

WORKING PROCESS OF CONSCIOUSNESS

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Stephen Hawking (1988) proclaimed: everything that matters in the universe is electro-magnetic field activity. The force field idea reached back to David Bohm who advocated the idea that our world is steered by pilot waves that emerge from a quantum fluctuating domain that cannot be observed: the implicate order that was later interpreted as the zero-point energy field or a super-fluid quantum space (Keppler, 2012; Sbitnev and Fedi, 2017). It was the Nobel laureate Wilzcek, who claimed that the fabric of reality comes about by harmonic relations of discrete wave frequencies displaying beautiful patterns, among others reflected in the colour-spectrum (Wilzcek, 1987). Sir Roger Penrose went even deeper by claiming that consciousness in the brain arises from a sort of resonance of tubulin proteins and neuronal communication with vibratory ripples of the supposed smallest scale in the known universe: the Planck scale (Penrose and Hameroff, 2011). Gravitational activity at this extreme micro-level would induce the recognition of basic information required for consciousness: the so called Qualia. Yet, knowledge on the discrete values of the crucial quantum wave frequencies at stake remained scattered.

Energies for “General Consciousness” (may be called as “God-Soul”) is fundamental “Gravity-Free” working silently and it is called “Absolute Reality” or “Eternal Consciousness” whose existences filled the “Wider Universe” explained details in my all articles. Our consciousness (may be called as “Live-Soul”) is particular “Gravity-Based”, Matter Oriented whose existences filled the “Narrower Universe” working actively whose characters of existences may be different for several created distinct “Physical Universe” when there created distinct matter elements, although the universe Unfolded with the “Symmetry Breaking” of the Super Unified Gaussian Energy Group SU(11) [i.e. at 10-dimensional Universe, where up-to 7-dimensional flat Universe then bending space and formed closed universe with starting measurable time and then arising an “Adiabatic Stages” thereafter our 4-dimensional Einstein’s Universe, because we study in my all articles, a complex space-time ($R + iR$) types of $(4 + D)$ -dimensions, where space “R” stand for 4-dimensional Einstein’s Universe and (iR) -is that of D-dimensions, where “D” is an extra dimensions, it is then compared with Kluza-Klein cosmology, we found that our real or physical universe actually appeared from 10-dimensional space-time, again the mathematics with real and imaginary (complex) numbers predicted a rotator feature that introduced the idea of vortices and even toroidal geometries. The fractal nature of life algorithm suggested a cosmic dimension from longitudinal soliton waves from all dark energies as explained in my articles down to vortices-like energy distribution at the Planck scale] whose subsets are SU(6), created pseudo forces or latent energy as explained in my articles creating “Quantum Gravity” or simply “Gravity” as well as “Consciousness” etc. which gathered information from previous and forwarded; SU(3), the strong forces; SU(2), the weak forces; U(1), the electrodynamics of GUT of SU(5) as explained by the Standard Model of Physics.

That means changes of matter universe occurring mainly with the expansion of the universe and created so called real space-time & matter which was explained by Einstein’s GRT with respect to classical mathematics or Standard Model of Physics.

We know that the “Quantum Energies” maintained the “Wave-Particle” duality theory, i.e. “Quantum Entanglement”, which may be true for energies from strong gravitational field with 5th & 6th dimensional space-times of “Dark Energy” although there may some exceptional cases for non-maintaining the above theory like “Sound Energy” always reached to our ears by maintaining the wave formed as explained by Einstein’s etc. and then formed matter particles with the symmetry

breaking of SU(5) of GUT, with applying forces like fluid surface tensions, or otherwise particle formation may be failed with the weak gravitational fields or particle formation was totally failed for gravity-free zones explained in my articles in “another phase” beyond the 10-dimensional space-times. Thus energies does not maintained the “Wave-Particle” duality theory rules for “Wider Universe” in another phase with extra-dimensional space-time ($-R^2$) or with Generalised Gaussian Unified Theories of SU(23), SU(47),.....etc. leaving with new energy groups SU(12), SU(24),...etc. as explained details in my articles.

Matter oriented consciousness mainly gravitational based from quantum level, i.e. quantum gravity based, which creates a complete body or bodies of animates & in animates with “Self Consciousness” like humans etc. then creating some emerging prosperities with evolution.

Matter oriented consciousness creating lives having some emergent characters like “Insights”, “Basic Needs”, “Instincts”, and specially created like “Qualia” etc.

According to the standard model of physics the basic particles of the matter atoms like “Hadrons” are formed by tightly binding with “Quarks by Gluons” then founding basic particles like protons, neutrons, electrons, etc. it was shown in my articles that in the early stages of our physical universe that means just after the symmetry breaking of SU(11), there was a plenty of conscious energies,[like the J_k -bosons of SU(6)] created Hadrons where Quark-Like particles are tightly binding by J-bosons of SU(11) as explained details in my articles, then produced like protons, neutrons, electrons with quantum gravities i.e. produced by continuously changing of the consciousness energies etc. and hence the universe expanded with its own evolution for the needs of formation for complete celestial bodies as well as within its planetary live bodies etc. as in the same manner which was seen by us in our earth.

Again the electron jumps from one orbital to another within an atom or atoms is due to the released or increased the energies of consciousness that means due to the quantum gravitational forces.

Increased by an atomic number caused the formation of heavy atoms or elements from lighter elements to heavier and then everything. Hence due to the excess production of the energies of consciousness, physically [i.e. by exchanging the bosons of SU(6) into the bosons of $SU(3) \times SU(2) \times U(1)$] due to the caused for production of quantum gravity within or gravitational fields outside the atoms which binding itself directly or indirectly with others and also there creating a Strong Electromagnetic Forces or Strong Currents in the frame-work of $SU(6) \times U(1)$ for signalling within its body or outsiders as like as the Weak Electromagnetic Force or Weak Current created by SU(2) in the frame-work of $SU(2) \times U(1)$.

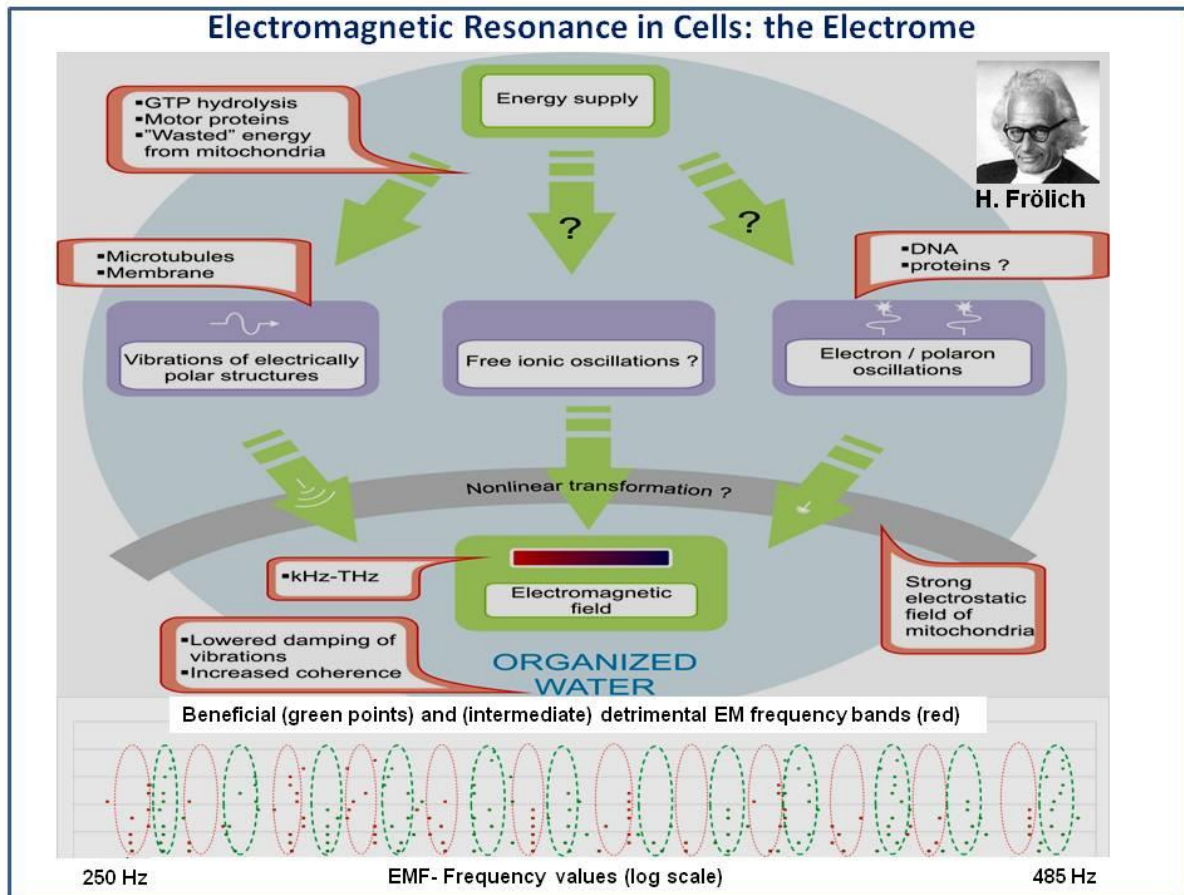


Figure1. The EM resonance aspect of the integrate cell (electrome) with oscillating constituents at various intracellular sites (green arrows). Bottom part: EM field frequency band pattern of coherent (green points) and non-coherent values, as revealed in a meta-analyses of biomedical literature (see Geesink and Meijer, 2016) [Picture taken from Neuro-Quantology | April 2019] Volume 17 | Issue 04 | Page 37-44| doi: 10.14704/nq.2019.17.04.2074 Meijer DKF., Life and Consciousness are Guided by a Semi-Harmonic EM Background Field].

A biophysical basis for a spectrum of discrete electromagnetic field (EMF) frequencies, that were shown to affect of health and disease, was elaborated and generalized (Meijer and Geesink, 2016; Meijer and Geesink, 2017; 2018 d). It should be realized that this frequency pattern reflects experiments in which the life systems were exposed to *external* EMF radiations, as well as influenced by the presence of endogenous frequencies. It has been found by Meijer Dirk KF and Geesink Hans recently, that about 20 different infrared spectra of bio-molecules: proteins, lipids and DNA can be described by the proposed quantum wave equation by making discrimination between coherent, de-coherent and transition frequencies. Transition frequencies are meant here as the poised condition between coherent and de-coherent states that occur in order to switch between order and disorder. This functions as a start to assemble bio-molecules by folding and twisting motions, or disassemble them by de-folding, and untwisting, or even implies a route to cell-death.

Bio-solitons are conceived as self-reinforcing solitary waves that constituting by local fields, being involved in intracellular geometric ordering and patterning, as well as in intra and intercellular signalling. The discrete pattern of EM wave frequencies is mathematically expressed as follows:

$$E_n = \hbar \omega_{ref} 2^n 3^m (2^p)$$

(E_n : Energy distribution, ω_{ref} : Reference frequency 1Hz, \hbar : Reduced Planck's constant, n : Series of integers: 0, 0.5, 2, 4, 5, 7, 8, -1, -3, -4, -6, -7, m : series of integers: 0, 1, 2, 3, 4, 5, -1, -2, -3, -4, -5, p : Series of integers: <-4, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6, > +52).

Most recently, Meijer Dirk KF and Geesink Hans studied EMF (IR) absorption frequencies of pure water (Geesink *et al.*, 2019b). It was concluded by them water molecule assemblies show electromagnetic and electronic collective states. Since water molecules, in principle, exhibit a comparable distribution of coherent EMF bands in the fluid assemblies in living cells, superposition of these wave patterns with those of plasma components will occur and a mutual wave resonance interaction between cytoplasm and macromolecules of life matter with the surrounding water molecules can be expected (Fig. 2). Among others long-distance, soliton mediated influence can be expected in the 3-dimensional folding of life-proteins in which oscillation of structured and wave-coherent water molecules could play a distinct guiding role (Meijer and Geesink, 2018; Melkikh and Meijer, 2018). Without exception, the above-mentioned studies demonstrated a striking fit of the reported EM frequencies with the coherent GM-scale. The water spectral patterns in a surrounding of ordered and disordered matter can be used as a biomarker for a health diagnosis, in which 12 absorbance frequencies in the spectrum are related to molecular structures and coherent domains (Tsenkova, 2018).

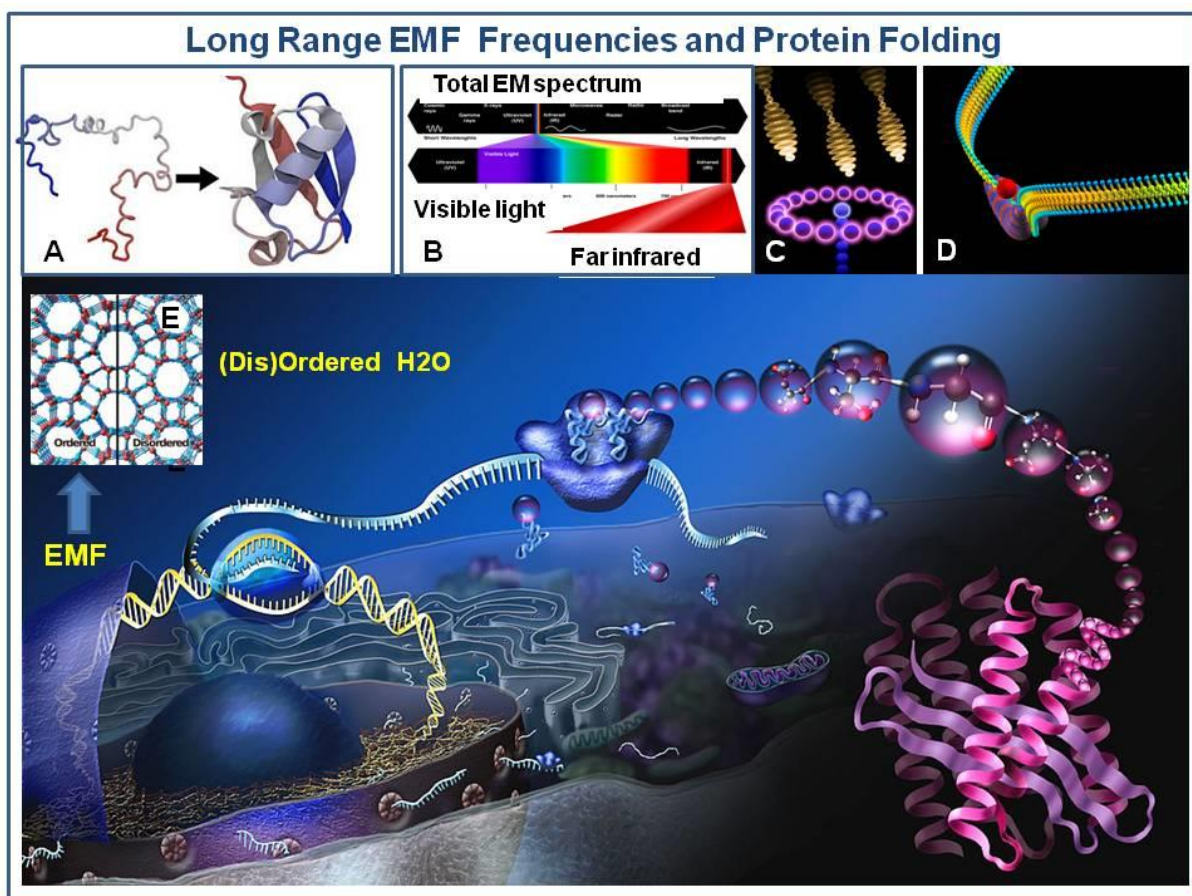


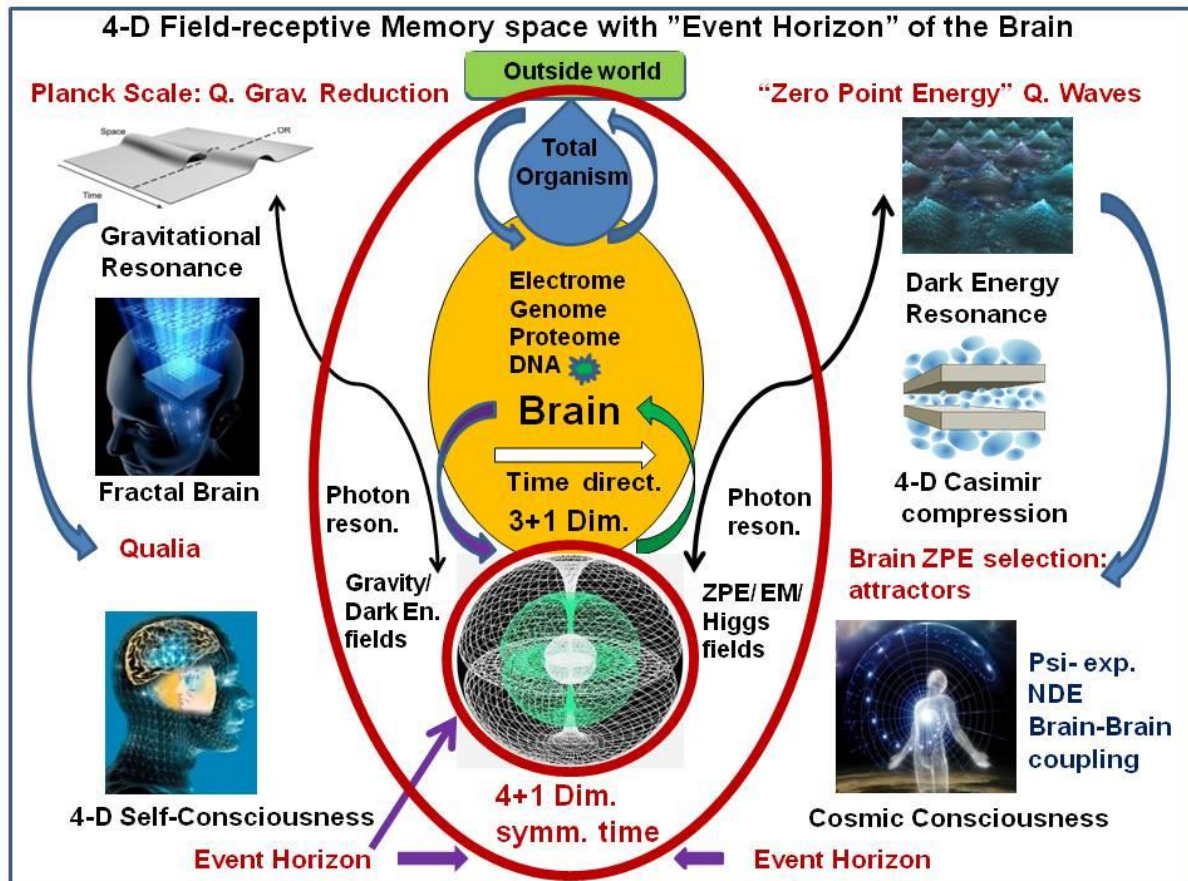
Figure 2. Soliton/phonon guided protein folding, depicting protein synthesis from DNA/RNA (left) to linear amino-acid chain (middle) and final folding to 3-D conformation (right). Inset in the middle shows: EMF-mediated structuring of water in hexagonal geometry, and on top, (A): Protein folding from linear AA chain; (B): electromagnetic field spectrum with visual and far-infrared parts; (C): phonon induced coherent vibration domain (BEcondensation) and (D): soliton/polaron travelling along a protein backbone. [Picture taken from Neuro-Quantology | April 2019| Volume 17 | Issue 04 | Page 37-44| doi: 10.14704/nq.2019.17.04.2074 Meijer DKF., Life and Consciousness are Guided by a Semi-Harmonic EM Background Field].

Again, it was considered that the human brain and its mental aspects are associated with classical brain physiology and are also part of a quantum physical universe. The human brain conceived as an interfacing organ that not only produces mind and consciousness but also receives information. The brain or its parts of the brain are conceived as an *interference hologram* of incoming data and already existing data which equivalent to the subject's memory.

Meijer Dirk K F and Geesink Hans then applied the long-distance EMF guiding principle also to the longstanding question on the brain mechanisms that are instrumental in the creation of (self)-consciousness and postulated that a supervening memory space is required to explain ultra-rapid brain responses and the presence of Qualia as well as transpersonal experience, (Meijer and Geesink, 2017). It was postulated that consciousness in the whole universe, arises through scale invariant, and nested toroidal coupling of various energy fields. In the brain of the human species, this takes the form of the proposed holographic workspace, that collects active information in a "*brain event horizon*", representing an internal and fully integral model of the self. This brain-supervening workspace is equipped to convert integrated coherent wave energies into standing waves, employing photon resonance that guide the related cortical template to a higher coordination of reflection and action as well as network synchronicity, as required for conscious states.

The presence of a field-receptive resonant workspace, associated with, but not reducible to, our brain, may provide an interpretation framework for widely reported, but poorly understood transpersonal conscious states such as NDE and clairvoyance, as well providing a potential algorithm for the origin of life, (Meijer and Geesink, 2018; Melkikh and Meijer, 2018). It also points out the deep connection of mankind with the cosmos and our major responsibility for the future of our planet (Fig. 3).

Accompanying literature search, revealed very similar frequency patterns in, among others, the colour spectrum, for wave resonances of phyllosilicates (clay materials), the plasma-protein albumin and various nucleotides in aqueous solution, as well as for a candidate RNA-catalyst (see **Table 1**). The latter findings may imply that EMF guiding played a crucial role in the creation of first life in pre-biological evolution (Meijer and Geesink, 2018b). The collective evidence indicates that discrete quantum coherence entanglement and superconductivity may not only be prerequisites for life, but that similar frequency patterns may operate also in non-animated physical materials. We argue therefore that a novel biophysical principle could be involved.



[Picture taken from Neuro-Quantology | April 2019| Volume 17 | Issue 04 | Page 37-44| doi: 10.14704/nq.2019.17.04.2074 Meijer DKF., Life and Consciousness are Guided by a Semi-Harmonic EM Background Field].

Figure3. Modelling of brain/mind relation in a 4+1-dimensional space-time framework (4+1 implies 4 spatial dimensions and one single dimension of time, on the basis of energy trajectories in a nested toroidal geometry. The opposing forces of Dark energy (diverging force) and Gravity (converging force) as well as discrete wave frequencies of electromagnetic fields, are instrumental in the generation and compression of individual life information. The human brain may receive quantum wave information directly derived from the Planck space-time level (left above) through quantum gravity mediated wave reduction, as well as through resonance with the ZPE field (right above). Our brain can perceive only 3+1 dimensions with a one directional arrow of time. The material brain and its 4+1-D supervening field-receptive mental workspace should be seen as an integral whole, until the bodily death of the organism. The 4th spatial dimension allows individual self-consciousness, since an extra degree of freedom is required for self-observation and reflection, while in the mental context the time dimension is symmetrical, allowing integration of past and future-anticipating events. The 4th spatial dimension is also assumed to accommodate the bidirectional flow of information between the domains of self-consciousness and universal consciousness. Bottom-up information flows from the Planck scale, combined with top-down information conjugation from the ZPE field, constitute the event horizon of the brain, also integrating gravitational and dark energy related force fields, and supervenes the physical brain. Event horizons of brain and whole body are depicted in the red ellipse and circle respectively.

Table1. Guiding EMF GM- principle in Animate and Non-animate systems*

<i>Animate systems</i>	<i>Non-animate systems</i>
- Biomedical research (1)	- Entanglement in EPR-experiments (6)
- Cancer research (2)	- Energy distribution elementary particles (7)
- Neurological studies *0	- Coherence behavior in superconductors (8)
- Albumin vibr. resonances *1	- Sound induced vibration patterns of Chladni, *4
- RNA synthesis catalysis *2	- Phyllosilicate semi-conductor materials *5
- Brain function and Consciousness (3, 4)	- Zero- point energy EM frequencies *6
- Protein folding in intact cells (5)	- Gravitational waves *7
- Super-conduction in life systems (8)	- EMF absorption Spectrum of pure Water (9)
- Oligo-nucleotides in solution *3	- Nucleotide sequence in DNA *8
- Ir-spectra of proteins, lipids, DNA (10)	

* = EMF freq. values extracted from related international literature.

In brackets (nr.): reference to own publications : (1) Geesink and Meijer, 2016; (2) Meijer and Geesink, 2017; (3) Meijer and Geesink, 2016; (4) Meijer and Geesink, 2018; (5) Meijer and Geesink, 2018; (6) Geesink and Meijer, 2018 a; (7) Geesink and Meijer, 2018b; (8) Geesink and Meijer, 2018 c; (9) Geesink and Meijer, 2019a; (10) Geesink and Meijer, 2019c. Supporting research of others: *0: Hamblin et al, 2017; *1: Nardechia et al, 2017; *2: Ferris, 2006; *3: Tang et al, 2018; *4: Chladni, 1980; *5: Adamatzky, 2013/Hashizume, 2012; *6: Irikura, 2007; *7: Rezolla et al, 2003; *8: Selvam, 2007.

Living cells thus make use of coherent frequency signalling, similar to Bose- Einstein condensates, in order to stay viable and stable, yet we also revealed de-coherent frequencies that are detrimental to life system, (Geesink and Meijer, 2016; Meijer and Geesink, 2016), among others in cancer (Meijer and Geesink, 2018a). If incoming man made electromagnetic signals indeed exhibit such de-coherent EMF radiation, then these signals, potentially, will decrease the coherency of (quantum) wave domains of living cells. A possible way to deal with such a problem is either to lower the energy density of the external man made de-coherent waves or to convert them to more coherent frequencies. We envision innovative methods for increasing the coherency of the electromagnetic signals through the use of appropriate semiconductor technologies, inserted in electromagnetic man-made devices. This by making also use of the knowledge with regard to the so-called Terahertz energy gap, through enabling the combination of supplied optical and electronic coherent information. Beneficial EM wave technology may therefore find applications by further improving health during the increasing use of EM-information data in our society as well as in the design of therapeutic instrumentation for various chronic diseases and ageing processes.

The reviewed studies may contribute to a better understanding of bio-fields that operated in the evolutionary organization of complexity, on the brink of inanimate and animate structures and, collectively, are seen by us as instrumental in the ongoing fabric of human and cosmic consciousness. The above treated aspects of a potential field-receptive workspace, as a guiding realm in life processes, may point back to the well- known implicate order of David Bohm, of which we may have identified some of the EM frequencies as a recipe for life.

Finally, we may concluded that the bosons of the new energy sources of SU(6) are so strong that the exotic matter-fluids changes to ordinary matter and hence then everything is possible with the presence of the new energy sources, introduced & explained details in my articles and properly working by these group of energies SU(6), SU(12), SU(24),....etc. may be called in the name of "Consciousness" and "Eternal Consciousness". Also Consciousness connected like an "Internet System" by others. Thus, naturally we can't escape from the gravitational field after our bodily death.

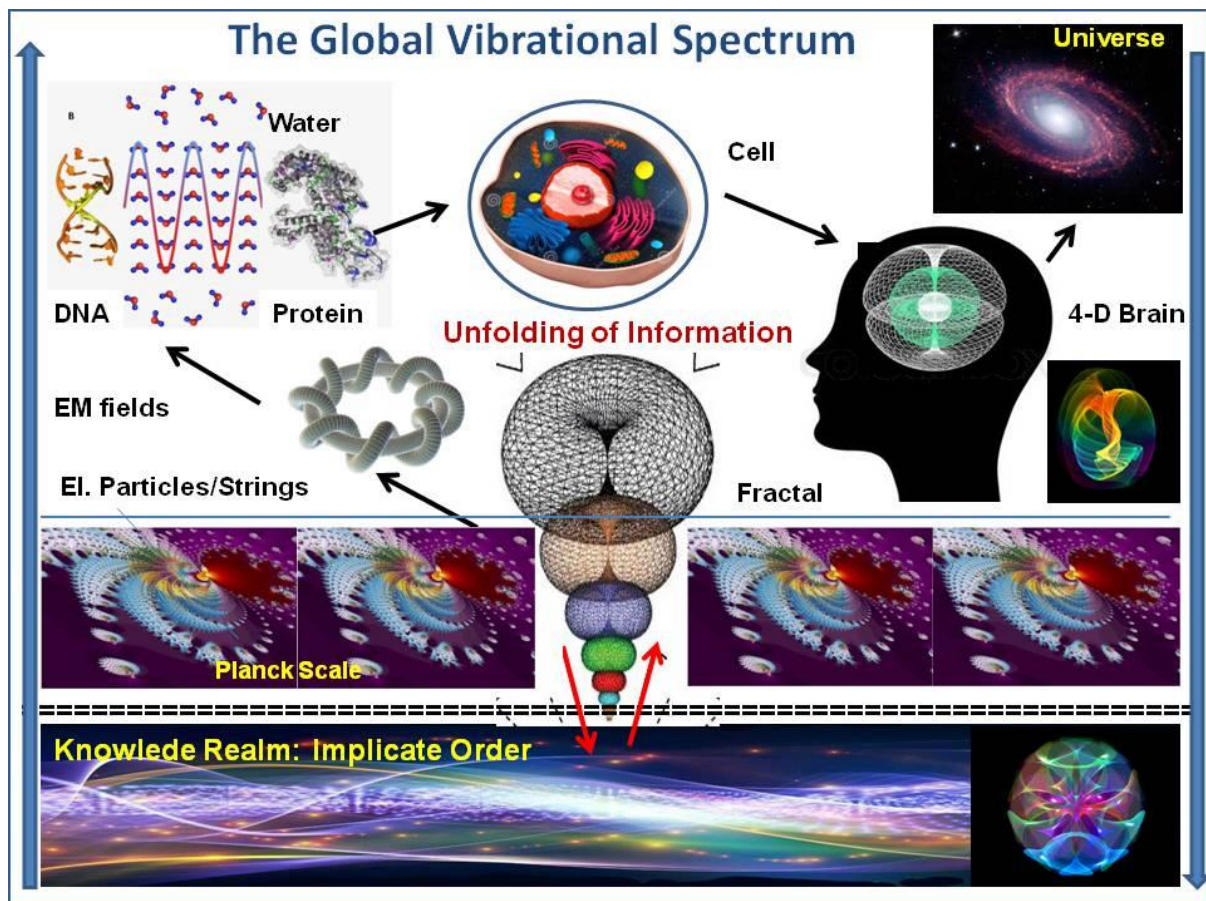


Figure4. The flow of information in the universe from micro- to macro-levels (bottom to top) conceived as a nested toroidal operation that is fractal and scale-invariant and is initiated in a knowledge realm underlying the known wormhole matrix (quantum foam) at the Planck scale. Supposed quantized string activities produce elementary particles, atoms, molecules and life systems. The latter contain dedicated holographic memory spaces at the cellular and organ level. The human brain integrates internally and externally guided, conscious states. Further fractal and self-similar properties in a quantum fluid universe provide the architecture of cosmic macro-structures.

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