

MERIDIAN (PSYCHO)THERAPIES: PSYCHO-PHYSIOLOGICAL CORRELATES

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PHENOMENOLOGY OF MERIDIAN (PSYCHO)THERAPIES & QUANTUM-HOLOGRAPHIC PSYCHOSOMATIC-COGNITIVE IMPLICATIONS

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ABSTRACT. In the *first part* of the paper, the novel *Meridian (Psycho) Therapies* for very fast removing of numerous psychosomatic disorders (traumas, persistent phobias, allergies, post-traumatic stress) are considered, demonstrating *close relation-ship acupuncture system & consciousness*, with significant psychosomatic & transpersonal implications. Then, in the *second part* of the paper, the *psycho-physiological correllates* (monitored by GDV bioelectrography, Biofeedback electro-physiological measurements, & Standard psychological tests) of the effects of several meridian (psycho) therapies are discussed.

Keywords: *Meridian (psycho)therapies, Psychosomatic disorders, Traumas, Persistent phobias, Allergies, Post-traumatic stress, Transpersonal psychology, Acupuncture system, Consciousness, Bodily hierarchical Hopfield-like quantum-holographic neural networks, Quantum-holographic paradigm, Psycho-physiological correlates.*

1. INTRODUCTION

Contemporary investigations of **psychosomatic diseases** imply necessity of application **holistic methods**, oriented on **healing person as a whole** and not disease as a symptom of disorder of the whole, implying their **macroscopic quantum origin** [1,2].

In the focus of these quantum-holistic methods are bodily **acupuncture system** & **consciousness**, with surprisingly significant psychosomatic-cognitive implications.

The **close relationship** of **acupuncture system** with **consciousness** and **psychosomatic problems** is implied by novel **meridian (psycho) therapies** [3,4], based on ancient teaching of psychosomatic disorders on the level of **energetic field** in and around human being, proving in practice that many psychological and emotional problems can be successfully treated in quantum leaps, without the need to pass through long and laborious stages of discovery, emoting and cognitive restructuring, often considered to be the trade marks of serious psychotherapy.

Meridian (Psycho)Therapies are also called ***Energy (Psycho)Therapies***, because of the common observation of majority of practitioners that psychological problems can be understood as manifestations of ***energy disruptions*** of energy configurations in the ***human energy field*** (or ***aura***).

In essence, systems of ***Energy/Meridian (Psycho)Therapies (EMPTs)*** represent an application of the ***energy paradigm*** into the fields of ***psychotherapy & spiritual technology***, and a ***quantum leap*** in the understanding of these important areas, since psychological problems are resolvable ***far faster*** if we approach them as if they were ***disturbances in energy fields***, than if we start searching for their historical causes – as was characteristically done in earlier times, beginning from the Freud psychoanalysis.

In this part we shall mention just few main systems of EMPTs and then Deep PEAT (***Primal Energy Activation & Transcendence***), Basic PEAT, DP4 Method, and Fore-Finger Method [4].

Thought Field Therapy (TFT) was invented by clinical psychologist Roger Callahan, who started this energetic revolution in psychology and psychotherapy. TFT entails diagnostic procedures to determine meridian disbalance, combined with percussing at specific acupuncture points in a prescribed sequence (algorithm) in order to treat an array of psychological problems.

Emotional Freedom Technique (EFT) was created by Gary Craig, one of the first disciples of Roger Callahan; he founded it on the same basis as TFT, but, judging by the statements of many practitioners, it is simpler and more efficient than TFT, because it uses just one algorithm for all disturbances.

Tapas Acupressure Technique (TAT) was developed by Tapasvini Fleming, who fruitfully connected her knowledge of acupressure with meridian systems; briefly, TAT is a 'do-it-yourself' therapeutic technique, based on traditional Chinese Medicine, which is extremely efficient with all kinds of allergies, sensitivities with different kinds of food and negative environmental influences.

Eye Movement Desensitization & Reprocessing (EMDR) was created by Francine Shapiro, and works by diminishing sensitivity through eye movements and reprocessing traumatic incidents; it is simple and efficient method for healing traumas and disorders connected with anxiety.

PSYCHO-PHYSIOLOGICAL CORRELATES OF MERIDIAN (PSYCHO)THERAPIES

The *experiment* with meridian (psycho)therapies was *conducted in two parts*, mutually *separated for two months*.

In the *first part of experiment*, the 17 volunteers were asked to *remove vividly recalled three traumas* by application of the *Fore-Finger Method, Basic PEAT & DP4 Method*, subsequently.

Fore-Finger Method is the newest method, efficient for removing even very hard psychological traumas. The method uses centripetal rotation 3-4 times counterclockwise around client's bodily axis, with client's previous closed-eyes visualization of the 'frozen' problematic situation. The client pays attention and reports four elements of that experience, alongside with putting the top of fore-finger in the center of this traumatic photo and imagining that the photo is stuck on the top of the fore-finger. The method is as simple as efficient. If the treated trauma is related to some other person(s), and trauma is not completely removed at the end of the process, it is necessary to do circular process, i.e. from all relevant viewpoints (just points of view which are emotionally charged).

On the other hand, in *associative sequence* during our *Deep PEAT*, in 'frozen' photo of problematic situation during *Basic PEAT*, and in *alternating visualizations of the polarities* of self/problematic situation in *DP4 Method*, the simultaneous effects of *visualization & touching of some acupuncture points* might be interpreted as *smearing & associative integration of the memory attractor of psychosomatic disorders* (cf. **Fig. 1**), through continuous imposing of new boundary conditions in the energy-state space of acupuncture system/consciousness. In addition, removing of traumas in the *Fore-Finger Method* via *visualization & counter-clockwise 3-4 rotations* around client's bodily axis, might be theoretically interpreted as *additional discharging of the memory attractors of psychosomatic disorders*.

Having in mind very *high efficiency* of *transpersonal circular meridian (psycho)therapeutic processes*, i.e. from all relevant mentally-addressed *meta-positions* of other persons involved in the treated trauma, this implies that these interactions of the trauma-related persons have *quantum-gravitational origin* in *transitional states of the trauma-related persons* [1].

It should be also pointed out that discovery and *neutralization/integration* of the client *Primordial Polarities* (Yin-Yang) during *Deep PEAT*, points to *most fundamental roots* of client's compulsive and unconscious *life game & thought processes* on the very *boarderline (quantum-coherent) implicate order – (classically-reduced) explicate order* of the quantum-holographic individual/collective consciousness [1].

In the moment of neutralization and getting conscious of *Primordial Polarities*, Being *regains* its spiritual and psychological *freedom* out of previously unconscious and compulsive *life game!*

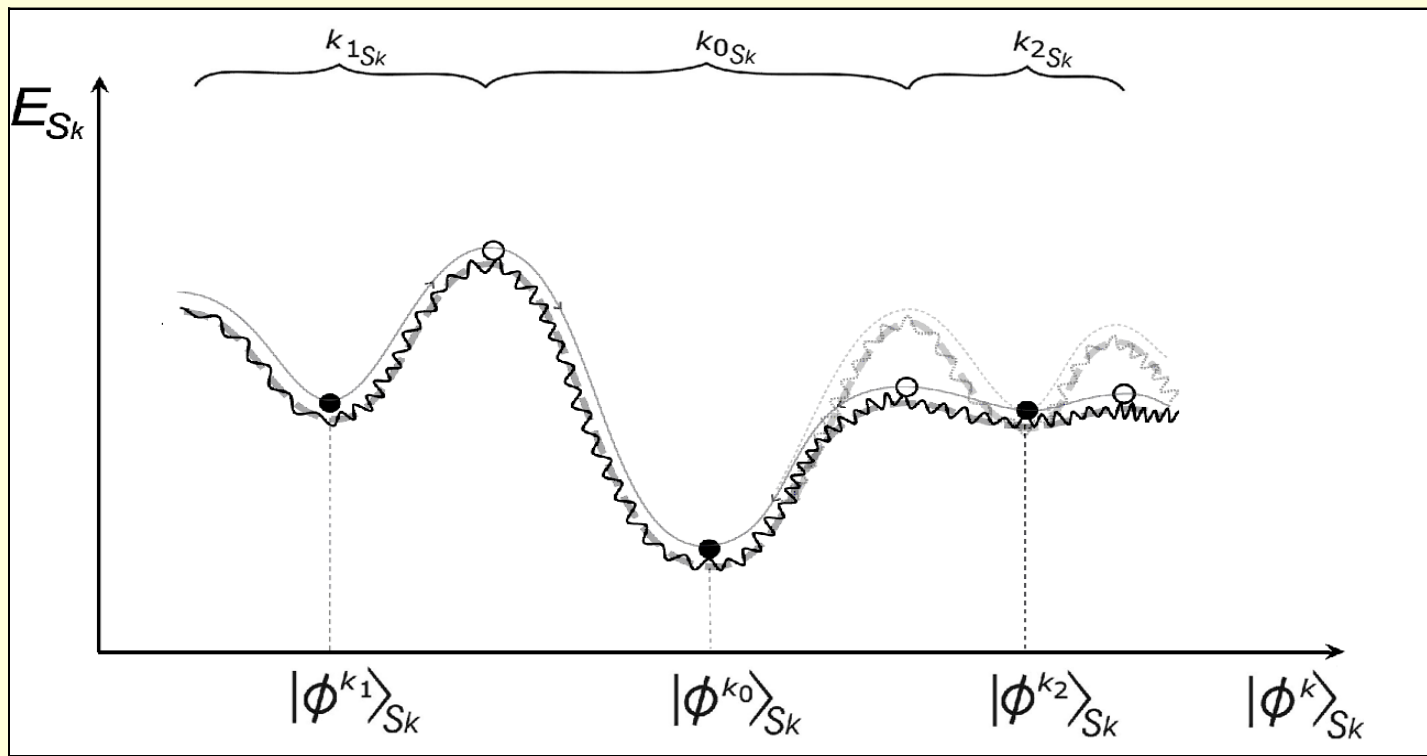


FIGURE 1. Schematic presentation of '**smearing**' & **associative integration** of the memory attractor of psychosomatic disorder ϕ^{k_2} into normal ego-state ϕ^{k_0} , **via** simultaneous effects of visualization of the psychosomatic problems & tapping/touching of some acupuncture points, in **meridian (psycho)therapies** – which might be interpreted as successive imposing of **new boundary conditions** in the energy-state space of acupuncture system/consciousness $E_{S_k}(\phi^{k_i})$ – when memory attractor of the *initial psychosomatic disorder* ϕ^{k_2} (dashed line) *becomes shallower and wider* (full line), with *greater overlap and followed associative integration* into memory attractor of normal ego-state.

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Basic PEAT requests along with imagination of the 'frozen' problematic situation an alternative using of the three acupuncture points around both eyes. Unpleasant experience disappears mostly in one treatment. The method has proved efficient not only in removing actual problems, but also in removing hard, chronic psychological disorders.

DP4 Method is the fourth level of Deep PEAT, which requests along with imagination of the 'frozen' problematic situation an alternative using of only one 'insight' acupuncture point in the internal corner of both ocular orbits: by touching right-hand point, related to rational and logic left-hand hemisphere, it is requested from the client to feel himself/herself 'here and now', and to report the four elements he/she feels in this moment (psychic picture, thought, emotion, bodily sensation). Then by touching left-hand point, related to holistic and emotional right-hand hemisphere, it is requested from the client to feel problematic psychological situation as if it is happening now, and to report their four elements. The client should move in his/her imagination alternatively between two situations (two polarities) and two points on the face, and very quickly these polarities will be empty. If the treated problem is related to some being or group, it is necessary to do circular process, i.e. from other viewpoints. If this method is used to create some new desired state, feeling or identity, the client put his/her right-hand fingers on the right-hand point and feel himself/herself 'here and now', and then put his/her left-hand fingers to the left-hand point and feel himself/herself within the snap-shot of the desirable situation.

In the ***second part of experiment***, the 15 volunteers were asked to ***remove vividly recalled psychological traumas & reveal Primordial Polarities*** by application of the Deep PEAT.

Deep PEAT goes to the deepest possible level of the psychological problem, its essence and root, enabling to find and neutralize the client's Primal Polarities, thereby resolving many problems that previously appeared in the chain of contents. In contrast to most EMPTs where the subject taps certain points on his/her face, body, or fingers, in Deep PEAT one lightly puts two fingers on the points, take one deep breath, exhale, and remove them a few seconds later; in its application only 3 acupuncture points are used. The basis and greatest value of the method is that the PEAT Processor does not pay too much attention to the problem he/she is working with, but rather on the contents of the mind which bubble up very quickly to the level of awareness, and does not end the session until the problem is resolved (on average a session lasts from 20 to 45 minutes). As a method of healing PEAT is a transpersonal EMPT, which removes quickly, easily and elegantly whole chains of traumas and other negative contents without emotional abreaactions, by releasing blocked energetic currents in the aura of a Being, and making conscious and neutralizing opposites from extremely remote times: problems, destructive fantasies, compulsions and obsessions, blockages, entities, implants...

In **both parts of experiment**, we studied **psycho-physiological correlates** (**Gas visualization discharge (GDV) bioelectrography, Biofeedback electrophysiological measurements, Standard psychological tests**) of the **effects of the meridian (psycho)therapies** described above, applied to volunteers with (more or less significant) psychological traumas.

GDV bioelectrography [5] was applied by using GDV camera type PEL-KO, to monitor the psychosomatic state of the volunteers just before and after application of every meridian (psycho)therapeutic method, by measurement of the stimulated electro-photon emission from all ten fingers in volunteers, whose information is software-transformed via an expert system based on Chinese and Indian traditional medicines into the human energy state, providing indirect information about the state of organs, meridians and chakras.

Biofeedback electrophysiological measurements [6] were applied by using ProCom2 device with software Biofeedback Infinity, to monitor basic skin response (BSR) of the volunteers before, during and after application of every meridian (psycho)therapeutic method, quantified *via* skin conductance (SC), providing indirect information about degree of skin moisture i.e. physiological excitement of the organism. Electrical conductance below 1 μS is considered as a measure of low physiological excitement, and above 5 μS as a measure of high physiological excitement.

Standard psychological tests [7-9] consisted of the *battery of three tests*:

(1) Digit Span test from WAIS-R, consisting of repeating the number series in forward consecutive direction (providing a measure of verbal attention span) and repeating the number series backwards (which assesses short term memory) [7];

(2) MMPI multidimensional personality test consisting of 201 items [8] (with "correct"/"incorrect" answers used to calculate scores in one or more of the total of 11 scales comprising the MMPI; three scales are controls used to verify the adequacy and readiness of the subjects for this kind of assessment, i.e. the degree of reliability of the test result: L (indicative of naive or rigid approach to the test), F (scores confused thinking or aggravation of pathology), and K (scores defense mechanisms); remaining eight scales are: Hs (narcissism of the body and hypochondria), D (depressive symptomatology), Hy (repression, negation and presence of conversive symptoms), Pd (immaturity and impulsiveness), Pa (sensitivity and hostility), Pt (anxiety and obsessive thinking), Sc (confused and bizarre thinking) and Ma (euphoric and hyperactive behavior); in each of the scales, the score over the threshold T value of 70 can be considered indicative of clinical syndroms);

(3) CON-6 cybernetic battery of six conative tests, administered in the form of a questionnaire consisting of 180 questions [9] (with answers to the statements offered as five degree scales ranging from "completely true" to "completely false", used to calculate the scores of the six scales: Epsilon (degree of the disorder of personality activation), Xi (psychosomatic disorders), Alpha (anxiety), Sigma (aggressiveness), Delta (dissociative disorders), and Eta (the disorders of the integrative functions of the CNS); the results are expressed in "qualification groups," where groups 1, 2 and 3 indicate adequate performance of the system it assesses, group 4 indicate substandard performance, and group 5 points to pathological aberrations in the functioning of the system in question).

The **obtained results** are presented below.

For the **first part of the experiment** monitored by **GDV bioelectrography**, it can be seen from **Table 1** that in 8 volunteers **without** significant traumas the biggest changes (the lowest t-test values) of distributions/mathematical expectations before and after meridian (psycho)therapies occur at Vishuddha chakra in the Fore-Finger method and at Sahasrara chakra in the Basic Peat method, while the smallest changes (the highest t-test values) before and after therapies remain at Anahata and Ajna chakras in the Basic Peat method. In 9 volunteers **with** significant traumas their changes in distributions/mathematical expectations before and after meridian (psycho)therapies are far greater (far lower t-test values), which is the most apparent at Muladhara, Swadhistana, Manipura and Anahata chakras in the Fore-Finger method, at Manipura and Sahasrara chakras in the Basic Peat method, and at Muladhara and Vishuddha chakras in the DP4 method, while the smallest changes (the highest t-test values) before and after therapies remain at Anahata, Vishuddha and Ajna chakras in the Basic Peat method, and at Sahasrara chakra in the DP4 method.

TABLE 1. The t-test values as a measure of agreement between distributions/mathematical expectations at the seven chakras (Muladhara, Swadhistana, Manipura, Anahata, Vishuddha, Ajna, Sahasrara), *monitored by GDV bioelectrography* before and after subsequent application of one of the *meridian (psycho)therapeutic methods* (Fore-Finger, Basic Peat, DP4), for the two groups of volunteers (without and with significant traumas).

t-test before - after		MULADHARA	SWADHISTANA	MANIPURA	ANAHATA	VISHUDDHA	AJNA	SAHASRARA
Without traumas	FINGER	0.30	0.20	0.56	0.19	0.04	0.35	0.67
	PEAT	0.46	0.31	0.59	0.93	0.55	0.98	0.09
	DP4	0.40	0.61	0.38	0.52	0.42	0.48	0.65
With traumas	FINGER	0.04	0.11	0.07	0.07	0.18	0.21	0.49
	PEAT	0.63	0.29	0.02	0.88	1.00	0.95	0.09
	DP4	0.09	0.29	0.17	0.48	0.11	0.21	0.88

For the *first part of the experiment* monitored by *Biofeedback electrophysiological measurements*, for 8 volunteers *without* significant traumas the mean values of the conductance were 3.7 μS during the visualization of the problematic situation and 2.6 μS after the Fore-Finger method applied (with t-test value **0.001**), 4.4 μS during the visualization and 3.7 μS after the Basic Peat method applied (with t-test value **0.092**), and 4.9 μS during the visualization and 3.7 μS after the DP4 method applied (with t-test value **0.006**). On the other hand, the higher values of the conductance were found in 9 volunteers *with* significant traumas, with mean values of the conductance 5.3 μS during the visualization of the problematic situation and 3.2 μS after the Fore-Finger method applied (with t-test value **0.002**), 4.9 μS during the visualization and 4.1 μS after the Basic Peat method applied (with t-test value **0.059**), and 5.6 μS during the visualization and 4.3 μS after the DP4 method applied (with t-test value **0.004**).

For the **second part of the experiment** monitored by **GDV bioelectrography**, it can be seen from **Table 2** that the biggest changes (the lowest t-test values) of distributions/mathematical expectations in 15 volunteers without significant traumas before and after Deep Peat meridian (psycho)therapeutic method occur at Anahata, Vishuddha and Ajna chakras, while the smallest changes (the highest t-test value) before and after therapy remain at Swadhistana chakra.

TABLE 2. The t-test values as a measure of agreement between distributions/mathematical expectations at the seven chakras (Muladhara, Swadhistana, Manipura, Anahata, Vishuddha, Ajna, Sahasrara), **monitored by GDV bioelectrography** before and after application of the **Deep Peat** meridian (psycho)therapeutic method, for one group of volunteers without significant traumas.

t-test before - after	MULADHARA	SWADHISTANA	MANIPURA	ANAHATA	VISHUDDHA	AJNA	SAHASRARA
DEEP PEAT	0.15	0.77	0.45	0.01	0.04	0.02	0.30

For the **second part of the experiment** monitored by *Biofeedback electrophysiological measurements*, the mean conductance in 15 volunteers without significant traumas was 6.0 μS during the visualization of the problematic situation, and 4.8 μS after the Deep Peat method applied (with t-test value **0.024**).

Effects of meridian (psycho)therapies on **standard psychological tests**, completely evaluated on only 4 volunteers passing both parts of experiment, indicate no change in scores of *Digit Span test* & *CON-6 test*, before and after the meridian (psycho)therapies. On the other hand, the results obtained using the *MMPI test* offer evidence of significant changes on the personality level of the subjects, before and after the meridian (psycho)therapies: the averaged profile of the subjects **before** (psycho)therapies indicated the dominant **presence** of the symptoms belonging to the neurotic spectrum (depression, hypochondria, hysteria, anxiety), while **after** the application of (psycho)therapies, symptoms related to anxiety, somatization as a way of dealing with stress, and repression of intrapsychic suffering were **alleviated** significantly (and can no longer be regarded as indicative of clinical syndromes), while only symptoms related to depression remained significantly **increased**.

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3. CONCLUSION

Meridian (Psycho)Therapies for very fast removing of numerous psychosomatic disorders (traumas, persistent phobias, allergies, post-traumatic stress) are firstly considered, demonstrating **close relationship** between **acupuncture system & consciousness**.

Simultaneous effects of visualization of psychosomatic problems & tapping/touching of some acupuncture points, might be interpreted as smearing & associative integration of disorder-related memory attractors, through successive imposing of new boundary conditions in the energy-state space of acupuncture system/consciousness during visualizations of the psychosomatic problems.

Psycho-physiological correlates (monitored by **GDV bioelectrography, Biofeedback electro-physiological measurements, & Standard psychological tests**) of the **effects of meridian (psycho)therapies** on (more or less significant) psychological traumas are discussed, applied to **17 volunteers** in the case of **Fore-Finger Method, Basic PEAT & DP4 Method**, and **15 volunteers** in the case of **Deep PEAT**.

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4. APPENDIX: SCIENTIFIC BASES OF QUANTUM-HOLOGRAPHIC PARADIGM

In Talbot's excellent book *The Holographic Universe*, he refers to renown quantum physicist David Bohm and neurophysiologist Karl Pribram, whose investigations imply that *Universe* might be a *giant quantum hologram*, a kind of *mind construct on the subject/object interface* – thus relativising a question whether objective reality exists or *fluctuate between implicate & explicate order*!? In his book, Talbot (himself extrasense!) argues that most of well documented *mysterious phenomena*:

synchronicity, lucid dreams, eidetic pictures, multiple personalities; viewing & therapy of aura, visualizing, hypnotic & miraculous healings; mystical religious, out-of-body & near-death experiences; psychometry, precognition, extrasensory perception; psychokinesis, materialization, teleportation;

might be presumably explained in the framework of (still controversial) *quantum-holographic paradigm*.

4.1 QUANTUM AND CLASSICAL NEURAL NETWORKS: LOCAL & GLOBAL COGNITIVE AND PSYCHOSOMATIC IMPLICATIONS

In the context of contemporary *investigations of quantum-holographic bases of consciousness* and *their fundamental cognitive-epistemological and psychosomatic-religious implications*, association of individual *consciousness* to manifestly-macroscopic-quantum *acupuncture system*, and application of *theoretical methods* of associative neural networks and quantum neural holography and quantum decoherence theory, imply *two cognitive modes* of consciousness, according to the coupling strength consciousness-body-environment [1]:

- (i) *weakly-coupled quantum-coherent direct one* (in religious/creative transitional and altered states of consciousness, like prayer, meditation, creative dozes, lucid dreams...),
- (ii) *strongly-coupled classically-reduced indirect one* (in perceptively/rationally mediated normal states of consciousness, like sensory perception, logical and scientific thinking...),

with conditions for **mutual transformations** – and significant **religious and epistemological implications** related to re-gained strong coupling of quantum-holographic contents of consciousness with bodily-environment, classically-reducing directly obtained quantum-coherent informational content – thus explaining **in principal non-adequate informational rationalization** of any direct quantum-holographic spiritual/religious **mystical experience** (as a **general problem** of the quantum theory of measurement, of **reduction of implicate order** of quantum-coherent (quantum-holographic) superpositions **into explicate order** of measured projective quantum and mixed classical states [1]!).

So it seems that **science** is closing the circle [1], by **re-discovering two cognitive modes of consciousness** and at the same time by imposing its own **epistemological limitations** – as it was preserved for millennia in **shamanistic tribal traditions**, or as it was concisely described by Patanjali in **Yoga Sutras**, pointing out that mystical experience (samadhi) is 'filled with truth' and that 'it goes beyond inference and scriptures', or as this difference between faith and knowledge was formulated at the beginning of the last century by Berdyaev in his **Philosophy of Freedom** as the difference of two modes of cognition, prayer-mediated 'comprehension of the affairs invisible' and rationally-mediated 'comprehension of the affairs visible'!

At the same time, the *analogy between mathematical formalisms of Hopfield's associative neural network & Feynman's propagator version of the Schrödinger equation* [1] additionally implies that *collective consciousness* is possible *ontological property of the physical field itself* with various micro-quantum and macro-quantum (both non-biological and biological) excitations, which is widely spread thesis of *Eastern esoteric/religious traditions*.

Then *memory attractors* of quantum-holographic space-time network of *collective consciousness* can be treated as *psychosomatic collective disorders* representing *generalized (quantum)holistic field records* (including interpersonal *hesychastic-prayer finally-reprogrammable loads*) – which might represent *biophysical basis of (quantum)holistic global psychosomatics* [1], with *religious/social implications* on necessity of *transpersonal spiritual quantum-holographic removing* of all unwilling collective memory attractors (which non-reprogrammed by prayer will unless cause psychosomatic diseases and interpersonal fights in this and/or further generations they are transpersonally and unconsciously transferred to, on the level of collective consciousness).

The same might be related to *lower hierarchical quantum-holographic macroscopic open quantum acupuncture system / individual consciousness* S_k , with memory attractors (states) $\phi^{(k_i)}$ in the energy-state $E_{S_k}(\phi^{k_i})$ hypersurface (schematically presented in **Fig. 1**) and *its quantum-holographic memory/propagator* [1]:

$$G^{(k)}(r_2, t_2, r_1, t_1) = \sum_i \phi^{(k_i)}(r_2, t_2) \phi^{(k_i)}(r_1, t_1)^* = \sum_i A_{k_i}(r_2, t_2) A_{k_i}(r_1, t_1) e^{\frac{i}{\hbar}(\alpha_{k_i}(r_2, t_2) - \alpha_{k_i}(r_1, t_1))}$$

which might represent *biophysical basis of (quantum) holistic local psychosomatics* [1].

It should be pointed out that *quantum decoherence* might play *fundamental role in biological quantum-holographic neural networks*, through *energy hypersurface* $E_{S_k}(\phi^{k_i})$ *shape adaptation* (in contrast to *low-temperature artificial qubit quantum processors* where it must be *avoided* until the very read-out act of quantum computation!) – which implies that Nature presumably has chosen elegant *room-temperature solution for biological quantum-holographic information processing*, permanently *fluctuating* [1] *between quantum-coherent states* $|\phi^k(t)\rangle_{S_k} =$

$\sum_i c_{k_i}(t) |\phi^{k_i}\rangle_{S_k}$ and *classically-reduced states* $\hat{\rho}_{S_k}^k(t) = \sum_i |c_{k_i}(t)|^2 |\phi^{k_i}\rangle_{S_k S_k} \langle \phi^{k_i}|$ of *acupuncture system/consciousness* S_k , through *non-stationary interactions* with out-of-body farther environment & through *decoherence* by bodily closer environment [1].

The same might be related to **lower hierarchical quantum-holographic macroscopic open quantum cellular enzyme-gene level**, which might be also functioning on the level of permanent **quantum-conformational quantum-holographic like molecular recognition** (through changes in operator of macromolecular electronic-conformational density of states) – so that **quantum neural holography** combined with **quantum decoherence** might be very significant element of the **feedback bioinformatics**, from the level of cell to the level of organism [1].

All this additionally imply that the **whole psychosomatics is quantum hologram** [1], both on the level of **individual and collective consciousness**, which resembles on Hinduistic relationship **Brahman/Atman** ('Atman is Brahman'), as wholeness and its part which bears information about wholeness. The mentioned quantum-holographic picture also implies that quantum-holographic hierarchical parts carry information on wholeness, enabling **quantum-holographic fractal coupling** of various hierarchical levels [1]:

(i) **acupuncture-based-quantum-informational (un)intentional control of ontogenesis and morphogenesis**, starting from the first fertilized cell division which initializes differentiation of the **acupuncture system of (electrical synaptic) "gap-junctions"**;

(ii) **meridian (psycho-energetic) therapies**, with very fast removing of persistent phobias, allergies and other psychosomatic disorders, demonstrating **closest relationship of consciousness & acupuncture system**;

(iii) **quantum-holographic language-influence on the genes expression**, with implications of **great psychosomatic significance of thought-emotional contents**;

(iv) **global fractal-information coupling of hierarchical levels in Nature** (out of which the most fascinating is mathematical discovery of '**Bible Code**' on the level of **preferences of collective & individual history** coded within The Old Testament – which might be interpreted as a consequence of **global quantum-holographic coupling of cosmic collective consciousness** (God!?) and **its every original manifestation** (including **The Old Testament**, as well as every **individual consciousness** (**Tesla & Mozart** as examples of **miraculous deep creativities**)) – which still does not mean the strict **determinism of the History** by the existing state of collective consciousness, whose memory attractors could (and should!) be **reprogrammed by hesychastic prayer** for the others thus removing interpersonal loads of the quantum-holographic Hopfield-like neural network of collective consciousness - so **leaving the room for free will and influence on the future preferences**).

It should be pointed out that on both cellular and acupuncture levels, there exist **two (interacting) macroscopic quantum subsystems** – first with **modifying many-electron hypersurface** $E_e(\phi_e^{(k)})$ and second with **modifying EM multi-phonon hypersurface** $E_v(\phi_v^{(k)})$.

In particular, **dynamic modification** of the **many-electron energy-state hypersurface** $E_e(\phi_e^{(k)})$ of the **cell's quantum-ensemble protein/substrate macroscopic open quantum system** (through changes in operator of density of states $\hat{\rho}_e(t)$), is a natural consequence of coupled electronic-conformational processes – which implies potential possibility to consider cell's biomolecular recognition as **Hopfield quantum-holographic associative neural network** – with assuming **standard cell's local treatment of quantum ensemble of non-interacting dynamically non-coupled N distinguishable** quantum biomolecular proteins of the same type (and their corresponding biomolecular classes of substrates) [1].

However, there is an ***alternative possibility*** of ***holistic cell's non-local treatment of quantum system of non-interacting dynamically coupled N in-distinguishable*** quantum biomolecular proteins of the same type (and their corresponding biomolecular classes of substrates) – when dynamical modification of many-electron energy-state hypersurface of cell's biomolecular protein macroscopic open quantum system (and analogously their corresponding biomolecular classes of substrates), can be best represented in the formalism of ***second quantization*** [1], which treats all biomolecules of the same atomic configuration as *in-distinguishable* quantum particles which occupy different isomeric-conformational states (which automatically provides a ***plausible quantum-holistic*** picture of biological cell, and especially ***phenomenologically approved quantum-holographic coupling*** of various hierarchical levels, ***from-biological cell-to-acupuncture system/consciousness-to-collective consciousness***, with significant psychosomatic and cognitive bioinformational implications [1]).

In this second **quantum-holistic cellular approach** – the mentioned cell's N -particle protein quantum state is considered in quantum-mechanical **occupational basis** (generally **bosonic**, because of protein *integer spin* due to even number of their covalent bonded electrons!), describing *number of proteins occupying* complete set of single-particle protein *isomeric/conformational* states: $|n_0 n_1 n_2 \dots\rangle_e$, with conditions $N = n_0 + n_1 + n_2 + \dots$ and $E_{S_{ke}} = n_0 E_e^{(0)} + n_1 E_e^{(1)} + n_2 E_e^{(2)} + \dots$ (where E_{S_k} is the many-electron energy of the total cell's protein N -particle-isomeric/conformational state, while $E_e^{(0)}$, $E_e^{(1)}$, $E_e^{(2)}$... are the many-electron energies of the protein single-particle quantum isomeric/conformational states 0, 1, 2, ...). An **many-electron energy-state hypersurface** of such protein N -particle-isomeric/conformational state has a schematic representation of **Fig. 1**, where *internal surface of every minimum* is proportional to the *partial energy* ($n_i E_e^{(i)}$) of the i -th protein single-particle-isomeric/conformational state occupied by n_i isomers of the same form ($i = 0, 1, 2, \dots$), so that *total energy* ($E_{S_{ke}}$) of the cell's protein N -particle-isomeric/conformational state is proportional to the *sum of internal surfaces of the all minima* of the hypersurface.

Regarding a **multi-phonon energy-state hypersurface** of the all possible protein isomeric/conformational states requires their consideration in quantum-mechanical **occupational basis** (also bosonic, because of phonon's integer spin!) – describing number of phonons occupying complete set of single-particle *phonon states* of protein isomers/conformations: $\left| n_1^{(0)} n_2^{(0)} \dots n_{3N-6}^{(0)} n_1^{(1)} n_2^{(1)} \dots n_{3N-6}^{(1)} n_1^{(2)} n_2^{(2)} \dots n_{3N-6}^{(2)} \dots \right\rangle_v$ where every isomeric protein composed of N atoms has generally $3N-6$ vibrational degrees of freedom (phonon types), out of which every phonon state can be occupied by unlimited number of phonons (which is characteristic of all bosons, i.e. particles of integer spin). It should be pointed out that an **energy-state hypersurface** of multi-dimensional phonon quantum state has also a schematic representation of **Fig. 1**, with potentially unlimited number of phonons in every single-phonon state. This energy hypersurface of multi-phonon quantum state might also **include** low-energy long-range **coherent microwave Frohlich excitations** (created as a result of interaction of electronic and phonon isomeric subsystems – of particular significance in *microwave resonance therapy* (MRT) of a dynamic modification of the EM multi-phonon (and related many-electron) *acupuncture macroscopic quantum subsystem*!).

For instance, on the cellular level of the N -particle *protein* macroscopic quantum system, there would exist **two (interacting) cell's protein macroscopic quantum subsystems** – first with *modifying many-electron protein hypersurface* $E_e(\phi_e^{(k)})$ and second with *modifying EM multi-phonon protein hypersurface* $E_v(\phi_v^{(k)})$ – described by the second quantization model Hamiltonian:

$$\hat{H} = \hat{H}_{is}^{(0)} + \hat{H}_{ph}^{(0)} + \hat{H}_{int}^{is-E} + \hat{H}_{int}^{ph-E} + \hat{H}_{int}^{is-ph} = \sum_i E_{is}^{(i)} a_i^+ a_i + \sum_i \sum_{j=1}^{3N-6} E_{ph}^{(i,j)} b_{i,j}^+ b_{i,j} + H_{int}^{is-E} + H_{int}^{ph-E} + H_{int}^{is-ph}$$

in which a_i^+, a_i are creation & annihilation operators of the various **many-electron protein isomeric/conformational states**, $b_{i,j}^+, b_{i,j}$ are creation & annihilation operators of the various **phonon states in all many-electron protein isomeric/conformational states**, and \hat{H}_{int}^{is-E} is a model-dependent Hamiltonian of the **many-electron protein isomeric-environment interactions**, \hat{H}_{int}^{ph-E} is a model-dependent Hamiltonian of the **many-electron protein isomeric phonon-environment interactions**, and \hat{H}_{int}^{is-ph} is a model-dependent Hamiltonian of the **many-electron protein isomeric-phonon interactions**.

4.2 QUANTUM-HOLOGRAPHIC RELIGIOUS & TRANSPERSONAL IMPLICATIONS

Our theoretical investigations imply **real origin of religious/transpersonal experiences** of various traditions of East and West [1] – and according to our elaborated theoretical relationship *consciousness/acupuncture* EM-ionic quantum-holographic Hopfield-like associative neural network [1], esoteric notions like **astral body** (*manomaya, lingasarira, manovijnana, ka, psyche, subtle body, psychic body, soul...*) and **mental body** (*vijnanamaya, suksmasarira, manas, ba, thymos, noetic body, spiritual body, spirit...*) – might be biophysically related to **out-of-body displaced** (connected with the body by miniature 'wormhole' tunnel of vital energy of the astral/mental body) **ionic part** of *acupuncture* system, and with **embedded EM field** of ionic MW ULF-modulated currents, respectively. Then, biophysical nature of **etheric vitality** (*qi, prana, pneuma...*) might be sought in **ions** (*positive with exciting yang-influence, and negative with relaxing yin-influence*) with embedded **ionic/EM MW ULF centers of consciousness** (*acupuncture points, chakras...*).

Then, **transpersonal interactions** might be interpreted [1] by **collapse-related** consciousness-channeled quantum-gravitational tunneling of operator's individual consciousness – mentally addressed on the target's content of collective consciousness in operator's (short-lasting) **transitional states of consciousness** – thus **intentionally channeling composite state** of the 'field' of target-under-influence-of-operator part of collective consciousness, $|\Phi\rangle_S \rightarrow |\Phi_j\rangle_S$, and automatically influencing complement 'particle' output $|\Psi\rangle_E \rightarrow |\Psi_j\rangle_E$ in quantum-gravitationally-induced and consciousness-channeled collapse:

$$|\Phi\rangle_S |\Psi\rangle_E \rightarrow \sum_i c_i |\Phi_i\rangle_S |\Psi_i\rangle_E \xrightarrow{p_j = |c_j|^2 \approx 1} |\Phi_j\rangle_S |\Psi_j\rangle_E .$$

It should be also pointed out, that in the context of **necessary conditions for decoherence, defining of open quantum system & environment is simultaneous process** – so that in the context of universal validity of quantum mechanics **consciousness is relative concept**, non-locally also influenced by farther parts of existing observing universe (and vice versa!), simultaneously creating conditions for the process of decoherence in the context of existing **relative borderline**:

$$|\Phi\rangle_S |\Psi\rangle_E \equiv |(\text{partial})\text{individual/collective consciousness}\rangle_S |(\text{complement})\text{environment}\rangle_E .$$

This is fully in accordance with the idea of **collective consciousness** as a possible **ontological property of the physical field itself** [1], with different **micro-quantum & macro-quantum excitations** (non-biological and biological, real and virtual...). Then, as **cosmic collective consciousness** $|\Phi\rangle_S \sim \prod_k |\phi^k\rangle_{S_k} = \sum_i c_i |\Phi_i\rangle_S$, coincident with the 'field' of Universe, has its **complementary 'particle' cosmic environment** $|\Psi\rangle_E = \sum_i c_i |\Psi_i\rangle_E$, their **strong-interaction-coupling** affects **decoherence of the 'field' of cosmic collective consciousness** into stationary **classically-reduced (observing) stochastic state**, $\hat{\rho}_S = \sum_i |c_i|^2 |\Phi_i\rangle_S \langle \Phi_i|$, with probabilities $|c_i|^2$ of realizations of corresponding classically-decoherent states of cosmic collective consciousness; however, **cosmic composite quantum state** $|\Phi\rangle_S |\Psi\rangle_E$ **evolves without collapse** (due to absence of the complementary outside-cosmic environment!), which implies that **Universe as a whole is quantum hologram** subject to **deterministic Schrödinger evolution** [1]!

However, **prayer-induced hypothetical macroscopic vacuum non-loaded spiritual excitations** (whose **exciting by prayers** arises associations on Holy Grace as **in-deterministic intervention** in otherwise deterministic evolution of the quantum-holographic cosmic (and embedded human) History, which thus **provide essentially new boundary conditions!**) might **modify cosmic collective consciousness** $|\Phi'\rangle_S \sim \prod_k |\phi^{k'}\rangle_{S_k}$ and thus **cosmic composite quantum state** $|\Phi'\rangle_S |\Psi'\rangle_E$, i.e. **classically-reduced stochastic state of cosmic collective consciousness** $\hat{\rho}_S = \sum_i |c_i'|^2 |\Phi_i'\rangle_{SS} \langle \Phi_i'|$, so implying possibility of **prayer-optimized** [1] (most probable and energetically most convenient!) **preferences of cosmic collective consciousness** (and conversely, on modification of cosmic-consciousness-observable classically-reduced stochastic state of the complementary "particle" cosmic environment $\hat{\rho}_S' = \sum_i |c_i'|^2 |\Psi_i'\rangle_{EE} \langle \Psi_i'|$, implying possibility of **prayer-optimized preferences of future cosmic alternatives!**).

4.3 IMPLICATE & EXPLICATE ORDERS OF QUANTUM-HOLOGRAM & THEIR OBSERVATIONS

From the above there appears that **classically-reduced level** of quantum system/consciousness $\hat{\rho}_s(t)$ or environment $\hat{\rho}_E(t)$, is **permanently emerging-from-and-dissolving-into quantum-holographic level** $|\Phi(t)\rangle_S |\Psi(t)\rangle_E$ (cf. **Fig.1**), and this permanent pulsating is going on extremely fast with possibilities of:

(i) **observing Bohm's explicate order of either average classical mixtures** (of quantum system/consciousness $\hat{\rho}_s(t)$ or environment $\hat{\rho}_E(t)$) of quantum-holographic reality **via classical measuring devices/senses**, or classically-reduced **stationary quantum states** (quantum system/consciousness $|\Phi_i\rangle_S$ and environment $|\Psi_i\rangle_E$) **via macroscopic semi-quantum measuring devices**;

(ii) **observing Bohm's implicate order of non-stationary quantum-holographic reality** $|\Phi(t)\rangle_S |\Psi(t)\rangle_E \sim \prod_k |\phi^k(t)\rangle_{S_k} |\Psi(t)\rangle_E = \sum_i c_i |\Phi_i(t)\rangle_S |\Psi_i(t)\rangle_E$ **exclusively via non-stationary quantum-coherent superpositions of creative-religious altered & transitional states of consciousness** (individual

$|\phi^k(t)\rangle_{S_k} = \sum_i c_{k_i} |\phi^{k_i}(t)\rangle_{S_{k_i}}$ or collective $|\Phi(t)\rangle_S = \sum_i c_i |\Phi_i(t)\rangle_S$).

This viewpoint is close to experiences of all **shamanistic tribal traditions**, claiming that (quantum-holographic!) **genuine reality** is represented by **dreams**, while (classically-reduced!) **awake state** is **lie/illusion** (**maya** in *Eastern traditions*) [1]!

In the same context, *necessity of* **direct quantum-holographic coupling** of individual & cosmic collective consciousness in observing *implicate order* needs **weak out-of-body quantum-communication coupling** consciousness-environment, i.e. **previous reprogramming of all psychosomatic loads** (cleansing of possessive/hedonistic *emotional-mental sin/karmic connections* with the world – which as loading ‘mental addresses’ would **otherwise affect quantum projections** of mentally-channeled tunneled consciousness on corresponding *out-of-body environment*, and thus to classically-reduced out-of-body **extrasensory observing** of mentally-addressed environment!) – and so **efforts of mystics** of all traditions to **clean consciousness/soul** through spiritual practice (*prayer, meditation, ...*) and thus to **reach eschatological goal** (*Kingdom of God, nirvana, ...*), i.e. *post-mortem salvation* (of sin-free/karmic-free non-bounded soul) [1] *appear reasonable!* .

These results forecast **great synthesis of two cognitive modes, rationally-scientific** (classically-reduced, in normal states) & **creative-religious** (quantum-coherent, in altered & transitional states), **within quantum-holographic paradigm** – where **personal role becomes morally indispensable** due to **fundamental influence & care for collective consciousness & mental health of Civilization** [1]!

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