic field inside a cavity of perfectly reflecting can be seen as an expansion of infinite different modes of the fundamental 3D quantum vacuum where each mode corresponds to an independent oscillation defined by frequency (9) produced by a specific RS process of creation/annihilation of quanta in correspondence to elementary fluctuations of the 3D quantum vacuum (Fiscaletti and Sorli, 2016). This means that the spectral energy density for the zero-point fluctuations characterizing the electromagnetic properties of the quantum vacuum is

$$\rho(\Delta\rho_{qvE}) = \frac{4(\Delta\rho_{qvE})^3 V^3}{\hbar^2 \pi^2 n^3 c^3} \quad (10).$$

By starting from equations (9) and (10), in AR the electric and magnetic fields are two different kinds of polarization of the 3D quantum vacuum produced by the frequencies of the radiation associated with the motion of the virtual particles produced in the RS processes, namely by the elementary fluctuations of the quantum vacuum energy density. In particular, in the SED regime, the quantum vacuum fluctuations are random plane waves summed over all possible modes with each mode having the zero-point energy $\hbar\omega/2$, and thus the electric and magnetic fields may be expressed as



According to relations (11) and (12), the electromagnetic radiations are expressed as expansions of plane waves, where the sum is over two polarization states, $\hat{\epsilon}$ is a unit vector, \vec{k} is the polarization vector such that $|\vec{k}| = \omega/c$ and $\theta(\vec{k}, \lambda)$ is a random variable uniformly distributed in the interval $(0, 2\pi)$ and independently for each wave vector \vec{k} and polarization index λ . The magnetic field can be seen as the polarization of space in $\hat{k} \times \hat{\epsilon}(\vec{k}, \lambda)$; the electric field is the polarization of space in $\hat{\epsilon}(\vec{k}, \lambda)$.

Photons defined by the fields (11) and (12) can be considered the fundamental entities which produce the storing of information. In AR, microtubules are getting information via biophotons from 3D quantum vacuum, an idea that is supported by recent research suggesting that microtubules use a binary system for storing information (Craddock et al. 2016). Bio-photons have spin angular momentum $\pm \hbar$, where \hbar is the reduced Planck constant and the \pm sign is positive for right and negative for left circular polarizations. Left-handed bio-photons carry information of zero (0) and right-handed biophotons carry information of (1). Each bio-photon carries thus one bite of information which can be zero (0) or one (1). By considering the helicity

$$H = \frac{\vec{\sigma} \cdot \vec{p}}{|\vec{\sigma}| |\vec{p}|},$$

where $\vec{\sigma}$ is the spin vector and \vec{p} is the momentum, since under space inversion $\vec{\sigma} \cdot \vec{p}$ changes sign, the net helicity of bio-photons associated with the parity-conserving electromagnetic interactions must be zero and, therefore, right-handed and left-handed biophotons are emitted or absorbed with equal amplitudes.

The idea that information and consciousness are spin-mediated is not new. A spin-mediated consciousness theory was proposed by biophysicist Huping Hu with his collaborator Maoxin Wu (2002, 2004 and 2008) and then reviewed by Sultan Tarlaci (2006). According to this theory, consciousness is intrinsically connected to the spin process, which provides the linchpin between mind and the brain, and emerges from the self-referential collapses of spin states and the unity of mind is achieved by entanglement of these mind-pixels. The starting

epistemological foundation of this theory lies in the fact that spin is basic quantum bit ("qubit") for encoding information and, on the other hand, neural membranes and proteins are saturated with nuclear spin carrying nuclei and form the matrix of brain electrical activities.

On the other hand, Persinger's group measured significant increases in biophoton emissions along the right side with respect to the left side, when subjects imagined white light in a dark environment. These quantitative measurements as well as quantitative analysis strongly suggest that spin energies can accommodate the interactions between protons, electrons, and photons and the action potentials associated with intention, consciousness and entanglement (Persinger *et al.*, 2013).

According to the approach of AR suggested in this paper, polarizations of biophotons are the fundamental elements originating consciousness through the following mechanism. A photon of the 3D quantum vacuum has a correspondent "pilot photon" in the 4D Hilbert space. Regarding the 3D photon, the 4D pilot photon, which is the vibration of the 4D Hilbert space, has higher density of information according the formula below:

$$C_k(n) = \binom{n}{k} = \frac{n!}{k!(n-k)!} = \frac{4!}{3!(4-3)!} = 4$$

(13).

In the light of equation (13), the 3D photon can manifest in the following four possible states of 4D pilot photon: $\psi(X_1, X_2, X_3)$, $\psi(X_1, X_2, X_4)$, $\psi(X_1, X_3, X_4)$, $\psi(X_2, X_3, X_4)$. This means that the 4D pilot photon contains 4 combinations of 3D photons, which implies it has 4 bite of information. When the 3D photon is moving through the microtubule it can give 4 binary impulses which are guided by the 4D pilot photon. 3D photon is the last element in the "energy chain" of pilot photons in higher dimensional Hilbert spaces. Higher dimensional pilot waves are increasing in the information density according to the formula (13):

- 3D - 1 bite
- 4D - 4 bite
- 5D - 10 bite
- 6D - 20 bite
- 7D - 35 bite
- 8D - 56 bite
- 9D - 84 bite

Interesting fact is that numbers 1, 4, 10, 20, 35, 56, 84 are the first seven tetrahedral numbers. This would mean that increase of information density in higher dimensional Hilbert spaces in Advanced Relativity model is following



tetrahedral numbers. The density of information is correlated with intelligence, which means that consciousness as the n-dimensional Hilbert space is of infinite intelligence. Human senses are three-dimensional and can perceive only the three-dimensional aspect of energy-information, in the form of ordinary 3D space, 3D particles and 3D massive bodies.

3D quantum vacuum which gives origin to the physical space is syntropic type of energy (Sorli *et al.*, 2016). The concept of syntropic phenomena intended as those processes responsible of the evolution of the biological complexity, was originally introduced by Fantappiè in 1941 in his unifying theory of physical and biological world and then was further developed by his collaborators Giuseppe and Salvatore Arcidiacono. In the approach of Fantappiè-Arcidiacono-Arcidiacono, life consists in a set of syntropic phenomena and cannot be only reduced to physical and chemical processes and therefore a source of information exists which supervenes chemical and physical processes with the aim of creation of biological systems. In the Advanced Relativity model, 3D photons, which are waves of 3D space, are the fundamental objects which enable living systems to lower the entropy of their environment (and thus provide the ultimate source of information which is responsible of creation of the evolution of biological complexity, in epistemological affinity with the Fantappiè-Arcidiacono-Arcidiacono view). Fritz-Albert Popp calls these photons in living organisms bio-photons (Cohen and Popp, 1997). The actual structure of bio-photons is not different from ordinary photons, and they are also 3D. Bio-photons of living organisms are actually the physical origin of "bio-energy", which in India is called "prana", and in China "Qi". In AR the health of an organism is based on a good information flow between higher dimensional Hilbert spaces and the 3D material organism; and therefore wrong and partial imaginations of the mind are the main cause of the illness. This is why health is intrinsically related to the origin of the observer, which is consciousness. Consciousness is the primordial energy-information of the universe, which, acting via mind to the 3D level of the organism, provides psychophysical health. When mind is not supported by consciousness, it becomes hyperactive, resulting in too much electrical current in the nervous system and its damage. On the other hand, a mind delighted with consciousness is calm, has higher efficiency and is the basis of psychophysical health (Davidson *et al.*,

2003; Rubia, 2009; Rosenkrantz *et al.*, 2013). In this perspective health, stable peace and prosperity of the human society can be achieved with the introducing of individual research on the origin of the observer in the educational system worldwide. The observer is the common ground element of every human being regardless different cultural and religious environments, and as such represents the real binding force between different cultures and religions (Sorli, 2016).

In AR, by following a philosophy that characterizes quantum field theory, the notion of energy is extended into multidimensional Hilbert spaces. Energy can be defined in 3D Hilbert space, in 4D Hilbert space, in 5D Hilbert space, more in general in a nD Hilbert space where n is the cardinal number of natural numbers; nD Hilbert space is the fundamental background of consciousness, which acts in the human being as the observer. Information has its origin in energy, which exists in different Hilbert spaces; energy and information are the same reality, an idea which is today generally accepted: "Quantum mechanics is not the final stage in the science of physics. At the beginning of quantum mechanics between 1900 and 1950, everything was particles, but later, from 1950 to 1970, everything was fields. The view today – from 1970 on – is that everything is information" (Tarlaci, 2010). Moreover, in the model here proposed, the information of the higher dimensional Hilbert spaces ruling the phenomena of the universe can be associated with specific properties of the fundamental non-local 3D quantum vacuum.

Recent publications of O.J. Pike and others, O. Firstenberg and others are providing the basic understanding of photons being constitutive elements of the matter (Firstenberg *et al.*, 2013; Pike *et al.*, 2014). In AR photons are waves of 3D physical space (3D quantum vacuum), which means particles are different forms of space energy as already predicted by Ervin Schrödinger: "What we observe as material bodies and forces are nothing but shapes and variations in the structure of space". In this picture time as numerical order of phenomena is characteristic for 3D type of energy. Phenomena which exist in higher dimensional Hilbert spaces will be addressed in next chapter are immediate and so have not time. In nD reality we do not have phenomena any more. Consciousness is non-phenomenal, pure emptiness, "nothingness", shunyata, Nirvana.

The very nature of consciousness energy is infinite and as such unreachable for exact



mathematical description with no epistemological gap. Advanced Relativity model has developed a mathematical picture for reality in which every element of the model corresponds exactly to one element in the real world, so there is no epistemological gap between the model and reality. Our research group works on the model with minimal epistemological gap for higher dimensional Hilbert spaces. Consciousness as non-phenomenal reality is remaining outside of this description. The true nature of consciousness research is not descriptive; it is experiential, individual research method (meditation) in which one discovers Nirvana: "Nirvana is a state of pure bliss and knowledge. ... It has nothing to do with the individual. The ego or its separation is an illusion" (Ervin Schrodinger).

1. Origin of Life

In AR life on the molecular level of 3D dimensionality has origin in nD consciousness. Evolution of life is encoded in 4D and more dimensional Hilbert spaces of higher information density and is communicated to the 3D ordinary life dimensionality via bio-photons. It is already confirmed bio-photons are transporting information between cells. This view is confirmed by discoveries in quantum bio-communication (Edmonds, 1994; Sun *et al.*, 2010) as well as, above all, in a recent model of phonon guided biology, where the functional architecture and metabolic networks of cells in living organisms are associated with typical eigenfrequencies, and in particular electromagnetic eigenfrequencies have a relation to quantum coherence in life systems to brain function and consciousness (Meijer and Geesink, 2016). According to Meijer's and Geesink's approach, quantum wave effects acting on life systems are determined by a toroidal quantum field at typical scalars and related to Frölich-Bose Einstein condensates working in biological processes and present in phonons. From this perspective, reality may be perceived as a vast interlacing network of discrete fields of oscillations that interact with the vibrational fields of life systems, a communication process in which photons of various energy content and solitons play an essential role. Here, a relevant result is that geometrical information fluxes of photons and phonons converted to scalar standing waves in a 4D toroidal topology can be considered the basis for the origin of consciousness states. Moreover, research of Tang and Dai suggested that bio-photons also may play a potential role in neural signal transmission and processing,

contributing to the understanding of the high functions of nervous system (Tang and Dai, 2014). In this perspective, the evolution of life is an ongoing process running in the entire universe (Sorli, 2016). Essential organic molecules which build life have been found in the entire universal space (Kwok and Zhang, 2011). Cosmic energy forms a connected matrix within the entire cosmos and by means of structured matter can elicit life (Pereira, 2015a). Energy Exchange between particles and quantum vacuum is a relevant reason of the interdependence between the cosmic energy matrix and matter. Emergence of life within matter corresponds to the point of conversion from non-local cosmic energy to localized energy which could have been mediated by quantum processes across the developing proton gradients within organizing matter. Inorganic elemental matter could have triggered quantum based energy processing and the creation of the first living conscious forms (Reddy and Pereira, 2016).

According to AR physical homogeneity of the universe implies also biological homogeneity. The physical circumstances for development of life are the same in entire universal space. On the planets similar to the Earth life has developed. A planet with the similar circumstances for development of life as on the Earth was discovered recently (Jenkins *et al.*, 2015). One cannot exclude that in the universe there exist other planets with the similar circumstances. Consciousness is shaping life via Hilbert spaces in entire universe. This also means that technology will never be able to create a "conscious computer" which would have higher cognitive abilities as friendship, empathy, compassion, which are in the domain of higher dimensional Hilbert spaces. Technology cannot reach beyond 3D ordinary reality.

2. Psi phenomena

The Advanced Relativity model implies that in higher dimensional Hilbert spaces (4D and more) the energy-information transfer – which can be ultimately associated with the action of specific properties of the fundamental non-local 3D quantum vacuum – is immediate. Telepathy between two or more human minds runs through higher dimensional Hilbert spaces where there is no time. A thought which is entering existence in a given human mind is immediately present in entire universe. In this sense two human minds are entangled and can communicate instantly via higher dimensional Hilbert spaces.



In the Advanced Relativity model, remote viewing (Tart *et al.*, 1980) also happens via higher dimensional Hilbert spaces and is immediate. People with remote viewing capacity have developed “direct perception”, which is beyond linear time as the “past-present-future” which is 3D activity of the human brain: “Traditionally, the way in which time is perceived, represented and estimated has been explained using a pacemaker-accumulator model that is not only straightforward, but also surprisingly powerful in explaining behavioural and biological data. However, recent advances have challenged this traditional view. It is now proposed that the brain represents time in a distributed manner and tells the time by detecting the coincidental activation of different neural populations” (Buhusi and Meck, 2005).

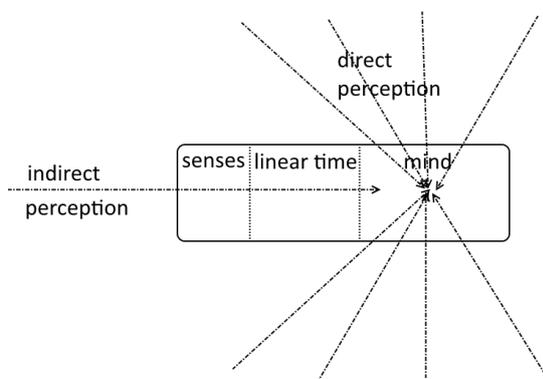


Figure 1: Indirect and direct perception.

Some people have developed clairvoyance naturally from birth, as the capacity of the observer to see coming events on a 3D plane, which already are in the process of actualization in higher dimensional Hilbert spaces. What happened on 3D plane in an individual life and the life of entire human society has the beginning in higher dimensional Hilbert spaces, which also are the origin of the collective human mind. Social events on the large scale, as for example wars, have the source in “mental” tensions on the higher dimensional Hilbert spaces which then escalate in physical violence. Experiments confirm that continuous meditation of 2500 trained individuals has reduced crime in city DC Washington for 23% during the meditation period (Hagelin *et al.*, 1999). Their meditation has brought peace and harmony in higher dimensional Hilbert spaces which has influenced the individual minds of entire population. Research of Radin and others confirms that directing intention toward a distant person is correlated with activation of that person’s autonomic nervous system (Radin *et al.*,

2008). Direct intention is directly transported via higher dimensional Hilbert spaces and is manifesting on 3D ordinary physical level.

The observer which is still experiencing world in the frame of linear psychological time, which has its origin in neuronal activity of the brain, has limitations in the understanding of telepathy, remote viewing, and clairvoyance. Albert Einstein used to say: “Time and space are modes by which we think and not conditions in which we live. Time has no independent existence apart from the order of events by which we measure it. There is something essential about the NOW which is just outside the realm of science. People like us, who believe in physics, know that the distinction between the past, present and future is only a stubbornly persistent illusion” (Sorli, 2016). Advanced Relativity model has confirmed that Einstein is right; time has only the mathematical existence and exists only in the 3D ordinary reality.

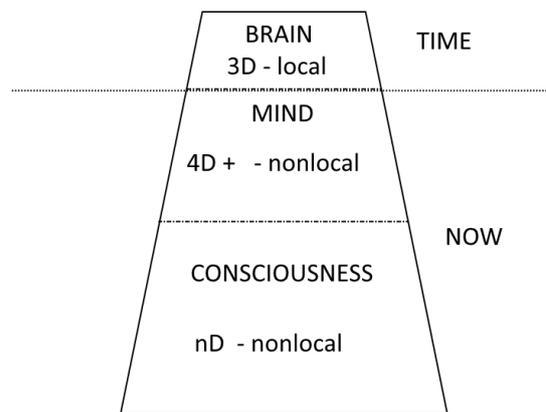


Figure 2: Brain, mind and consciousness in Advanced Relativity

3. Discussion

AR has developed a mathematical model for 3D ordinary background in which every element of the model corresponds exactly to one element in the real world, so there is no epistemological gap between the model and reality. The nature of 4 and more dimensional reality is such that the model of higher dimensional Hilbert spaces with higher information density is an approximate model with a certain epistemological gap. Consciousness as non-phenomenal reality is described by nD Hilbert space which does not reflect fully the very nature of consciousness which is not descriptive; it is experiential, individual research method (meditation) in which one discovers consciousness, also named emptiness, nothingness, Nirvana. Even Nobel Prize Laureate Erwin Schrödinger, who had a life-



long interest in the Vedanta philosophy of Hinduism, which influenced his speculations at the close of his book *What is Life?* about the possibility that individual consciousness is only a manifestation of a unitary consciousness pervading the universe, recognized that: "Vedanta teaches that consciousness is singular, all happenings are played out in one universal consciousness and there is no multiplicity of selves. [...] Nirvana is a state of pure bliss and knowledge. ... It has nothing to do with the individual. The ego or its separation is an illusion. [...] Although I think that life may be the result of an accident, I do not think that of consciousness. Consciousness cannot be accounted for in physical terms. For consciousness is absolutely fundamental. It cannot be accounted for in terms of anything else" (Schrödinger, 1944).

In order to get more physical insight about Quantum Brain Dynamics it is necessary to carefully examine properties of a single protein microtubule of brain neurons from quantum-mechanical point of view (Enaki et al, 2016). This will give new possibilities for realization and manipulation of quantum information processes with the help of entanglement and non-local channels in the ensemble of microtubules of brain neurons (Satyajit *et al.*, 2013).

From metaphysical point of view, a very interesting idea consists in the fact that while material universe is three-dimensional, the mathematical universe is multi-dimensional. Uniting theory and technologies for matter (quantum theory and physics, and nanotechnology), building blocks of living systems (biotechnology) and cognitive sciences (cogno) becomes necessary for developing new human capacities. Such initiatives by definition rely on converging existing state of the art trans-disciplinary research converging nano-bio-info-cogno disciplines, possibly under the more successful quantum perspective for understanding the world. Such confluence is imperative for mapping and analysing massive and complex brain data as, for example, measuring signals from nervous system, neuron to neuron interactions, conditions and repairs of sub-cellular structures for regenerative medicine, neuromorphic engineering, adaptation to change, collective and artistic human capabilities, broadening and transferring human perception, to name a few.

Because protein microtubules of brain neurons are quantum optical devices it is

instructive to study the generation of squeezing and entanglement in microtubules to obtain more insight about nature of consciousness from quantum biophysical point of view (Satyajit *et al.*, 2013) and role of consciousness in the Universe. In this situation non-local correlations takes place between different microtubules of brain neurons and therefore quantum information in the brain may be transmitted through non-local channels which in this paper are "pilot photons" of higher dimensional Hilbert spaces. The model of the mind and consciousness presented in this paper offers a deeper understanding of altered states of consciousness (ASC), induction of ASC by different physical methods: electrical stimulation (direct and alternating current), magnetic stimulation, sound (binaural) stimulation compared with placebo in healthy volunteers (Moldovanu and Vovc, 2013).

Several researches confirm that meditation (mindfulness) is reconnecting human mind with consciousness and so improving man's psychophysical health (Cojocar and Moldovanu, 2013). Meditation is a technique which activates consciousness by "observing" (watching, witnessing) body-mind activities. The fundamental function of consciousness is the permanent awareness of the activity in lower dimensional Hilbert spaces (mind) and body which is 3D. This awareness has the power of body-mind healing, because it disintegrates mental forms which cause illness and replaces them with more adequate mental forms which are life supportive. Deepak Chopra's integrative medicine is the valuable practice of how meditation activates consciousness which is healing body and mind (de Jonng *et al.*, 2016). Meditation is not only reorganizing higher dimensional Hilbert spaces (mind), it is also increasing cortical thickness of the brain (Chopra, 1990) which confirms the power of consciousness when acting on the 3D brain level.

Advanced Relativity model is fulfilling the request for deeper understanding of space-time metrics which will allow further development of 'Orch OR' Theory": "Hopefully, in the near future, with more experimental understanding of the space-time metric, Orch-OR would evolve to a complete deductive mathematical expression of consciousness—a dream that entire mankind is eagerly waiting to see" (Lazar *et al.*, 2005). In AR space-time metrics is fully understood: time exists only as the numerical order of microtubule activity on the 3D physical reality. In 4D + Hilbert spaces where is always NOW information transfer



is immediate. In AR the introduction of “imaginary time” in order to develop space-time metrics (proposed by Ghosh and others) is not necessary: “In addition, the fractal shape of entire brain architecture suggests that one clock is physically located inside another clock. Hence, we get information processing in an imaginary space. When we have both an imaginary space and an imaginary time, then we get a generalized hyper-dimensional space. Therefore, the discovery of resonance and wireless processing lead to a layered architecture of multiple space-time metric stacked one above another” (Ghosh *et al.*, 2013). In 4D and more Hilbert spaces there is no more “space-time” metrics, we have only different layers of Hilbert spaces where is always NOW.

In the Advanced Relativity model, the mathematical definition of brain as 3D reality, mind as 4D + reality and consciousness as nD reality is unifying Platonic values of mathematics and Vedanta wisdom: “Orch OR provides a credible, testable model for how mental activity enters the physical world. I would take its optimism and turn it around: the mind-brain problem is indeed closer to being solved, not because quantum events give rise to mind but because these events indicate that an invisible agency (consciousness) is producing orderly, intelligent, information-infused activity at the very interface where spacetime emerges. The Platonic values of mathematics are undeniable, and once they are admitted into the picture, Vedanta would allow in every other Platonic value (truth, beauty, love). Then “nothing” – pure awareness without qualities – is the only viable explanation left standing for the origin of mind and reality itself” (Chopra, 2013). In this perspective meditation is the only valuable experiential research method to discover consciousness.

There is a certain correspondence with chakras in yoga and higher dimensional Hilbert spaces of AR:

3D - Muladhara

4D - Svadishthana

5D - Manipura

6D - Anahata

7D - Vishuddha

8D - Ajna

9D - Sahasrara (state of Nirvana)

nD – non-manifested consciousness (state of Parinirvana)

In this picture non-manifested (non phenomenal) consciousness is nD. Between 9D and nD there is a passage which in Buddhism represents the passing from Nirvana (9D) to

Parinirvana (nD) which occurs upon the death of the body of someone who has attained Nirvana during his/her lifetime.

The thesis of biologist Bruce Lipton is that human mind empowered with consciousness can change genetic code (Lipton, 2007). According to the Advanced Relativity model it cannot be a-priori excluded that the person which has attained Nirvana (9D Hilbert space) has the power of the mind to change his genetic code. The 3D biophoton accompanied with 9D pilot photon can carry 84 bits of information which means it can hit 28 microtubule triplets and transmit them information. This information in the form in 3D bio-photon spin is then transformed in biochemical signals of polypeptides (MAPs) (Villasante *et al.* 1981), which then transport information to the 28 genome triplets. This is how information is transported from the “enlightened mind” to the genome.

Consciousness is the fundamental energy of the universe and has powers which seem that are un-comprehensible for common scientific mind which experiences life in the frame of linear time. The power of NOW (Tolle, 1997) has to be discovered firstly and then one attains the larger more adequate scientific view which allows him/her to see clearly the real nature of life.

4. Conclusions

Advanced Relativity is the unified model of the universe, life, mind, and consciousness where all phenomena are guided by consciousness via lower dimensional Hilbert spaces. In this model, time is the numerical order of changes and exists only in 3D reality. 4D and more dimensional Hilbert spaces realities are timeless (phenomena there do not have numerical order and are immediate) which gives new vision on the origin of life, PSI abilities and the timeless nature of consciousness itself.

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