

# The Possible Novel Insights in Structure and Function of Consciousness System

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## ABSTRACT

This paper is about nature of the consciousness and mind as phenomena of living organisms, particularly humans. These phenomena might exist in artificial intelligent systems in form altered more or less in relation to humans. It also proposes relations in between consciousness and body and plausible manners of control which consciousness has over physical body. Philosophical frames explaining these relations through holistically aspects and classical, partial aspects are quantum holographic paradigm, treating organism as a whole and Cartesian paradigm, respectively. This might have particular clinical implications of different scales in treatment of various diseases, especially psychosomatic but also and others in which structural changes represent main pathological foci. It represents plausible philosophical hypothesis of scientific, epistemological and gnoseological kind as one solution of Hard problem of consciousness.

**Key Words:** nature of consciousness, quantum holographic paradigm, psychosomatic diseases

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## Introduction

Consciousness complexity task requires answers on two basic questions:

1. What is the nature of the consciousness?
2. Where is the transitional line in between consciousness and matter?

They can be seen as analogies to *hard problem* proposed by David Chalmers (Hu, 2008; Chalmers, 1996) and have much in common with binding problem in philosophy of the mind. In order to answer this questions we need to recall to physical matter represented as highly organized living matter, the most complex in human organism. Thinking that way, we will undoubtedly conclude that on manifest level, we can think about and see mind and body as dual entities. In other word, as separated on the one hand but also as coupled on the other hand thanks to their

dualistic nature. Asking then ourselves where is the boundary line in between them, especially if we take under consideration the obvious potential for bondage on the empiric level, despite their different presentation. The connection line bounds on very specific ways the seemingly opposite entities that appear, as they are incompatible. So, we got structure and function of the brain with all of its organization levels on one side and consciousness on the other side represented to subject as subjective experience, qualia, inner subjectivism or we can say inner consciousness quality. Naturally, it is obvious that we here are talking about boundary line in between two qualities or entities of seemingly very different nature. One of them (physical body) is available to observation by another subject's senses and on that way directly measurable in all of its parameters well known to science. While the other (mind) just indirectly, on empirical way enriches our knowledge about its existence by its existence. It does not contain so clearly strong deterministic elements like environment (physical body) from which it emerges. In other words, parameters of consciousness ultrastructure are at least for now, immeasurable. Only its manifestations are. Here, there is objective necessity to distinguish

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in between physical body and brain. According to emergentism, the brain represents the main mass of central neural parenchyma responsible for generation and interactions with the mind. Hence, on that way we may raise few questions considering:

- Interactions of mind with the brain
- Direct interactions of mind with body with some characteristics related particularly to acupuncture system (Raković, 1994)
- Indirect interactions of mind with body via the brain
- Interactions of mind with the physical body treated as a whole, so called mind–body problem.

I will base my conclusions more commonly on emergentistically approach rather than on approach of panpsychism and their use would depend on specific context dependent indications. Difficulties that we have in measurement are highly localized on area of essence of consciousness and its deepest organization levels. As I mentioned earlier, this difficulties do not exist on the most superficial level, ultimate mind quality and supreme differentiation level in which consciousness fantastically represents outer reality with the relatively highest degree of determination. So, now again we can ask the logical question – how these seemingly opposite principles are, reductively speaking connectable and above all complementary? The term *boundary line*, how I liked to call this area of connection in between those two entities, just partially reflects these relations among them. We can call these relations also *psychophysical relation*, *psychophysical junction*, *spiritual neurochemical bondage* and many others but all of them have some defects just like the term *boundary line* itself. For example, the term *psychophysical relation* reduces too much central nervous system (CNS) ultrastructure, while term *spiritual neurochemical bondage* emphasizes biochemical processes of synaptic neurotransmission and represents them as a brunt of body–mind problem with cons too. This term represents too much robust, reductive and oligodimensional view of human mind and consciousness problem in general. Of course, we cannot underestimate the importance of these processes but they are far from all. If we take the emergentistically

approach as perspective of consideration the phenomena we are talking about here, then we will be able to conclude that these biochemical events are just the beginning of some very complex process of building of consciousness system. This progress will further continue but not any more in material but rather in some another nonmaterial, we can say etheric realm which obey some other laws in some other scales. As the result, we got ultimately generation of qualia. If we picture the problem like this, now it is obvious why the term boundary line is not adequate. That is not the one–dimensional line, but rather multidimensional dynamical system called consciousness. So, after all that's been said till now I think that term *qualitative quantum–transitional autoimprinting* based on self–organizing theory (Pitkänen, 2009), would be much more appropriate to give answers on postulated questions.

### **The Model of consciousness system**

To propose this theoretical model of consciousness I was partially inspired by quantum–holographic consciousness theory based on concepts of Karl Pribram (Pribram, 1977) and David Bohm (Bohm, 1983; 1987a; 1987b; 1993), postulated by Dejan Rakovic (Rakovic, 1994; 2002a; 2002b), analyzed and further developed by other scientists like Hiroomi Umezawa (Umezawa, 1993; 1995) and Francisco Di Biase (Di Biase, 2000; 2009). The consciousness can be modeled as a very complex dynamical system, I'd like to say *consciousness system* with its own ontological evolution (Popp, 2008) based on self–organizing principles (Pitkanen, 2009).

### **Field basis**

In fact, consciousness represents spatiotemporal quantum coherent superposition of electromagnetic (EM) field geometry as a product of central neural network processing in its fundamental aspect. Specific synaptic coupling of neurons building the biological network enables amplitude and frequency modular EM field, characterized by self–summing, self–modeling, we can say self–organizing on spacious–temporal manner. The high degree of quantum non–locality determines this process, ensuring and stabilizing field integration. The phenomenon reaches other cortical areas of the brain that is one of the ways of integration of various brain



functions (McFadden, 2007). Namely, synaptic interneuron connections are acting as a nanoprocessor connector devices like digital-analogous converters (DAGs), particularly meaning at excitatory glutamatergic (Glu-ergic) axo-spinous synapses as transformers of frequency modular axonic current (AV potentials) into amplitude modular analogous-continual membrane potentials of neuronal perikaryodendritic compartment. Through the EM field generation this potentials are maintained on one way and by electromagnetic-neuronal interaction on another way, we can say self-maintained acting on voltage-sensitive ionic channels and thus changing and modulating transmembrane ionic dynamics (ionic influx/efflux). This further leads to generation of EM field *de novo* that has some updating influence on membrane potentials by enrichment of information with every new circle of these EM-neuronal interactions.

### *Mosaic structure*

Generated highly dynamical EM field takes its own geometrical phase space in which interactions occur on the new level of EM field in between various sub-compartments in taken phase space. Quality of these interactions has two modes: superposition leading to field amplification and neutralization accompanied with diverse quantities of these interactions controlling each other in various intensities and scales. On this way, the field level generates some kind of *mosaic structure* where in various sub-compartments of the field geometry simultaneously exist EM interactions in various degrees. We can take this state as highly polarized and upon that highly differentiated state of EM field geometry system, or we can say resonant state with very low entropy values, thus maintaining polarization. Time scale in which this is the case is probably  $\sim 0.1$  s which defines fundamental biorhythm (alpha peak in EEG for instance) (Pitkanen, 2009). Since this state is very unstable due to novel and constant informational input from senses and extrasensory, it can have just peak behavior, as outlined previously. Thus, the state of polarization coherence is almost immediately accompanied by decoherence leading to equivalency or depolarization of specific sub-compartment states characterized with very

high entropy values leading to mosaic deletion. The EM geometry system thus expresses periodic and/or pulsating behavior oscillating in between these two states on basic biorhythm frequency ( $\sim 0.1$  s). Decoherence could be representing the other way of holistically informational integration of various parts of the brain (Mc Fadden, 2007). This implies one common, basic relation, field homogeneity/ heterogeneity which plays the crucial role in value variability of formatting function representing exogenous as well as endogenous object, signs, symbols, entities on the field level all depending on differentiation degree of the function upgrading its complexity. Plotted on the most superficial level, this depends of abstract thinking possibility. Here, the function term defines the model representing the underlying laws of consciousness system generation processes. The role of superposition care predominantly excitatory post-synaptic potential (EPSP) and inhibitory post-synaptic potential (IPSP) and AV potentials play role in synchronization of electric firing activity (Bischof 2008; Radman 2007; Courtemanche, 2003) into synchronous firing patterns of different cortical areas on macroscopic as well as neurons inside of one areal on microscopic scales, for instance Brodmann areas and cortical microcolumns, respectfully. This further implies that the first detection level by the field represents transformation of variable values of the EM field geometry function leading to changes in field mosaic structure as the response on current activity in inter-neuronal communication. The next level of conversion as primordial sensorial-effector phenomenon would be generally integrative transformation of mosaic function values that would retain values of previous transformation of the function on its architectonical ultralevel but simultaneously updating new values and by that providing the basis for the next elementary progress. Naturally, the next level is analogous with preceded two. In fact, this is, we can say, horizontal relation, meaning by that the relation on the same organizational level of the field vector that relates different value parameters of space-time sheets mathematically, quantum-mechanically, and deterministically speaking. However, because of the spatial 3D dynamical nature of the field, geometrically and architectonically organized by *circulus viciousus* principle, this mere physically speaking spacious-temporal



relation grows into conversional–detecting relation on the next organization level. This one further generates logical relation on the higher level of organization of the field geometry system during processes of complexity upgrading the valuable relations between function parameters. Whilst these processes flow through specific phases of development and differentiation during information processing, field system gains higher degree of freedom and much more stable structural and functional autonomy because of much greater dynamics of field level. The functional autochthony strengthens with every organizational iteration. This results in nonlinear intense increasing of mind segregation from central neural parenchyma leading to physiological mind–body detachment above some interactional threshold. Observing from empirical aspect, we witness this every day.

### *Integrating homogenization phenomenon*

With this complexity, the new, secondary, much more complicated than it was on the beginning of this compound process, information input is available for the field system to affect central neural parenchyma as the archaic structure which has the only part, nothing else than generator of EM field primordium, closing the field–matter interaction circle on that way. Field system generated on this emergentistically way expresses at the same time property I would like to call *integrating homogenization phenomenon*. It needs to be distinguished from mosaic elementary homogeneity with decoherent character that is the basic process. On the other hand, this one high degree level process embracing polarization object differentiation is based on processes of mosaic elementary homogeneity/ heterogeneity I mentioned beforehand.

### *Psychophysical dissociation*

Integrating homogenization phenomenon as the high–level field link aspires to consciousness throne, thus amplifying and establishing mind–body segregation leading to another phenomenon I would like to call *psychophysical dissociation*. The phenomenon of psychophysical dissociation we can understand as infinite number of interactions of elementary space–time unit values and its variations of entangled and

integrated EM field. These are born from specific current variable relations of function parameters. The aim of these interactions is parameter function implication, self–organization based on self–preservation and inter–stimulation. For instance, we can simplify that on model manner by comparing these processes with the man who restraint by environmental physical conditions is trying to adapt by finding the optimal body position in order to escape the pressure. Unfortunately, this is not so easy but with every attempt, he is much closer to ideal position. Alternatively, maybe even much more picturesque, the energy of this infinite array of interactions we can represent by hyperbole with the same connotation.

### *Spheric field structure*

All that has been said till now implies incredible, on the first look even preposterous but still very logical conclusion which undoubtedly leads to principle of metaphysically aspects of analyzing the observed phenomenology. This, in the question and in the focus, is “*reaching the interminable great in interminable small*” as the first and “*quantity procreates quality*” as the second principle. In infinitely little moment of time during the process of space–time quantum coherent superposition, functional interactions, with no choice, directed, to say canalized by system are reaching their infinite peak obtaining this way needed energy quantum for inner transformation development deviating it to, I like to say, *spheric field structure* by quantum jumping. The spheric field structure represents new level of the existence of consciousness system at primordial level, observed from emergentistically aspect. It can be comprehended as a level higher than level of field geometry system thanks to its more developed analytical (deductive) and synthetically (inductive) capabilities by neutralizing the field nature and just extracting the informational content. We can consider this as primitive thinking process correlate.

### *Primal qualia*

The further interactions characterizing this organization level of the consciousness system are in framework of this subsystem implying at the same time the adequately corresponding



and appropriate interaction type having the spheric field structure label. This besides cognitive–informational aspects also means the greater autonomy in nonspecific activities such as self–superposition and autonomy and space–time presentation to *primordial inner subject* or *primal qualia*. I included the both previously mentioned principles here, where the action of conquering the spheric field structure level represents the first and maintaining the level the second principle but reductively speaking we can take them as equal to some extent. This prelude us deeper in problematics where impose us another principle, by my opinion the most important one, *the consciousness system organization principle*.

### **Organization principle of the consciousness system**

Here, we need to define ultrastructure / *epistructure* relations, preferably, I like to call it *ultralevel* / *superlevel* relations, very intriguing by the way and determine most precisely the organization level hierarchy of the consciousness system. First, I have to describe in short the concepts referring to *primary consciousness* and *spheric–like superstructure* that is necessary to comprehend the previously introduced concepts.

#### *The primary/secondary consciousness*

When we approach to the problem of consciousness considering it as a system of mutually related elements then we have to define referent observing system on which we can refer ourselves in determining which processes are below and which one are above this reference system I call *primary consciousness, referral, or zero energy consciousness* based on zero energy ontology respectively. Therefore, the processes below the reference system serve to construction of the consciousness system and I explained them earlier, and I will later on. We can thus consider them as sub–referral, sub–primary or *sub–critical*. They represent structural and dynamical medium of some particular organization level with some certain characteristics depending of level complexity, above all relatively high processing potential and some particular degree of autonomy that is manifest, substantial form of existence of primary consciousness system. Considering

this, we can define primary consciousness system on the empirical level as a consciousness that is aware of the external as well as internal environment and characterized by self–awareness or hereditary self–reflection. By the term self–awareness, I mean the consciousness insight into the psychophysical existence of its own subject, but not consciousness about its own consciousness that would be then positive energy consciousness or *secondary consciousness*. Therefore, the primary consciousness would be a consciousness as a naturally given to subject by its birth with no invested mind effort in upgrading the consciousness level. All the processes that are above the primary consciousness, termed as *supracritical* belong to area of consciousness upgrading. By other words, the consciousness system is incomplete as long as it does not reach the level of primary consciousness. Then it is able to generate complete qualia and compete as primary or secondary consciousness. Generally speaking the term *consciousness* is more adequate when talking about problematics from aspect of inner subjectivism referring to qualia and term *consciousness system* when talking about externally observed construction of given mechanism.

#### *Spheric–like superstructure*

Taking into account the previously said, *spheric–like superstructure* would be representing the highest level of sub–critical processes. It represents basis for extraversion of the ultralevel and on the other hand is responsible for the main finalizing mechanisms of logic machinery of subcritical mediumality at the level of spheric–like superstructure. In order to understand this, mediumality term requires explanation in some fundamental concepts. Later on, I will explain it more deeply in *Level mediumality* section of the paper. Simply said, structural property of the consciousness organization level characterized by nature of medium built by represents level mediumality. Since the level ultrastructure is constantly changing due to system extraversions, its mediumality also transforms accordingly. Moreover, as relatively highly differentiated, spheric–like superstructure would have probably some medical psychosomatic implications as one of the programing structures for generation of psychosomatic therapeutic algorithms but not



the main one. In this case, it would be still much more important as a carrier or controller of lower levels acting on penetrating–adhesive puncta or control localities of consciousness system, which I will explain later. Here, the role of programing interface would most probably have the higher–level supersystem or its upgrading forms at the level of secondary consciousness or even beyond. I will deeper analyze it later in context of nature of the qualia.

### *Ultralevel extraversion/higher level super system formation*

#### *Key point for primary consciousness*

We should for the moment return to the main roots of matter organization generally, to the level of vibratory expression, respectively. The influence of biological system structure forces this level to organization as well as field geometry level based on it. Another words, it is bounded to biological system structure; it needs to organize in this living network as basic organization level. It is also the fundamental level for field level implying that it further transforms the structure of spheric–like superstructure itself. Then, we can ask the logical question, how it manages this? The answer on this question leads us to key point of the whole story. First, we need to follow the flow of matter organization and energetics of quantum transitions in framework of psychophysical autoimprinting. Then, simultaneously we have to consider the psychophysical relation dualism taking into account diametric opposites in between mind and matter. These are different substrate nature on one hand and absolute matching on the other hand. Summarizing all of this, we really can conclude and to see the coexistence of these tendencies in term of highly specific organization as the only way of theirs complementary coexistence. Observing from molecular to macrolevel, highly complex central neuroformations generate supersystem more complex than the neural network generated by and at the same time structured from field elements which are much older phylogenetically speaking than the corpuscularity is and on whose hierarchic organization it is based on. On the same way, the mind field basis at the level of the spheric–like superstructure as an ultralevel is superorganized in much more sophisticated structure, the phenomenon I call *the extraversion of ultralevel into the*

*supersystem of higher level.* Matter organization progress in sphere of the mind behaves as quantum jumping reducing that way the number of fundamental organization levels and simultaneously building the superlevel of existence. Let us take this on the following way. The matter can organize on two ways. The first one is through building much more complex systems based on corpuscularity. On that way, we have for instance atoms, molecules, cells, tissues and organs, systems of organs and at the end the completely organized material organism (of course taking into account the subatomic structure as well). Therefore, if we start from molecule, in order to reach the tissue for example, we need to go through the intermediate cell level in between those two. However, this is, I would call it classical organization mode necessary for let us say less sophisticated hardware of the entire psychophysical system. The second way of organization on the other hand grounds itself on completely different organization principle. For instance if we have got the boson field mediumality with bosons interacting one way outside of living organism, than we would got another mode of interaction of field bosons inside of living organism. Other words, they are not just organize in order to build the high entropy medium such as EM field but they are, we can say, superorganized into a more functional biosystem without intermediate level formations like those that we see in classical mode. On that way ultralevel bosons which are so elementary, suddenly are becoming the most complex not by themselves but the supersystem directly generated by them. Organizational ultralevel converts to supersystem on the next level, more complex than the previous level generated by, but directly structured from elementary medium. This makes the superlevel much more autonomous, integrated, variable, flexible, stronger and thus resistant to destruction and closer to mind quality. Thus, in sphere of transitional quantum jumping processes we have endless sequence of extroverted ultralevels into systems of higher levels. So, if the levels of vibratory expression, subtle anatomy, aura and ethereal been are organized in theoretical apsychical been on one, directed, specific way, than they would be organized on opposite way in process of procreation of the mind. Thus the supreme organizational level of qualia would represent, theoretically



speaking ultimate extraversion of vibratory expression ultralevel as the fundamental level in sphere of matter organization but as the utterly level in mind generation. This further implies the existence of possible communication of supreme mind superlevels and fundamental matter organizing levels because of their nature, same in its elementary plan but quite different in organizational plan. This also can be seen as vicious circle where the beginning and the end are of the same quality and thus because of *resonant matching effect* enclose the organism as a whole. Of course, the mind as superior thanks to its organization has the modulating power over the body that has its clinical implications in psychosomatic medicine area. This is the fundamental property of psychosomatic hypothesis. I think that there is a great possibility that system not enclose itself on vibratory expression level but on some another higher or maybe lower level. Very limited automodulation and human imperfection in any sense are some of proofs for that, among which the most important are ego complexes by my opinion. The voluntary consciousness efforts and evolutionary advantages determine the further progress in this area. With this mind–body knowledge level given at this point, I think that we can produce very powerful psychosomatic strategies thanks to yet unexplored synaptic nature as a very important source of variability potentially used in psychosomatic algorithms.

### **Evidence for the Model**

I am aware that I have not provided any proofs until now for proposed model of consciousness hierarchy system. The proofs I will discuss here are of logically–philosophical nature.

### *Evidence for ultralevel extraversion*

The system tends to unify and integrate itself by entangling its information carrier parts. Since the mind has the characteristics of unity and complexity simultaneously, logical imply from this state is that it has to be very elementary in its ultrastructure and very complex in its systemic structure. The only mechanism that combines these two properties is extraversion of the ultralevel into a supersystem of the higher level. As a phenomenon, consciousness has its own time continuity of its own existence enabling that way introspective and from internally subject

aspect person's consciousness and intercalation in psychic coefficient of presented reality with still unknown character or mechanism of degree of consciousness level. As objective reality, consciousness detected by subject's consciousness is his unique quality whose biological system belongs and whose ingredient is. It represents the prism through which subject observes the outside world and inside (intrapsychic) reality with constant direction from inside to outside. Even if we are witnesses of this every day, the question why is this the case can be asked? On the unconscious level mind contains encoded information about psychophysical integrity. If this finding continues deepening further, by simple reductively logical deduction it also contains the information about physical integrity by itself. Thus, all previously described interactions and information processing processes as mind integrity ingredients are basing themselves and relating to somatic body with adequately presented analogous logically psychological relation in mind sphere. Psychobiological system such as human organism is able to, without knowing the exact base of its own psychological life be aware of its own consciousness about perceived object with own empirical, congenital, species specific and enlightened by learning mind effort or consciousness in general, all depending of internal consciousness level (complexity of consciousness system). On the level of the most highest organizational level of the ultimate consciousness system as a whole, individual human biological psycho–physical system is aware of instant internal or object of external reality but also its consciousness about consciousness related to object at particular moment. This is occurring due to minimal criticality of intra–interactive consciousness system autonomy in which critical value of consciousness threshold is available to subject mind, another words available to this same consciousness because of more precise defining of logical parameter system of perceived object function at that particular level. Thereafter, general consciousness ability or consciousness potential and awareness about current object of attention as built and defined entities can interact or construct logical relationship. For this voluntary push, we may say that has increased the subject consciousness level for some quantum of information but still without upgrading subjects' consciousness. We can say



that subject is not become more aware or not obtained higher degree of consciousness insight. For this progress to occur are needed specific conditions such as multiplying of voluntary pushes, more intense and more deepen mind effort which is beyond of bondages of empirical and which requires specific psychomodulation based on cognition of quantum transitional autoimprinting or boundary line as I firstly named this concept and maybe some another conditions. If we would for some moment as irrelevant for context, purely theoretically, take specific consciousness quality as abstract mind phenomenon, than we could see using analogy of logical relation of consciousness about consciousness in sphere of consciousness, that there is another analogous system. Other words, it is analogous organization principle. This is just in ultrastructural complexity lower system, in which we can find analogous logical relations that of course, due to their lower degree of complexity have not reached the threshold of consciousness monumentality. This means that these mind contents have the lower autonomy degree because of their nature as constituents of ultrastructural hierarchy of consciousness system. They are in linear relation with supracritical mind contents meaning that they are lying on the same logical and psychological plate of consciousness mechanism machinery with mind elements building the primary consciousness level but not on hierarchical plate. Here, I would emphasize that these subcritical mind relations and objects based on them belong to just conditionally unconsciousness. For them cannot be said to express themselves as really unconsciousness, because these are conditionally, elementary and structural components of the consciousness system. They are characterized by various degree of complexity of quantum–transitional autoimprinting of consciousness system and not completely developed, differentiated, highly structuralized, definitive, defined and determined mind contents of supreme organizational level, which on the other hand can be conscious or unconscious all depending of energy value of the same origin and depending from mind condition. Nevertheless, what is for sure, they are in some certain conditions (e.g. psychotherapy) available to subject's consciousness perception due to resonant matching of associative with

unconsciousness content. We should keep this in the mind.

### *Evidence for level mediuality*

Logically–philosophical evidence of persistence of logically–interactive progressive function relations expressing the consciousness system complexity, and referring to acquired degree of relations implicit autonomy leading to certain nature of these relations depending of degree of complexity implies the objective need for second evidence embodying physical environmental medium embedding function parameters. Let us just say, purely hypothetically to return to physical beginning/basis of mind sphere, and then we will see that prime mediums for function development are its presentation on physiologically–biochemical processes of central neurotransmission and further its presentation on the level of EM field as the next step. On these two primary organizational steps, we can see evolution progress in mediuality complexion upgrading function of the consciousness system. For the purposes of this evidence I will analyze relation neural network/EM superstructure to show the nature of transition and laws of mind function development showing directly the conversion of mediuality. The concept is very simple. If the nature of the first jump is relation material/immaterial the next jump needs to be similarly radical in its transformation subtilizing further the EM field medium. On this way, I prove the second evidence and show the etheric nature of consciousness proving this kind of mind nature in biological systems. As we already showed the progression of logical relations in the first evidence analysis through ultralevel extraversion, we thus can imply that with further development medium, in which mosaic function has occurred, is also evolving. With this, I would conclude the second mediuality evidence of acorpuscular etheric substantiality of function medium where primary discussed theory about exact organization and the mechanism of mind essence, still remains at the level of hypothesis.

### **Elementary mind unit**

In order to determine and analytically access the mind nature problem most precisely, there is a need to define the term of elementary





mind unit. Sensory input dimension characterizes local neural network in every stimulus detection moment. Depending of mind environmental parameters state in space–time function, the constant sensory input dimension value is used to assign variable number of sensorial modalities and vice versa, single quality of sensory modality is assigned to variable value of sensory–information input dimension. Thus elementary mind unit represents just like in the other scientific areas, standardized entity value of analytical modulation of studied object (in this case mind). It represents direct, standardized, elementary extension of materialistic into mind sphere with previously described stratificationally–hierarchical structure of medium characterized by quantum transitional jumping for constant, specific conditions and quality of sensory modality as stimulus and information input of local or systemic neural network. Thus, in psychosomatic modulation techniques, these elementary mind qualities should be the targets of modulation representing on the same way keys of locks of somatic representation into mind sphere and whose somatotopic representational map is still unknown. This should not be reductively taken as degrading process of consciousness system complexity. It's just proposed one of the ways of approaching to physical sphere where transitionally resonant points of elementary mind units into matter simultaneously represent penetrate–adhesive points by which physiological processes would be subjugated to mind complexity built from elementary mind units. Psychosomatic therapy restitution hypothesis bases itself on this model.

### **The level transcendentally, mediumality and logic**

Before I discuss the nature of the qualia I think that we have to distinguish some key terms I will first define. One of the potential mechanisms of EM field mind organization and maybe even on higher organization levels is specific method of informational medium generation by spacious–temporal integration of formerly discussed relations into also previously mentioned the spheric like superstructure. I would emphasize here that this formation mechanism should be strictly distinguished from ultralevel extraversion by means that spheric like superstructure as the novel organizational level is not the level in all

means of that term, further meaning that it is not the radically new jump/level but more like basis structure for progression into extraversion. Medium organizes in spheric like superstructure before *real level* conversion. Thus, it arranges its elements into right relations necessary for the next quantum jump. It represents just higher formation or superstructure consisting of integrated and organized EM waves. These constrained by neural network architectonics, deterministically arranged are fusing themselves forming on that way spheric like superstructure and not extroverted ultralevel through presented superlevel. The whole system of mind essence based on spheric like superstructures and extroverted ultralevels into systems of higher levels on any supracritical hierarchic organizational level is characterized by constant present of unified, structural and elementary *transcendent medium* presenting the reality existence coefficient, generally speaking. There is a possibility, by my opinion, that this kind of medium is structured from the exotic matter but it is very hypothetical. The point is what's for sure, that it is very subtle and therefore highly instable and undetectable for the most superficial consciousness levels. However, in transpersonal mind states, during of high–level synchronicity, it maybe stabilizes its structure and therefore can maintain transitional persistence of Einstein–Rosen tunnel by stabilizing its walls. How it manifest itself during the normal consciousness states? During the comparison of some reality parameters, subject can perceive the specific *transcendent dimension–annihilating phenomenon* of particular function observables belonging to the consciousness system. Therefore, the subject is compelled to accept the reality by *veda law*, meaning as the acausalistic order. Transcendentality can be awakened only by the analysis of concrete entity as integral, considering its structural and spacious–temporal patterns and not by comparing variables, again because of formerly mentioned annihilating phenomenon. So I here introduce by the way the new potential scientific method where the object itself is variable under study and control variable simultaneously. But this should be further tested and developed. Transcendent medium is expressing some kind of immaterial, neutral quality characteristic but is blurred its organizing aspect. It has some



place in consciousness system hierarchy or its universality infiltrating the whole consciousness system structure like some kind of mind connective tissue influencing and determining in some degree general mind properties. This nature of transcendent medium synchronized and simultaneously opposed to polarized quality of reality generates some kind of equilibrium consisting of two components:

- A. Cognitive, non-transcendent component generating the subject's awareness about itself
- B. Unconscious, transcendent and non-cognitive component.

Considering this kind of relation, the subject therefore experiences his own consciousness through awareness about its intensity, feeling it, as some degree of consciousness level in relation with other consciousness intensities without knowing what it really is. This spontaneous empirical approach does not treat the whole object quality. If it is the opposite than we would be able to say that absolute quality of empirical consciousness system aspect is known to the subject himself. In order to make it real subject needs to ascend over the before mentioned annihilating phenomenon. However, unfortunately, since the both, mind as internal reality of the subject and external reality are characterized by transcendental dimensionality, they are not therefore available to knowledge by their existence but by analysis of single entity as mirror/prism of observing. This leads us to I like to call it *consciousness-escaping phenomenon* discussed later. From this follows as implication the deep encoding of human ignorance mentioned by Freud as so-called resistance (Freud, 1917). So we need to be very smart in battle against it.

Levels of aura, subtle anatomy, ethereal being and vibratory expression, mentioned earlier would be taken conditionally, because of the lack of strong scientific evidence of their existence. Question – how it works, than can be asked? If the answer on human mind power and complexity does not lie in these mediums, than in place of structural elements of consciousness needs to be some another generated complexity. The only answer is superorganized logic, in my opinion less possible but probable. However, it's necessary

for artificial intelligent systems. It seems too much reductive in context of biological systems and especially humans. Just in case, I will analyze it as one of the possible options of human kind evolution. This new mediumality is characterized by novel nature, but simultaneously it keeps the properties of system through ultralevel/superlevel law unchanged. Abstracting the mediumality for now, the logical laws of one mediumality level needs to be defined.

Let's just say for example to study consciousness as a quantum phenomenon occurring at the EM field medium, than ultralevel extraversion and quantum transitional autoimprinting as its basis could be studied using the specific quantum vector analysis. Relation determining quantum vectors define polarization in between unified focal elements of EM field medium with cognitive and gnostic implications determined by senses and neural network architectonics. On that way vectors describe active formalism at some mediumality level (*e.g.*, EM field mediumality level) which when extroverted in superlevel is self-confirming itself (autoimprinting) using elementary units of generated mediumality as consequence of conversion due to extraversion, whose base is consisting of deterministic vectors set at the previous ultralevel. Thus, the extraversion of ultralevel into a superlevel represents the conversion machinery for processed information in the brain circuits contributing to consciousness and other mind functions like intelligence and thinking as main mechanism supporting these processes. According to this, elementary causes underlie extraversion are represented by same formalism determining vectors and not by conversion into a medium *de novo* like previously said which is structuralized by elementary patterns. In this case we may say that information is converted by extraversion at some mediumality level generating the logic that way and not the medium itself. On this way, represented formalism (*e.g.*, triangle) would be self-represented due to extraversion as borderline vector interconnects greater number of points as elementary units of formalism at the superlevel than it could at the ultralevel. By this, triangle formalism described with three key points and interconnecting vectors at the ultralevel is qualitatively transformed to formalism determined with much greater



number of key points (e.g. at the border and inner area of triangle) and vectors at the superlevel. This leads to autoimprinting process (self–confirming) leading further to consciousness awareness or qualia. Basis of this phenomenology constitute quantum–holographic relations in between two observed levels as equivalent of explicit/implicit reality relation. Thanks to this, determination vector amplifies itself and constrained by the vector defining relation of formalism borders with environment enters to process of formalism differentiation, enabling that way self–confirming phenomenon to occur as formalism determination closer to consciousness experience of the subject.

### The nature of the qualia

One of the mechanisms enabling the qualia generation is before mentioned extraversion of the ultralevel (ultrastructure) into a supersystem (epistructure) of the higher medium level of evolution function of mind quality mediuality according to quantum–holographic law. However, this is not *conditio sine qua non* for the qualia generation. Even at the corpuscular–organically level of matter organization, it is possible to achieve some specific kind of reductive consciousness and experience of self–conscious observation called qualia. This tells us that primordial pattern of qualia is deeply encoded. The proposed theory of ultralevel extraversion just represents one of the adaptive options evolution has chosen for generation of qualia in biological systems. This kind of biological qualia has of course some original characteristics that will be expressed through psychosomatic modulation, offering that way healing potential to biological organism. As I already mentioned, generation of the qualia requires regardless of level mediuality specific relations of elementary mind units consisting the level mediuality of the consciousness system. This may look very encouraging in idea to produce not just highly intelligent but highly consciousness systems. However, I'm still just for studying the partial use of this potential in order to maintain and balance homeostasis in various disease treatments using psychosomatic modulation and not for creating such kind of artificial systems. By studying virtual highly conscious systems, the great potential of human kind could be exploited by upgrading the psychosomatic modulation to the extent of

capability to use just one organizational level resource to the maximum, independently of ultralevel extroversion mechanism as the only source of informational variability of modulatory algorithms. Besides, the ultralevel extraversion is hardly to achieve in artificial intelligence since it characterizes only the biological neural networks. Because of this, the possibility to generate qualia on lower organizational levels thanks to logical–interactive relations is thus imposed as a necessity. If, using the introspective analysis we discern empirical presentation of the qualia, consciously demarcate it from attached object of attention, where object just has the function as qualia carrier, then it could be concluded that the qualia is underlain by perceptive object *detection*. As mentioned before, following the trend of building the consciousness system complexity, it's obvious that perception doesn't exist at subcortical neural network neuroformations. That's why it's treated as one of the mind functions. Unlike it, the detection exists at this lower complexity levels representing the basis for perception, *conditio sine qua non* for qualia generation. It can be said that two mandatory structural – functionally parameters characterize qualia:

1. Object perception
2. Consciousness about the object
3. Consciousness about consciousness related to object as secondary consciousness/reflection (optional one – extraqualia or before mentioned secondary consciousness)

The basis of these parameters represents consciousness system detection of relations in between elementary mind units of the level mediuality that determine the object at particular level and interactive relations in between object with its environment. This is before mentioned differentiation process mechanism of the object mind presentation contrasting the object presentation with surrounding environment. However, in order to generate qualia, specific system conditions need to be set like awareness presenting strictly the mode of becoming acceptor for some detectable object properties. Further, the system is excited by received information input and enters into the activated state. At that point, it can be said that system detects the information at the primordial level. This



leads to interference of information with the surroundings leading further to activation of the other spacious-temporal medium compartments. At that point, system detects the primordial detection of information creating that way an upgraded detection. The new one assembles and assimilates the primordial one fusing with it and this upgraded, superposed detection is the first order detection, basis of the qualia. Limiting the observation to just one level, this progressive process continues until all the 4D medium compartments are activated. This is accompanied by the extroverted object ultralevel presentation into a supersystem according to quantum-holographic laws. These cyclic processes are reverberating with consequent generation of series of detected object detections resulting in detections with higher and higher order. At some critical point when reaching the particular complexity threshold, the system is capable to detect not just higher order object detection but primordial detection directly as the translocation of the medium unit compartments has occurred. The system is then capable to be primitively, blurry aware of object presence, since the object projects itself to the system as a whole and not just to its partial detection processes. As they are superposed they can, now as a system, first detect the object and then almost simultaneously highly detect it, incarnating that way primordial analysis and interpretation processes. Therefore, after the activation of medium by information input and first circle of direct primordial and indirect higher order detections of the object, every element of the medium exponentially gains the huge number of informational inputs where one represents the direct and the others the indirect detections. This organization based on interelementary relations of the medium can be modeled on the following way. The mediumality of the 4D spheric like superstructure would be simply presented through the 3D geometric organization of the medium units, structurally interrelated by the same number of dynamical connections, neglecting the time dimension for now. From structural aspect, this organization would be analog to the autoorganizing mapping Kohrenen neural network. However, as medium is tightly coupled to the time dimension of the 4D spacious-temporal continuum, the Kohrenen model presents that

way reductive approach to real state problem. As the evolving function of detecting relations tends to be infinite implying its huge dynamics, every medium unit in every moment is impacted by different information characteristics of the input describing object properties then it was in the previous moment due to drastic configuration changes again due to various informational inputs. Thus, every medium element detects the present state of the other medium elements and transformation of this state into a new one with constantly implicated dynamics of the level. It can be seen that element detects its own state indirectly through other elements detecting it and influencing it. There is probably another way of direct detection of its own state through reality implicate order by introversion of super/epilevel. This process is analogous to extroversion but not reciprocal one, we may say analogous to reciprocal one, with role of upgrading the consciousness system complex and making it closer to universality creating that way the basis of philosophy of panpsychism. At the level of the explicit reality, it is possible for the medium unit to detect the present state or transformation of the state by conversion of indirect to direct detection mechanism. During the receiving of the informational inputs about state transformation indirectly, the element takes the resulting state according to summary input, representing the elementary qualia. This process is also cyclic enabling the element to detect maximal number of inputs describing its own state in some elementary time moment. Element detects its own state and detection of detection of the state. These detecting circles are organized from circles of lower to circles of higher order. This can be modeled by integral function. This means that progressive detection processes also compel to hierarchic organization not just as structural but as functional one for the mediumality level in the moment of object perception with consecutive generation of the qualia. It is clear that this functional organization is quite different from structural with Kohrenen neural network as the analog. Regarding the above-mentioned mechanisms, the mediumality unit element simultaneously detects:

- A. Self-state in some observed time moment
- B. Conversion of self-state in some observed time moment



- C. States and their transformations of the other medium units
- D. States and their transformations in the system as the integrated whole
- E. Subsystem states including all possible numerous variations in subsystem states with its own conversions

By integration of the elementary states and detection processes of these states into a sovereign system, organizational wholeness of level mediocrity detects/perceives the object with its surrounding borders meaning as differentiated and well-formed coupled to mind content especially with certain degree of primary consciousness level referring to that particular object. Then it can be said that qualia is born. With this, system enfolding unity and integration of the wholeness are achieved. Thanks to detection speeds due to entanglement in between elements, the quantum dynamical inner informational input with internal encoded hypervariability is generated. Such superquantum system is behaving as highly plastic quantum-holographic Hopfield super neural network actualizing quantum-coherent self-states superposition on systemic, subsystemic and elementary level. At the same time, this represents the evidence of necessary existence of this solution to the problem of qualia generation as one of the potential alternatives. Quantum coherent superpositions of the systemic level states are representing the fundamental background of qualia generation mechanism at the eplevel as well as on the level of the implicit reality. According to principles of emergentism philosophy, deletion of internal relations is occurring as the ultimate integration mechanism due to system autonomy accomplishment resulting in the supreme product – a structural etheric unary qualia representing the potential scientific and philosophical proof and analog of soul/spirit depending of religious doctrine interpretation. This theory would be at the same time the answer to the question – why just biological systems have the soul? Although the artificial intelligence systems are leaving the informational imprinting at the level of the Universal consciousness, due to lacking of minimal critical organizational threshold and implicative extraversion/introversion of the ultra/eplevel it can be treated just as a spirit analog but not the spirit of its own. The origin of the soul/spirit is above the informational

processing superposition level of extra/introversion of ultra/epi(super)level of explicit/implicit order. What lies beyond, who knows? I propose a few solutions:

- A. Energy charge enhancing
- B. Another reality
- C. *De novo* organization

In any case, spirit would be the real superqualia but I will leave this discussion for some another paper.

### Consciousness escaping phenomenon

During consciousness introspective studies, it can be observed that consciousness cannot penetrate into self-containing structure and even if it can, there is great resistance it expresses during that process. Such kind of occurrence I call consciousness escaping phenomenon meaning literally that consciousness escapes from itself. There is a great probability that such kind of mechanism has protective effect on mind integrity. Some resonant effects could occur if there is not that phenomenon that could potentially devastate the consciousness system resulting at least as psychotic break and I would not exclude even the somatic manifestation in this case.

Perception of reality is just available to consciousness but the segment that is not the consciousness itself. That is why exists the deep encoding of human knowledge as I previously explained. The consciousness system during information processing represses the detection of its own function and just self-confirms and amplifies the perceived part of reality that then becomes conscious one. Simultaneously there is potential consciousness about unconsciousness related to same underlying mechanisms. If we try to surpass this, the new envelope of unawareness is occurred. The ignorance is always on top. Therefore, if we want to survive we have to not to know.

### Emergentism/Panpsychism dilemma Where is the truth?

As it almost always happen, the truth is somewhere in middle. Panpsychism should be understood just as potential of the Universe to replicate itself through various forms of intelligent life. Something that religion calls God's creation. But if we talk about particular



intelligent organism, than we need to consider its modes of complexity and organization including mechanisms for specific, concrete consciousness generation as marker for particular species (*e.g.*, human kind). In that case, the emergentism is objective need. Observed hierarchically, emergentism is based upon panpsychism and has much greater clinical implication as such.

### **Psychosomatic modulation based on the Model**

In this section I will expose some pragmatic elements from previously said and indicate to its potentially healing potentials in treatment of various diseases.

In previous sections I've explained the proposed concept of extraversion of the ultralevel into a system of the higher level. According to this model of consciousness quality, mind could be modally presented as fractal supersystem in which the information running from the ultralevel is on quantum-holographic manner projected to supersystem as converted (more conscious) but with the same informational feedback to ultralevel. Another words, the nature of epilevel/ultralevel relation is quantum-holographic meaning that information contained in some of the levels as elementary is projecting to all of infinitely small adimensional qualitative compartments of the adjacent level of this relation, by one lower/greater. These compartments as information carriers are characterized by lack of quantity and presence of absolute unary quality. Every subsystem also as a part of 4D space-time level dimension contains the complete information as the interrelated level which is the essence of holography. So, relation of two levels can be observed as specific communication in between them as two multidimensional integrals interacting at the plate of informational presentation. Consciousness system as the construct of specific organized informational order at the boundary information/entropy approximately can be modeled as follows. It's already mentioned the multilayer property of the consciousness system. Observing the one of the mediumality levels it can be noticed that it's consisted of associatively connected mind contents. All of them at that particular level have the same organizational complexity but different informational content. Thus we may

say they represent the systemic horizontal structure of level mediumality. It's purported that at the implicate order level associated mind contents are fused and non-differentially highly integrated with not determined relations in between them. According to holographic laws, at the moment of transformative explosion into an explicit superlevel order, elements of reduced dimensionality (above all time dimensionality) organize the relations of context-informatory structural hierarchy and successiveness inside of the boundaries of the level – 4D geometry architectonics/homogeneity state is collapsing that way.

Now, taking into account the whole organization of the consciousness system from vertical aspect as fractal ultralevel/superlevel (quantum)holographic system with horizontally associated mind contents at some particular level as its horizontal aspect, it can be seen that in such kind of 4D multidimensional space-time system exist determined (potentially undetermined) number of potentially somatic modulatory programmable relations. They represent, by the modulatory program, highly determined strikes of penetrable-adhesive puncta / localities of the consciousness system. Coherently cohesive synchronized informational superposition as the modulation impact fundament corrects the homeostatic disorder on various organization levels. The place of impact (mediumality level and its particular mind content) is programmable parameter representing the target zone for the penetrable-adhesive localities of consciousness system all depending of nature and type of disorder as main and basic parameter for this kind of somatic modulatory strategies and algorithms.

Inner subjective reality consists of interactively coexisting informational relations as the objective aspect of the inner reality. In the interaction with the novel information (*e.g.*, running from senses, preferable) filling the surrounding for the observing point of particular information, information enters the state of associative and holographic integration with the new one. Another words, this means that program modulation of any subsystem may be realized by modulation of any informational input or element of consciousness system thanks to this kind of system multidirectional connectivity which is



almost like quantum–holographic implicit self–carrying annihilating structure tending to implicit cohesiveness. Because of this huge amount of possible strategies, degree of freedom and variability, various algorithmic programs of modulation are theoretically possible. However, this is at the same time also the limiting factor leading to carefully choosing the strategies picking the most powerful, most specific, most selective and most important, the most closest (informational likeness/ complementarity) to health problem or simply said, the most effective modulatory strategies.

When the organism is ill, homeostatically misbalanced, information generated by this kind of system state is propagated by peripheral nervous system (PNS) on proprioceptive and nociceptive way, depending of presence/absence of pain sensations, then by humoral way (hormones, cytokines and indirectly by autacoids) and by acupuncture system to CNS. At the level of this organic system after crossing over the acupuncture–nervous threshold and fronto–limbic excitatory reticular–thalamic ascending activating system (ERTAS) filter, information is gaining the status of high frequency processed information (EEG–alpha, beta and gamma waves) of conscious character. In the case of low frequency processed information (EEG–delta, theta waves) modulation is undoubtedly possible but with significantly less quality of patients compliance due to unconscious information character but nor the less significant as the case in the malignant diseases.

In the internal environment, information enters the process of integral, fusing, imploding, holographic–infiltrating and associative interactions with surrounding. As we are interested, in such kind of therapy interventions, for aims of information analysis for every kind of actually processed information by the patient (*e.g.*, pain) made by doctor, doctor needs to know its analytical parameters such as localization, intensity and others. Using this method and approaching to specific characteristics of qualia information, the aim can be achieved although the patient perceives the same information holistically.

Two ways of therapy inputs / approaches are potentially possible:

- Reductive–neutralizing approach
- Explosive annihilating approach

The first one would be based on induction of information processing block and the other would be based on autodestruction of mind content by homeopathic like mechanism of informational amplification induction of resonant disorder destruction. I will cover them in short. If the explicit holographic form and the information input would be superposed, the resulting information would then have the integrative–transforming influence on holographic implicate order interfering with holographic informational structure on particular way. They can be matched with consecutive resonant effect (autoimprinting effect) or repressing each other (autodeleting effect) or autoimprinting/ autodeleting output variety effect as one of the potential alternatives. But what will happen if information input interferes with one of the partial units of the expressed holographic picture that represents the basis of holographic selective therapy approach? Then probably, we may just guess, the asymptotic fusion of the partial information units of explicit order and implicate order would occur. Then due to specific type of this integrative interaction the polarizing force in between absolutely, completely fused attractor consciousness content and the asymptotic incompletely cohesive one characterized by high potential energy is generated. Now the mind driving force is created and it can be used in myriad of different ways. I've emphasized some of them here. Depending of resonant characteristics of this kind of input with surrounding environment we would have reductive–neutralizing or explosive annihilating or hybrid implicative aspect of somatomodular strategy algorithms.

### Conclusion

Summarizing altogether, we can conclude that consciousness is a very complex and highly dynamical multidimensional system of deeply integrated functional levels represented as unary entangled highly differentiated and sophisticated systemic structure with its own hierarchy. We could take this system as some kind of spiritual and biological central processing unit of the human organism that receives information from external as well as the internal reality, processes them and gives



specific output. These outputs could be let's say programed on highly specific manners to give us various wanted psychosomatic effects in treatment of various diseases and clinical conditions by adequate mapping of relations in

between of informational processing and various specific, highly controlled inputs. Mastering these techniques, we might look at new horizon. I expect these in near future and sincerely hope to.

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