

Tesla's Legacy for New Millennium: Path to Quantum-Holographic Primal Source

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Abstract. Nikola Tesla is undoubtedly the greatest inventor in the history of electrical engineering, and what makes him especially fascinating was his unusual mental control of creative visions. Regarding presented Tesla's extraordinary creative experiences in his altered states of consciousness (categorized in his time as nonphysical phenomena) – Tesla's conviction "when we start to study nonphysical phenomena, we will progress more in ten years than we have for centuries" then becomes clearer. In this context, it seems that Tesla's legacy for the new millennium is introspective evidence of his transpersonal creative communications, with fascinating possibility of his meditative eidetic control & increase of macroscopic quantum correlations with the quantum-holographic primal source of collective consciousness. In this lecture it will be pointed out that they could serve as an extraordinary case study for understanding biophysical basis of both transpersonal psychology & control of creative processes, based on subtle interplay of normal & transitional & altered states of consciousness in meditation & sleep, which may help in developing future strategies for education. These insights could also provide deeper understanding of Hopfield-like neural-networks quantum-holographic framework for quantum-informational transpersonal psychosomatics, based on decrease of quantum entropy & macroscopic quantum correlations of acupuncture system / individual consciousness & collective consciousness, which may help in developing future strategies for integrative medicine & transpersonal psychology. In wider context, Tesla's whole research & life could also provide an inspiration for reconsideration of global educational / informational / political goals – with reorientation towards holistic gentle actions for solutions of the global risk society.

Keywords: Nikola Tesla, Hopfield-like neural-networks quantum-holographic framework, quantum-holographic primal source, creativity & education, meditation & sleep, normal & altered & transitional states of consciousness, individual & collective consciousness, macroscopic quantum correlations, integrative medicine & transpersonal psychology & transpersonal psychosomatics, acupuncture system & consciousness, free will.

*When we start to study nonphysical phenomena,
We will progress more in ten years than we have for centuries.
Nikola Tesla*

1. Introduction

Nikola Tesla is undoubtedly the greatest inventor in the history of electrical engineering, and what makes him particularly fascinating is his unusual mental control of creative visions. Having in mind Tesla's exceptional creative experiences in his altered states of consciousness (categorized in his time as nonphysical phenomena) – Tesla's conviction "when we start to study nonphysical phenomena, we will progress more in ten years than we have for centuries" becomes clearer. In this context, Tesla's legacy for the new millennium seems to be his autobiographical introspective testimony of transpersonal creative communications [1], with the fascinating possibility of his individual meditative eidetic control & increase in macro-quantum correlations with the quantum-holographic primal source of collective consciousness (cf. Fig.1(a)). This could serve as an extraordinary case study to understand the biophysical basis of transpersonal psychology & control of creative processes based on the subtle

interaction of normal & transitional & altered states of consciousness in meditation & sleep [2-5], and could help develop future education strategies.

These phenomenological insights could also serve as an additional confirmation of our Hopfield-like neural macroscopic quantum-holographic / quantum-gravitational theoretical framework for quantum-informational transpersonal psychosomatics, based on decrease of quantum entropy & macro-quantum correlations of acupuncture system / individual consciousness & collective consciousness (cf. Fig.1(b)), which could help develop future strategies for integrative medicine & transpersonal psychology; and in a wider context, these insights could provide inspiration for rethinking global educational / informational / policy goals – with a reorientation to holistic gentle actions for solutions of the global risk society [2-11].

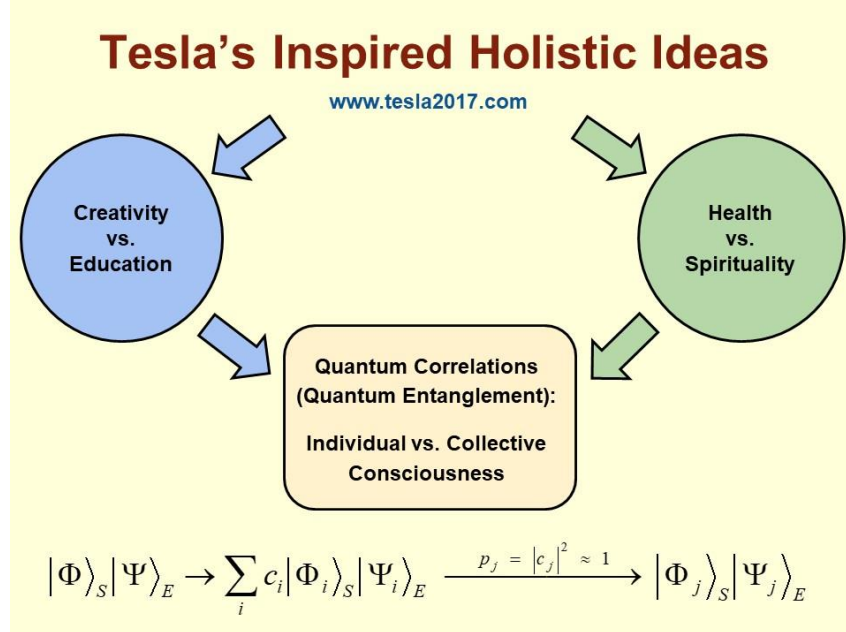


Figure 1. (a) Symbolic representation of *mentally controlled-directed increasing* of macro-quantum correlations of interacting individual consciousness (S) and collective consciousness / environment (E) in *transpersonally-entangling creative phases* (left-hand side of the image and formula above, with previous mental increase of the focused weight contribution c_j and subsequent (practically non-stochastic) classically-reduced selection of this dominant weight contribution c_j); and **(b)** Symbolic representation of *mentally controlled-systemic decreasing* of macro-quantum correlations of interacting individual consciousness (S) and collective consciousness / environment (E) in *transpersonally-disentangling spiritual phases* (right-hand side of the image and formula above, with previously systemic mental decreasing of almost all weight contributions c_i and subsequent (practically non-stochastic) classically-reduced selection of the remaining dominant weight contribution c_j (related to mentally-embedded address on the founder of the corresponding mystical tradition)).

2. Tesla's Inspired Holistic Questions of Creativity & Education

On the one hand, Tesla's introspective analyses may provide *a direct clue* for deeper understanding of quantum-holographic framework for holistic control of creativity & education – based on meditation insights & carefully guided & increased macro-quantum correlations of individual & collective consciousness, as will be elaborated bellow.

During his stay in Budapest (1881/1882), in looking for employment after leaving his engineering studies, Tesla was beset by his need to detach the commutator from the machine [1]: "I started by first picturing in my mind a direct current machine, running it and following the changing flow"... His

incessant thinking produced a complete nervous breakdown... The breakdown quickened and sharpened his perspective a hundredfold... His pulse fluctuated from very low to 260 beats per minute... His physical state had completely deteriorated... [By his incessant meditative efforts Tesla presumably had *awakened* his "kundalini" vital energy in the base of spine [2-5], which abruptly opened his "doors of perception", usually causing permanent psychosis in persons mentally unpurified previously, but Tesla succeeded to recover owing to his "pure soul", and subsequently a series of his incredible "meditative inventions" began (Author's note).]... After nearly a year of unsuccessful treatment, during repeating walks with his colleague Szigeti in the City park, Varosliget, he was regaining his strength. On one occasion, during a walk in the park toward the end of February, Tesla looked at the setting sun, and began to recite the glorious passage from Goethe's Faust [...] *"As I uttered these words, the idea came like a flash of lightning... and in an instant the truth was revealed. I drew with a stick on the sand the diagram of my motor... secrets of nature which... I had wrested from her against all odds and at the peril of my existence... See, how smoothly it runs. No commutator, no brushes, no sparking. As the current in one coil decays, in the adjacent coil it increases, coil after coil, creating new magnetic rotating fields and pushing the shaft continually... In less than two months, I evolved virtually all the types of motors and modifications of the system now identified with my name... it was a mental state of happiness as complete as I have ever known in life. Ideas came in an uninterrupted stream and the only difficulty I had was to hold them fast."*

Tesla was absolutely convinced in similarity of scientific and artistic ideas [1]: *"They are coming from the same source."* This viewpoint is similar to Plato's, but Tesla did not come to that speculating philosophically, as he had experienced the world of ideas from the boyhood: *"When a word was spoken to me the image of the object it designated would present itself vividly to my vision and sometimes I was quite unable to distinguish whether what I saw was tangible or not ... Sometimes it would remain fixed in space though I pushed my hand through it... ["Quantum hologram" [2-5], in Tesla's altered quantum-coherent stationary state of consciousness? (Author's note)]... Then, instinctively, I commenced making excursions beyond the limits of the small world of which I had knowledge and saw new scenes. These were at first very blurred and indistinct, and would flit away when I tried to concentrate my attention upon them, but, by and by, I succeeded in fixing them; they gained in strength and distinctness and finally assumed the concreteness of real things. I soon discovered that my best comfort was attained if I simply went on in my vision farther and farther, getting new impressions all the time, and so began to travel – of course in my mind. Every night (and sometimes during the day) when alone, I would start my journeys... ["Astral journeys" [2-5], in Tesla's transitional quantum-entangled states of consciousness? (Author's note)]... I have been practicing this until my seventeens, when my thoughts turned to inventions seriously."*

In the context of *creative insights & incredible Tesla inventions* (directly visualized in his consciousness with the details of the functioning of the devices, without any application of Maxwell's electromagnetics!), it is interesting to consider the *possibility of controlling creative processes within our quantum-holographic / quantum-gravitational theoretical framework* [2-5]. They predict the *transpersonal properties* of the psyche in the short-lasting *quantum-entangled non-stationary transitional states of consciousness* (with subsequent classically-reduced stationary extrasensory perception of the previously focused mentally-addressed out-of-body complementary environment, cf. Fig. 1(a) as well, which may also be Jung's "archetype" of the problem-with-solution at the level of quantum-holographic collective consciousness, which raises associations on Tesla's "mental inventions" & Plato's "world of ideas" as well).^{1,2}

¹ According to our quantum-holographic / quantum-gravitational theoretical framework [2-5], *transpersonal interactions* might be interpreted by *decoherence-related consciousness-channeled quantum-gravitational*

After returning of the displaced consciousness upon the body, in order that *transpersonally acquired information ascends to the level of normally conscious state*, it is necessary to overcome two filters [2-5]: (i) *acupuncture system / nervous system threshold filter* (which requires "emotional colouring" of the solving problem) and (ii) *frontolimbic amplification filter* (which requires "emotional-

tunneling of operator's individual consciousness – mentally addressed on the target's content of the collective consciousness / environment in operator's transitional states of consciousness (short-lasting and therefore poorly reproducible!) – thus *intentionally channeling state of operator's individual consciousness*: $|\Phi\rangle_S \rightarrow |\Phi_j\rangle_S$ & *automatically influencing the complement collective consciousness / environment output*: $|\Psi\rangle_E \rightarrow |\Psi_j\rangle_E$ in *quantum-gravitationally-induced & consciousness-channeled decoherence (quantum collapse)*:

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

Alternatively, this might be interpreted as *quantum entanglement between memory attractors of individual consciousness* $|\Phi_i\rangle_S$ & *collective consciousness* $|\Psi_i\rangle_E$ (*quantum-correlated via consciousness-based resonant recognition / interaction of associatively-related attractors of individual & collective consciousness*), followed by *body-induced decoherence-related stochastic process* (with previously mentally enhanced $|c_j|^2 \approx 1$ contribution by focusing on $|\Phi_j\rangle_S$ memory attractor of individual consciousness, cf. Fig. 1(a)). In this respect, the "gauge quantum field theory & quantum gravity correspondence" of any quantum entangled system (i.e. Einstein-Podolsky-Rosen correlated quantum pair) & corresponding connected miniature (non-traversable) wormhole (i.e. quantum-gravitational Einstein-Rosen bridge) [12] should be notified (on its *possible traversability* in cosmological conditions see ref. [13], while in transpersonal conditions see refs. [2-11] and Footnote 12 as well!).

[Note that the above expression also describes a much more frequent, *constantly fluctuating*, spontaneous interaction of *individual consciousness with a closer environment*, making that with sensory-focused contents we have the experience of reality as in *normal states of consciousness*! This continuous fluctuation has its analogy in the *quantum biomolecular world*, between *continuously fluctuating non-complementary "states of biomolecular energy" & "states of biomolecular conformation"* (and entangling "states of biomolecular environment") [14]!]

² It should be pointed out, that in the context of *necessary conditions for decoherence* described by the expression in the footnote above, defining of open quantum system & its 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* [15]:

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

This is fully in accordance with the idea of *collective consciousness* as a possible *ontological property of the physical field itself* [2-5], with different micro-quantum & macro-quantum (both non-biological and biological, real and virtual) excitations. Then, as *cosmic collective consciousness* (coincident with the "field" of Universe) has its complement "particle" cosmic environment, their strong-interaction-coupling affects *decoherence of the "field" of cosmic collective consciousness* into stationary *classically-reduced (observing) stochastic state*, with probabilities of realizations of corresponding classically-reduced states of cosmic collective consciousness.

[However, note that the *cosmic composite quantum state*:

$$|\Phi\rangle_S |\Psi\rangle_E \equiv |cosmic "field" collective consciousness\rangle_S |(complement) cosmic "particle" environment\rangle_E$$

evolves without collapse (due to absence of the complement outside-cosmic environment!), which implies that *Universe as a whole is presumably quantum hologram* subject to deterministic Schrödinger evolution (in the context of universal validity of quantum mechanics!).]

thinking priority" of the solving problem). According to our investigations, all mentioned conditions might be realized in quantum-coherent stationary state of *waking meditation* (by entering in this prolonged altered state of consciousness, with mental addressing on the solved problem) – which *Tesla* has been doing by *persistent mental focusing* on the solving problem as described in Introduction!

On the other hand, during the *sleep state* the mentioned conditions might be realized in quantum-entangled non-stationary transitional states of *falling asleep* & quantum-coherent stationary states of *REM-sleep* (with previous *intense concentration* on the solving problem before sleep & *subsequent amplification* of the obtained classically-reduced answer in the form of symbolic dream, which should be then *correctly interpreted* in the context of personal internal symbolism) – *widely applicable* even to meditation-non-trained persons [2-5]! Of course, for solving conceptually complex *scientific problems* it is necessary to be an *expert* in the corresponding field, in order to *scientifically rationalise a solution* representing scientific shift.

The same might be applied to *artistic creative experiences* & their subsequent *artistic expressions* (*Mozart as an excellent example* [16]), while very *art-works* then behave like *mental addresses of "archetypes"* being in contact with artists in mentally-addressed transpersonal communications during the acts of creation. Then *deep artistic experiences of the public* might have strong *spiritual note* too, through *spontaneous mental addressing of the artistic public on the masterpeace* & emotionally-induced *excitation into transitional state of consciousness*. Finally, this could similarly be extended to *deep spiritual experiences of the believers* with their *mental addressing on holy icon / relic* & emotionally-induced *excitation into transitional state of consciousness*.

3. Tesla's Inspired Holistic Questions of Psychosomatics & Spirituality

On the other hand, Tesla's introspective analyses may provide *an indirect clue* for deeper understanding of *quantum-holographic framework for integrative medicine & transpersonal psychology by imposing healing boundary conditions – based on methods & techniques for decrease of quantum entropy & macro-quantum correlations of acupuncture system / individual consciousness & collective consciousness*, as will be elaborated bellow.

According to our theoretical investigations, in-deterministic manifestations of *free will* & holistic manifestations of *transitional & altered states of consciousness* – necessarily imply *quantum bases of consciousness* – with significant psychosomatic-transpersonal implications [3,6,8]. Namely, as demonstrated by *quantum-coherent characteristics* of the Russian-Ukrainian school of *microwave resonance therapy* (MRT) [3-6,17-21] (highly resonant microwave sensory response of the disordered organism, biologically effective non-thermal microwave radiation of extremely low intensity and energy, and neglecting microwave energy losses down acupuncture meridians), the *acupuncture system* is the only *macro-quantum system* in our body to be *associated with consciousness* (while brain still seems not to be [22]!) This is also supported by *meridian (psycho / energy) therapies* [23], with very *fast removing of traumas, phobias, allergies and post-traumatic stress*, demonstrating *closest psychosomatic relationship of consciousness & acupuncture system* [3,6,8].

Also, as Peruš's theoretical research has shown that *any quantum system in Feynman's propagator version of quantum mechanics* has formal mathematical structure of the *quantum-holographic Hopfield-like associative neural network* [24] – then closely related *acupuncture-based & consciousness-based memory attractors* can be treated as psychosomatic states *representing individual (quantum) holistic field records* (cf. Fig. 2)!³ Within this quantum-informational framework, it is

³ This represents the basis of so-called *quantum neural holography* [24] (see also ref. [3]), which allows successive reconstruction of the wave functions of the memory states at the output of quantum-holographic

plausible to consider healthy psychosomatic state as the simplest informational state of the lowest quantum entropy (with single memory attractor), and disordered psychosomatic states as more complex states of the higher quantum entropy.⁴

Hopfield-like neural network (complete, of both amplitude and phase) in recognition of the wave function of the previously memorized state displayed again at its input (which is the basis of every holography, but everything here is simpler than in the standard laser holography, which requires so-called coherent reference & subject laser beams). Although basic elements of quantum vs. neural system (modeled by formal neurons & connenctions) are very different, their collective processes obey similar laws. So Hebb's correlation matrix of memory synaptic connenctions in Hopfield's associative neural networks, corresponds to Green's function (quantum propagator) in Feynman's version of Schrodinger equation:

$$G(r_2, t_2; r_1, t_1) = \sum_{i=1}^P \phi^{k_i}(r_2, t_2) \phi^{k_i*}(r_1, t_1) = \sum_{i=1}^P A_{k_i}(r_2, t_2) A_{k_i}^*(r_1, t_1) e^{\frac{i}{\hbar}(\alpha_{k_i}(r_2, t_2) - \alpha_{k_i}(r_1, t_1))}$$

where ϕ^{k_i} is i -th *quantum memory attractor* (i.e. explicate short-term memory of i -th quantum state / attractor), and G is *quantum-holographic memory* (i.e. implicate long-term memory of all P quantum states / attractors in quantum memory) of such informationally interpreted (any) quantum system! Then, (re)construction of quantum attractor patterns, i.e. transformation of the representation of *long-term memory* (of quantum latent consciousness / subconscious) into representation of the *recall / short-term memory* (of quantum manifest consciousness), is analogous to the wave-function decoherence (collapse). In this context, *association of individual consciousness with manifestly-macroscopic-quantum acupuncture system*, by applying methods of *associative neural networks*, *quantum neural holography*, and *quantum decoherence theory*, provides *quantum-holographic framework* for psychosomatics, epistemology and spirituality [3,6,8] – outlined in this paper.

[According to direct mathematical correspondence between classical neural variables (left) & quantum variables (right): $q \Leftrightarrow \phi$, $q^k \Leftrightarrow \phi^k$, $J \Leftrightarrow G$ [3,24], and corresponding Hopfield's classical & Feynman's quantum equations, it might be realized that *quantum memory attractors* $\phi^{k_i}(r, t)$ of (any!) quantum system behave as quantum analogues of classical neural activities in space r and time t – implying that *wave functions* ϕ^{k_i} ($i = 1, \dots, P$) at *space-time points* (r, t) are behaving fundamentally as *P-dimensional parallel neural quantum processors* (notice also their difference in respect to usually exploited *2-dimensional qubits* in quantum informatics [3,25])!

⁴ In particular, considering psychosomatic state in generally mixed quantum state of density matrix:

$$\widehat{\rho}_{S_{kv}}^{(k)} = \sum_i |c_{k_i}|^2 |\phi_v^{(k_i)}\rangle_{S_{kv}} \langle \phi_v^{(k_i)}| \equiv \sum_i p_{k_i} |\phi_v^{(k_i)}\rangle_{S_{kv}} \langle \phi_v^{(k_i)}|$$

(where p_{k_i} are probabilities of realization of the k_i -th state), then von Neumann's quantum-mechanical entropy $S = -k \text{Tr}(\widehat{\rho}_{S_{kv}}^{(k)} \ln \widehat{\rho}_{S_{kv}}^{(k)})$ is reduced to classical Shannon's entropy $S = -k \sum_i p_{k_i} \ln p_{k_i}$ [3,25]. In the mentioned quantum-holographic framework, *entropy of the pure-healthy state* of the psychosomatic system (described by the single k_0 -th term in the superposition, of probability $p_{k_0} = 1$), would be equal to $S_{k_0} = 0$ (as the pure quantum state $\widehat{\rho}_{S_{kv}}^{(k_0)}$ provides maximal possible information about the quantum psychosomatic system), while *entropy of the mixed-disordered state* of the psychosomatic system (described by the full above superposition), would be equal $S_{\widehat{\rho}} > 0$ (as the mixed stochastic state $\widehat{\rho}_{S_{kv}}^{(k)}$ provides uncomplete information about the quantum psychosomatic system).

[Accordingly, in the mentioned quantum-holographic framework, *psychosomatic healthy state* is the state of the *minimal entropy*, while *psychosomatic disordered state* is the state of the *increased entropy*. In the same

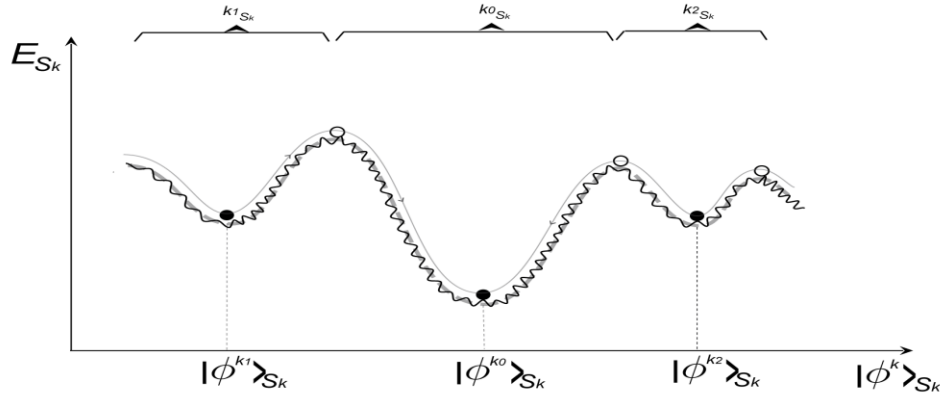


Figure 2. Schematic presentation of the memory attractors in the energy-state hypersurface of *psychosomatic state of open macroscopic quantum-holographic acupuncture system / consciousness*, as proposed quantum-holographic manifestations of psychosomatic disorders (hundreds of them being in primary psychosomatic diseases and thousands of them in their combinations according to acupuncture-based *Tibetan traditional medicine*, with therapeutic goal to balance / remove all unwilling side memory attractors in procedure traditionally recommended half a year) [2-6]. This information might be *quantum-holographically* projected onto *lower open macroscopic quantum-holographic cellular enzyme-gene level* (which also functions on *quantum-holographic-like cellular quantum-conformational level* of the molecular recognition, thus influencing gene expression & possible somatisation of the top-down hierarchically projected non-balanced / non-removed psychosomatic disordered information). On the other hand, *higher open macroscopic hierarchical level of quantum-holographic collective consciousness & related (quantum) holistic global psychosomatics* might also be *quantum-holographically* projected onto *lower levels of quantum-holographic individual acupuncture systems / consciousnesses* (with spiritual / social implications on the necessity of transpersonal quantum-holographic removing of all unwilling side memory attractors on the level of collective consciousness, which unless would result in further transpersonal transfer of memory attractors onto individual & collective consciousnesses in this and future generations). See the text for further explanation.

Hence, the goal of *acupuncture-based & consciousness-based holistic procedures and approaches* would be a *bioresonant excitation* of the electromagnetic (EM) microwave (MW) / ultralowfrequency (ULF)-modulated or radiofrequency (RF) / lowfrequency (LF)-modulated psychosomatically disordered state (*acupuncture palpatory-painful / psychologically traumatic*) – thus enabling that its initial memory attractor is bioresonantly excited (similar to annealing procedure in neural networks [26]) becoming shallower and wider on the account of deepening of the (energy-dominating) attractor of healthy (*acupuncture palpatory painless / psychologically traumatic-free*) state [3,6,8] – which is then altogether quantum-holographically projected on the lower quantum-holographic cellular level, thus changing expression of genes. [An early example of EM healing effects was *Tesla's EM RF self-healing* [27] (Autor's note).]

However, when this process is hindered by *transpersonally entangled blockages* in the EM field-related energy-state space of the (open) acupuncture system / consciousness (on numerous laboratory tests revealing the evidence of entangled minds i.e. stationary extrasensory experiences in a quantum reality, see refs. [28]) – then memory attractors of quantum-holographic network of EM field-related *collective consciousness* should be removed as well (via prayer or circular psychotherapies from all relevant meta-positions included in the problem, to disentangle energy-informationally all mental

framework, application of some *psychosomatic therapy* naturally *decreases entropy* (degradation) i.e. *increases information* (organization) of the psychosomatic system!]

addresses included in the problem [2-6], with final goal to achieve permanent healing i.e. spiritual integration of personality). In this context, *collective consciousness memory attractors* might be treated as psychosomatic collective disorders *representing generalized (quantum) holistic field records* (cf. also Footnote 2) – including interpersonal hesychastic-prayer finally-reprogrammable loads [3,6,8]!

So, *all acupuncture-based & consciousness-based holistic procedures and approaches* might be treated as *quantum-informational therapies*, by imposing *new healing boundary conditions in the EM quantum energy-state space of acupuncture system / (individual & collective) consciousness* (cf. Fig. 2) – suggesting *three front lines of psychosomatic medicine*: (i) *collective consciousness*, (ii) *acupuncture system / individual consciousness*, and (iii) *somatic level*. In past several decades application of these holistic methods has provided development of *transpersonal psychology* [29] & *integrative medicine* [30]. It should also be pointed out that the necessary activities in the second and third levels, with neglect of the first level, would result in further transfer of memory attractors on the level of individual & collective consciousness in this and future generations.

According to our quantum-holographic / quantum-gravitational theoretical framework, *spontaneous transpersonal communications*, with exchange of information in transitional states of consciousness, would have *negative psychosomatic-spiritual effects*, giving rise to *global trans-generational increase of psychosomatic loads* on the level of quantum-holographic network of *collective consciousness* – which might represent the *sin / karmic "engine of history"*. *The only phenomenon which decreases these loads might be all-forgiving prayer to ourselves & others* (relatives, enemies, decided) – *probably via simultaneously vacuum-excited spiritually-purifying new macro-quantum portions of vital energy* (similarly to spiritually-excited & mentally-channeled Ayurvedic, Qigong, Reiki and modern experiences of local & transpersonal healing [2-6]) *in prayer-related persons* – as *(decoherence-like) quantum-gravitational indeterministic purifying interventions in (intrinsically-unitary) quantum-holographic evolution of collective consciousness!* In the context of the *predestined trans-generational cosmic quantum hologram of collective consciousness*, in a deep psychotherapeutic terminology the possibility of its *optimization by spiritual purification* would be reduced to *dis-entangling / un-binding from almost all levels of individual & collective consciousness*, and consequently to *full re-integration of the higher Self* – by its *re-union with spiritual primal source* (with previous mentally controlled systemic decreasing of macro-quantum correlations of individual & collective consciousness, cf. Fig. 1(b) as well). This might leave most room for *free will & influence on future preferences* – making the *role of every person indispensable* due to influence and concern for *collective mental environment!*

Our *quantum-holographic framework* might also imply that quantum-holographic hierarchical parts carry information about the whole (which resembles the Hindu relationship *Brahman / Atman*, as a whole and the part which contains information about the whole [2-5], allowing subtle *fractal coupling of various hierarchical levels* in Nature [31]. This might be supported by *acupuncture system and its projection zones* (ECIWO holographic concept [32]) and the discovery of *quantum-holographic influence of verbal communication on the expression of cell genome* (by voice-modulation of irradiating-laser beams [33]), as well as by the *origin of the amazing creativities* (Tesla and Mozart as case studies [2,16] and *predestined life paths and temptations* (as indicated by the contemporary experiences of hypno-regressions [34] as well as experiences of different traditions [35], while still emphasizing that it is *possible to optimize them by spiritual purification*).

The same *quantum-holographic / quantum-holographic theoretical framework* might also suggest *two modes of knowledge*, according to the coupling strength consciousness-body-environment [2-5]: (i) *weakly-coupled direct mode* (in the *out-of-body spiritual- creative quantum-entangled non-stationary transitional states of consciousness / quantum-coherent stationary altered states of consciousness*, like

prayer, meditation, daydreams, lucid dreams, creative insights...) and (ii) *strongly-coupled indirect mode* (in *bodily* perceptively-rationally mediated *classically-reduced stationary normal states of consciousness*, like sensory perception, logic and scientific reasoning...) – with *conditions of mutual transformation*. This could explain the *generally poor informational rationalization* of any direct quantum-holographic spiritual / religious *mystical experience* (as the problem of quantum theory of measurement, related to the reduction of the implicate order of the quantum-entangled (quantum-holographic) superposition of two-partite states into the particular explicate order of the corresponding measuring classically-reduced one-partite states). And might help us understand that all our partial rationalizations (classically-reduced mappings!) are still an approximation of the fundamental-holistic reality (quantum-holographic territory!), *which differ from tradition to tradition*. On the other hand, *the consensuses of the mystics of the same tradition of a similar partial rationalization of mystical experiences* could be understood as *part of the same dominant-channeling trans-generational contextual heritage of members of the same tradition* (because we are not born as so-called *tabula rasa*, as being indicated by the aforementioned contemporary experiences of hypno-regressions & experiences of different traditions as well!).

This is close to experiences of numerous *shamanistic tribal traditions*, with beliefs that the *genuine* (quantum-holographic) reality is represented by *lucid dreams*, and that (classically-reduced) waking state is lie / illusion (*maya*, as stated in the *traditions of the East*) [35-40]). So *science might be closing the circle, by re-discovering two different modes of knowledge* and at the same time setting its *own epistemological limitations* [2-5] – as preserved for millennia in *shamanistic tribal traditions* [35,40,41], or as concisely described by *Patanjali* more than two millennia ago, pointing out that mystical experience (*samadhi*) is "filled with truth" and that it is "above inference and the scriptures" [39], or as formulated at the beginning of the last century by *Berdyayev* as the difference of two modes of knowledge, prayer-mediated "comprehension of affairs invisible" & rationally-mediated "comprehension of affairs visible" [42]!

In addition, the necessity of direct quantum-holographic coupling of individual & cosmic collective consciousness in an observation of the implicate order might need weak out-of-body quantum-communication coupling consciousness-environment, i.e. previous *reprogramming of all psychosomatic loads* (cleansing of the possessive or hedonistic emotional-mental sinful / karmic connections with world – which as loading "mental addresses" would give rise to quantum projections of the mentally-channelled tunnelled consciousness upon the out-of-body environment, and thus to classically-reduced *out-of-body stationary extrasensory observing* of the mentally-addressed environment). In this context the efforts of mystics of all traditions to *purify consciousness / soul via spiritual practice* (prayer, meditation...) and thus to reach their *final eschatological goal* (Kingdom of God, nirvana...), i.e. *post-mortem salvation of soul* (non-bounded sin-free / karmic-free) by *re-union* (*re-ligare / yoga*) with the *supreme God* [35-39,43-45] might appear reasonable! [But it still would leave room for *personal love*, whose highest manifestation is ability and readiness for *permanent & unconditioned forgiving* (to loving person, and because of him / her to everybody else, including enemies!), in spiritual prayer and (subtly related quantum-holographic) living practice; the same refers to love for relatives and friends [3-6].]

All this indicates the *full significance of holistic education & behavior* – suggesting necessity of *redefining* the global educational / informational / political goals, with the shift towards *holistic gentle actions for global solutions of the world risk society* [2-11,46].

4. Conclusion

Regarding presented Tesla's extraordinary creative experiences in his meditative states, his conviction "when we start to study non-physical phenomena, we will progress more in ten years than we have for centuries" – *represents Tesla's legacy for new millennium & path to quantum-holographic primal source* – revealing possibility for control of macro-quantum correlations of individual & collective consciousness.

Thus, Tesla's introspective analyses may provide a clue for deeper understanding of *quantum-holographic framework for holistic control of creativity & education* – based on meditation insights & subtle interplay of normal & transitional & altered states of consciousness – in carefully guided & increased macro-quantum correlations of individual & collective consciousness.

Also, Tesla's introspective analyses may provide a clue for deeper understanding of *quantum-holographic framework for integrative medicine & transpersonal psychology by imposing healing boundary conditions* – based on methods & techniques for decrease of quantum entropy & macro-quantum correlations of acupuncture system / individual consciousness & collective consciousness.

In wider context, Tesla's whole research may also provide an inspiration for *re-consideration of global educational / informational / political goals* – with re-orientation towards holistic gentle actions for solutions of global risk society.

5. Appendix: Additional Notes on Macro-Quantum Phenomena in Biology, Medicine, Psychology & Informatics

In this Appendix we shall outline additional notes on macro-quantum phenomena in biology, medicine & psychology, based on our quantum-holographic / quantum-gravitational theoretical framework for holistic psychosomatics, and related long standing open problems of the biophysical nature of acupuncture system & consciousness & qi / prana / vital energy / uncreated light, including implications on fundamentals of quantum informatics & invited experimental tests as well.

This is in line with increasing interest in macro-quantum informational trends in biology [14,47-50], bioresonant quantum-informational medicine technologies [51], cognitive science & consciousness studies [2,15,24,52-57], all the way down to quantum-informational roots of the universe [58,59].

Notes on Quantum Biology

Ad.1. It should be noted that *a number of macro-quantum phenomena in biomolecules & open biological cells* might be accounted within our quantum-holographic / quantum-gravitational theoretical framework – related to mechanisms of quantum-holographic projection of the healing boundary conditions in the energy-state space of the acupuncture system / (individual & collective) consciousness of the patients on the lower *quantum-holographic hierarchy* all the way down to the cellular & biomolecular levels, thus changing the *expression of genes* in morphogenesis – as a very important feedback element of *bioinformatics* (so-called "*downward causation*").^{5,6}

⁵ This might be connected with basic *macro-quantum informational control mechanisms of embryogenesis / ontogenesis & morphogenesis* and their backward influence on the *expression of genes*, starting from the first fertilized cell division which initializes differentiation of the acupuncture system of non-threshold electrical "*gap-junction*" synapses [3,4] – as well as with similar ideas of *general systems theory* applied to biological systems, with recognized open problem of the "*emergent control*" of higher hierarchical levels over lower levels in *cognitive sciences* [60,61] – pointing to significant role of *acupuncture system / consciousness* in these processes. The mentioned problem is of fundamentally-theoretical physical significance, as it tackles the question of *universality of quantum mechanics*, i.e. the question of general validity of the quantum-physical laws for *macro-*

phenomena as well, mostly treated by the methods of classical physics.

[Although this question was raised in early phase of founding of quantum-mechanical theory (and temporarily put aside for very different reasons, being considered as a difficult scientific problem), in this respect the situation is not better today, and it can be said that the problem of universal validity of quantum mechanics is still open [14,15] – and presumably *needs additional phenomenological assumptions*, like *quantum-chemical*, that many-atomic quantum systems (including acupuncture system) are phenomenologically limited to (*fermion*) *structures with dynamically coupled identical electrons* [14] (presumably including many-electron acupuncture system)!]

[It should be also mentioned that Sit'ko et al. have revealed necessary & sufficient conditions for existence of macroscopic selfconsistent potentials (of so called Landau-Haken type) alongside acupuncture channels, with EM MW eigenfrequencies of healthy & disordered states of acupuncture system [17,18], pointing out that living systems are the fourth level of quantum ladder of Nature (nuclear-atomic-molecular-biological), governed by specific macroscopic quantum laws of the *Physics of the Alive*. Sit'ko et al. have also conducted EM MW measurements via specially designed radiometric system (on the level of inherent noises $\sim 5 \cdot 10^{-23}$ W/Hz·cm²), which enabled obtaining of the following important characteristics of the acupuncture channels and points [19]: channels have diameter of 3÷5 mm in their surface exits in the acupuncture points; refraction index within channels is $n = 1$ as in the air, while being 5÷6 in the body outside channels; in case of functional disorders of channels, upon external EM MW flux of $10^{-21} \div 10^{-20}$ W/Hz·cm² the corresponding acupuncture points completely absorb radiation, while upon flux greater than 10^{-19} W/Hz·cm² acupuncture points completely reflect external EM MW radiation (so in natural conditions the effects of solar radiation on biological systems are neglecting in the very sensitive EM MW regulatory region, being intensely absorbed by atmosphere, which was presumably of evolutionary significance in natural selection of biological species).]

⁶ In particular, our analyses imply the existence of *novel macro-quantum biomolecular phenomena*, with biomolecular chain folding in an open environment considered as a subtle quantum interplay between energy & conformation eigenstates of the biomolecule, governed by quantum-chemical & quantum decoherence laws (with *time-adapting density of conformational states of the biomolecular open macro-quantum (sub)system* S_k : $\hat{\rho}_{S_k}^k(t) = \sum_i p_{k_i}(t) |\phi^{k_i}\rangle_{S_k} \langle \phi^{k_i}|$, $\sum_i p_{k_i}(t) = 1$, represented by corresponding depths of minima like in Fig. 2

[3,4,14]). On the other hand, within an *open biological cell*, a system of all identical (non-interacting & dynamically non-coupled) biomolecular proteins might be considered as corresponding spatial quantum ensemble of these identical biomolecular processors, providing spatially distributed quantum solution to a single corresponding biomolecular chain folding, whose density of conformational states – within the occupational basis of enzyme's conformational states – might be represented as Hopfield-like quantum-holographic associative neural network (HQHNN) (like in Fig. 2 as well [3,4,14]). Further on, since all successive biochemical reactions are functionally inter-connected, so are the successive HQHNNs within the corresponding enzymes' occupational bases. They may be presented in the form of Haken's multi-level synergetic neural network [62], composed of layers of successive HQHNNs – with structure of (non-morphological / abstract) "formal neurons" massively inter-connected by "formal connections", while the layers of HQHNNs would be mutually quantum-holographically coupled via their "memory attractors" (i.e. their quantum-holographic memory states, within the occupational bases of conformational states of the corresponding enzymes involved) [14]. This is also in line with trends of modeling higher cognitive hierarchical information processes [3,4,24,52,62].

[Accordingly, this might be the reason for sensitivity of our organisms on bioresonant diagnostics & therapies [3,4,17-21,51,63] – especially having in mind that different cellular enzymatic activities under different external stimuli can behave as Hopfield-like attractor metabolic network within *statistical mechanics* [64] & that (bio) chemical transformations can be formulated in the framework of fundamental *quantum chemistry* [65]! It should also be added that *Resonant Recognition Model* (RRM) of biomolecular recognition (theoretically predicted [66] & experimentally observed [67] in wide frequency ranges, from small portion of UV, across IR & MW & even MHz & KHz regions) – indirectly supports our macro-quantum HQHNN theoretical framework. Thus, the same characteristic RRM frequency of protein(s) & corresponding target(s), presumably characterises not only general

Ad.2. It should be added, that *quantum nature of water* (and its fundamental quantum-informational nature as Hopfield-like quantum-holographic neural network), with its numerous memory attractors, might also *mediate in coupling* quantum-informational intra-cellular & extra-cellular biochemical reactions (this being the possible quantum-informational basis of *homeopathy* & some intriguing *field-mediated experiments*).⁷

Notes on Quantum Medicine

Ad.3. Our quantum-holographic / quantum-gravitational theoretical framework for psychosomatics implies necessity to focus on *origins of many psychosomatic problems on underlying prenatal trans-generational levels* – with their roots in the energy-information *blockages at different levels of consciousness* (caused by trans-generationally-predestined stressors such as fear, frustration, anger,

biomolecular function of protein(s) & target(s), but also their quantum biomolecular recognition interaction on the level of biological cell. The RRM model also implies that *biomolecular information processing* is going on in the *inverse space of Fourier spectra of the primary sequences of biomolecules*, bearing resemblance to quantum-holographic ideas that *cognitive information processing* is going on in the *inverse space of Fourier spectra of the perceptive stimuli* [52], thus *indirectly supporting quantum-holographic / fractal coupling of various hierarchical levels in biological species!*]

⁷ So, *homeopathic remedy* [68] with water as the diluent might interact with macroscopic quantum-sensory EM level of acupuncture system / consciousness, as supported by *Voll's electropuncture diagnostics* – used to *test the optimal choice* of homeopathic remedies, which from a distance about 50 cm (without an oral administration of homeopathic remedy!) changes electro-resistance of acupuncture meridians of the patient (so that particular homeopathic remedy is chosen which *mostly reduces* the relative deviation of the previously measured values compared to the nominal value of a healthy state). A step further has been made in the direction of *electronic-homeopathy*, with direct transmission of properties of homeopathic drugs on carriers (water, alcohol, saline solutions, sugar...) with the possibility of changing their potency, without the use of homeopathic substances. Even effects of so-called *programmed placebo* were observed, where only labeled name of the homeopathic remedy on the glass walls of the small bottle has transferred information on the enclosed sucrose pills as carriers [69], with the same effect as in ordinary homeopathy [63]. There should also be mentioned the intriguing experiments of Montagnier et al. with *information transferred from the ultralowfrequency-excited DNA molecules on the water solution*, with subsequent possibility to transfer it on other organisms, or to be used as (sufficient!) information for the *in-vitro synthesis of new DNA molecules* only with the addition of the necessary building blocks of nucleotide bases in the originally filtrated aqueous solution [70]. In addition, there should be mentioned the fascinating experiments of Gariaev et al. with *quantum-holographic transfer* of genetic / metabolic information on both *short & long distances* (up to 30 km), by introducing this information into bio-system, biochemical systems and real physiological conditions [33].

[The aforementioned field-mediated biological experiments might indicate that the (*quantum-holographic*) *field-encoded information* is presumably critically important even on the evolutionary scale to transfer appropriate boundary quantum-informational conditions necessary for an explanation of the current *dynamics of biological evolution*, that cannot be explained on the basis of classical random laws described by the probability theory, as simply argued by Lennox [71]. This possibly indicates that the *quantum information* (embedded by quantum-holographic boundary conditions in the very beginning of the Universe) *might be fundamental physical property of the Universe* (and perhaps even more fundamental than particles, fields, and even the space-time, as briefly formulated by Wheeler's famous motto "*It from bit*" [72], motivated by *quantum-theoretical viewpoint* that we live in a *participatory Universe*); on possibility of spiritual imposing of new boundary conditions at the level of cosmic field / collective consciousness cf. Footnotes 8 & 9!]

hatred ...) – while *healing* would begin by their *integration* with healthy core of personality, through unconditional *spiritual & forgiving acceptance of ourselves & our environment*.⁸

Ad.4. As there is no out-of-cosmic environment that triggers the non-unitary decoherence of the quantum-entangled non-stationary state of "cosmic-field-collective-consciousness" & "complement-cosmic-particle-environment" – *the proposed mechanism of prayer* (probably via simultaneously vacuum-excited spiritually-purifying new macro-quantum portions of qi / prana / vital energy / uncreated light) *might impose (intrinsically, non-unitary!) necessary boundary conditions without mutual mentally-loaded addresses in prayer-related persons, as a source of free will at the level of collective consciousness*.⁹

⁸ In the context of *trans-generational* cosmic quantum hologram, although on the level of collective consciousness everything is *quantum-holographically predestined* – as suggested by experiences of different traditions [35-38,73-75] & contemporary experiences of post-hypnotic regressions [34] – these experiences suggest the possibility of *optimizing* life-programs by *spiritual purification*. In particular, let us mention Hawaiian *ho'oponopono* tradition of *repenting & forgiving ourselves* in the context of life situations, with fascinating successes in their reprogramming [73] (in this context, I have to mention an *incredible experience* of my cousin Milica, with (epi)genetic conditioned high-risk pregnancy with very low level of amniotic fluid, normalized in just a few days of ho'oponopono practice, with subsequent normal delivery!). Some other tribal traditions are also worth mentioning, where initiated shamans ritually enter the *altered states of consciousness* & receive answers to the health problems of members of their tribe & apply healing methods based on *reprogramming the loads on the level of tribe's collective consciousness* (as in South America *ayahuaska* tradition [74] or Nigerian *Abiku* tradition [75], with fascinating spiritual diagnosis & subsequent extension of the predestined-short-life programs!). On the same line, it is worth mentioning the *fascinating world bestseller confession of Anita Moorjani* [76] *on spiritual changing her life program*, in which she decided to change her previous life program (and thus forgive herself & her grieving husband) and to continue to live – with return from clinical death & after a few weeks even *spontaneous healing of terminal phase of cancer*!

[This greatly contributes to our understanding that even *most difficult psychosomatic illness*, like cancer, *have their roots in the energy-information blockages* & that *healing begins by removing them* – first lovingly to ourselves, accepting ourselves & forgiving ourselves, which is then manifested by love to others & acceptance of others (e.g. by spiritually dis-entangling / un-binding repentant-forgiving prayer [3-6])!]

⁹ Hence it could be really said that *all-forgiving prayer* might represent biophysical basis for optimization of (quantum) *holistic global psychosomatics of collective consciousness* (and complementary incoming individual & collective events) [2-6]! It should be added that above mentioned Ayurvedic, Qigong, Reiki, and modern experiences of local & transpersonal healings imply that *meditative visualization (intrinsically, non-unitary!) might also impose new (decoherence-like) quantum-gravitational boundary conditions*, by vacuum-excited spiritually-purifying & mentally-channeled transfer of new macro-quantum portions of vital energy. But contrary to prayer, *meditation could balance only practitioner himself* while not removing simultaneously other mentally-loaded addresses (thus in these situations it would be necessary to practice *circular meditatively-healing visualization from meta-positions of the others* included in the existic conflict, in order to *remove simultaneously mentally-loaded addresses*)! So, in the context of our quantum-holographic / quantum-gravitational theoretical framework, *spiritual prayer / meditation practices might be non-unitary source of free will at the level of collective consciousness*, while *non-spiritual behaviour would maintain the trans-generationally-programmed unitary evolution of collective consciousness*. This is absolutely not-intuitively from the perspective of quantum physics of inorganic world & lower biological species, and might be manifested only with the emergence of the *human species & spiritual prayer / meditation practices – and evolutionary might greatly increase the responsibility of each individual & the entire human race*!

[The difference between lower biological species & inorganic world should also be noted [10], because in the first case *quantum-entangled unitary evolution of their portions of collective consciousness might be maintained* as a result of "transpersonally-exotic communications" which would update their quantum entanglement within

Notes on Quantum Psychology

Ad.5. On the same traditional line, it should be pointed out that many *transpersonal esoteric concepts associated with consciousness are phenomenologically well known* (as repeatedly experienced by "holy men" of different spiritual traditions) – and their physical explanation should be sought on the very border of the current scientific paradigm.¹⁰

their "collective consciousness" through some kind of so-called quantum Zeno effect [25], while in the second case *standard classically-reducing effects of non-unitary-decoherence* influenced by the close environment are manifested [3,25]!

It is interesting to mention Buddhist interpretation of *karma*, which occurs not as a *result of our spontaneous reaction* to the current situation in life, but as a result of the *latter justification of our conscious reactions against the others* in this situation [77]! In the context of the *quantum-holographic predestined life programs* (as suggested by contemporary experiences of the post-hypnotic regressions [34], and experiences of different traditions [35]), this is fully justified because we all (*non-consciously!*) *react to current conflicting-encoded life-situation* (several hundred milliseconds before we become aware [78]!), but immediately afterwards we have a chance to (*consciously!*) *permanently dis-entangle the existing trans-generational conflict by penitent-all-forgiving prayer*. This might be *quite fair spiritual opportunity – and on each individual is to use it or not –* with accompanied *either unloading or further deepening trans-generational conflicts!* Bearing in mind the role of a mentally burdensome contents in the *post-mortem spiritual evolution of the soul of the dying* (to mention transpersonal collective levels of consciousness of "*Bardo levels*" in Tibetan tradition [43] or "*aerial toll house*" in Christian tradition [44]) – this would imply the importance of prayers for the soul of the deceased with ability not only to *influence its spiritual evolution*, but also the *trans-generational preferences for individual and / or collective future offspring* (with possibility of even *retroactive-nonlocal trans-generational dis-entangling / un-binding of mental / emotional conflicts*, as suggested by *experiments with prayer* [79] – bearing resemblance to quantum delayed choice experiments [80] and pointing additionally to quantum roots of consciousness)!

[That might be possibly the reason for *Christianity* to insist on *repenting and forgiving* ('*And forgive us our debts, as we forgive our debtors*', Mt.6,12), which represents a level of spiritual maturity of a person. This implies an obligation of spiritually mature persons to help in reprogramming mental / emotional conflicts by praying, even when themselves being victims of the conflicts ('*But I say unto you, love your enemies, bless them that curse you, do good to them that hate you, and pray for them which despitefully use you, and persecute you*', Mt.5,44). It is not even allowed to see evil in fellow-men and condemn them (an old biblical commandment given to the man in paradise, forbidding to take food '*of the tree of the knowledge of good and evil*' – in fellow-men - '*for in the day that you eat there-of you shall die*' (Gen.2,17), whose violation has caused the *Adam's fall*, and sowed the seed of the growing '*terror of history*'), insisting only on *personal repenting and forgiving*, as the only way in *permanent reprogramming of psychic conflicts*. Anything else would enhance the existing mental / emotional personal loads and enlarge evil in the world, dismissing an individual and humankind from the final spiritual ideal of sinless state of consciousness (an old biblical commandment after *Adam's fall*: '*The man has now become like one of us, knowing good and evil. He must not be allowed to reach out his hand and take also from the tree of life and eat, and live forever*'. (Gen.3,22)).]

¹⁰ It should be added that *transpersonal esoteric concepts of different spiritual traditions* [35-45,73-75,77,79,81] – might be biophysically accounted within our plausibly generalized quantum-holographic / quantum-gravitational theoretical framework (with elaborated psychosomatic relationship consciousness / acupuncture macroscopic quantum-holographic Hopfield-like EM-ionic-exotic associative neural network [2-5]): (i) *astral body* (*manomaya, lingasarira, manovijnana, ka, psyche, nephesh, nafs, subtle body, psychic body, soul...*) – versus ionic component of the out-of-body displaceable EM-ionic macro-quantum acupuncture system (connected with the body by miniature "wormhole" space-time tunnel, generated in the highly-non-inertial transitional states of consciousness, as frequently observed in non-stationary extrasensory near-death experiences); (ii) *mental body* (*vijnanamaya, suksmasarira, manas, ba, thymos, ruach, ruh, noetic body, spiritual*

Ad.6. Psychotherapeutic experiences from *post-hypnotic regressions* provide systematized messages that our major life lessons & opportunities are lying in the spiritual sphere *in order to optimize the otherwise predestined life-programs* – and their physical explanation might be sought within our *quantum-holographic / quantum-gravitational theoretical framework*.¹¹

body, mind...) – versus EM component of the out-of-body displaceable EM-ionic macro-quantum acupuncture system (embedded within ionic component of the out-of-body displaceable EM-ionic macro-quantum acupuncture system); (iii) *distributed centers of consciousness* (*chakras, acupuncture points, sephiroths, holy discs...*) – versus EM-ionic condensations in the structured out-of-body displaceable EM-ionic macro-quantum acupuncture system; (iv) *vital energy* (*chi / qi / ki, prana / akasha, mana, ka, pneuma / ether / natura medica / anima mundi, yesod, baraka, the Holy Spirit / Uncreated Light, Heilstrom, Innate Intelligence, bioenergy / biofield...*) – versus EM-ionic-exotic macro-quantum condensates (unstructured / structured, virtual / real) within acupuncture channels (with possible generalization from the EM field to the unified field, in line with the broader traditional meaning of vital energy, as all-pervasive cosmic quintessence).

[Additionally, if put in the theoretical context of the fundamental *holographic principle* [58], according to which any 3D physical system is *isomorphic* to the holographic information embedded on its 2D surface, then *quantum-holographic informational content of a body* could also be contained in *corresponding surface layer of vital energy of the astral-mental body (aura)*, as has been stated in various traditions – in accordance with our Hopfield-like neural macroscopic quantum-holographic / quantum-gravitational theoretical framework for psychosomatics & proposed close relationship of the acupuncture system & consciousness (supported by meridian psycho-energy therapies as well, with the rapid elimination of traumas, phobias, allergies and other psychosomatic disorders, by simultaneous emotional-involved intensive visualization of psychosomatic problems & tapping / touching on prescribed acupuncture points [23])!]

Aforementioned consensus on the *transpersonal esoteric concepts* in different spiritual traditions, demonstrates that acquired information in their transpersonal extrasensory perceptions may give rise to classically-reduced *out-of-body stationary extrasensory perception* of their mentally-addressed out-of-body environments of collective consciousness (in Tesla-like creative way [2]!). However, in *non-stationary mystical states of consciousness* without such transpersonal mental-addresses, the shortly acquired information in the form of quantum-entangled correlations of individual & collective consciousness cannot be completely saved but is classically-reduced after returning into stationary normal state of consciousness (as the problem of quantum theory of measurement, related to the reduction of the implicate order of the quantum-entangled (quantum-holographic) non-stationary superposition of two-partite states into the explicate order of measuring classically-reduced stationary one-partite states). In this context, we mention *several-millennia controversy about post mortem evolution of the soul*, probably related to an *interpretative epistemological level* of transpersonal transfer of mentally-addressed loads within the existing generation & further generations via network of collective consciousness, with possibility that particular strong conflicts transferred as "ego-states" leave a strong impression of previously lived lives [2-11]. But what is the *ontological spiritual reality* – could remain *permanent controversy* of all these principally limited attempts of *human rationalization* [38]. And might help us understand that all our partial rationalizations (classically-reduced mappings!) are still an approximation of the fundamental-holistic reality (quantum-holographic territory!), *which differ from tradition to tradition*.

[On the other hand, *the consensuses of the mystics of the same tradition on a similar partial stationary rationalization of mystical experiences* could be understood as *part of the same stationary dominant-channeling trans-generational contextual heritage of members of the same tradition* (because we are not born as so-called *tabula rasa*, as being indicated by contemporary experiences of hypnoregressions [34] & experiences of different traditions as well [35])!]

¹¹ A number of psychotherapeutic experiences of post-hypnotic regressions [34] provide *important implications* on correspondence of the described experiences – and our theoretical predictions [10]: (i) *transpersonal-spiritual tunneling as exclusive communications, without space-time barriers* – in accordance with our theoretical predictions (cf. also Footnote 10); (ii) *soul transpersonally chooses a pair of prospective parents, among several*

Notes on Quantum-Gravitational (Bio)Informatics

Ad.7. According to our quantum-holographic / quantum-gravitational theoretical framework of consciousness & psychosomatics, *physical explanation of transpersonal phenomena without space-time barriers* (even practically incorporated in psychosomatic energy-correction) – presumably might be sought in invited combination of *quantum-gravitational-like transitional states of consciousness & Principle of equivalence & objective reduction of quantum wave function*.¹²

offered alternatives previously carefully observed with all the details of the offered alternatives – indicating that life is predestined on the physical level by existing boundary conditions at the level of cosmic field / collective consciousness (cf. also Footnotes 7-9); (iii) *by made choice of the parents, life is not completely fixed, but can be optimized by spiritual means, repenting and forgiving to ourselves & others* – bringing new boundary conditions at the level of cosmic field / collective consciousness, which points to the fundamental importance of spirituality as a source of the greatest freedom for optimizing otherwise predestined life-programs, and necessity of careful control of the reactions on current life-temptations in order to avoid further deepening of the existing conflicts (cf. also Footnote 9); (iv) *although the aforementioned experiences evoke strong associations on reincarnation, some of the reported insights suggest the possibility of transmission of information of the same content into several persons during their overlapping lifetime periods* – implying a trans-generational transfer of accumulated information, with experiences that transferred contents leave a strong impression of the previously lived lives (cf. also Footnote 10).

[Thus, in the context of the aforementioned *trans-generationally-predestined quantum-holographic structure of collective consciousness* (as suggested also by the experiences of tribal traditions & traditions of East & West), *it seems irrational not only to be angry with the life program* (previously freely chosen prenatally [34]) *but it is also irrational not to optimize it* (spiritually-accepting & forgiving ourselves & our environment) – *contributing to both our own spiritual growth & catharsis of our trans-generational mental environment* (which is fundamental question of both mental hygiene & civil decency i.e. both spiritual & civil morality)!]

¹² According to our *quantum-holographic / quantum-gravitational theoretical framework for psychosomatics* [2-6,15], *physical explanation of numerous transpersonal communications* (precognition & other esoteric phenomena & out-of body experiences without space-time barriers [1,3,16,28-30,34-41,43-45,73-77,79,81]) might be related to so-called *transitional states of individual consciousness* (as *highly-non-inertial transitional processes from high-dielectric bodily into low-dielectric out-of-body states*, equivalent-to-strong-gravitation according to Einstein's *Principle of equivalence* of inertial & gravitational accelerations!) in *quantum-gravitationally mentally-channeled tunneling* of out-of-body-displaced part of acupuncture EM-ionic quantum-holographic neural network (cf. also Footnote 1) – quantum-gravitationally stabilized by so-called "*exotic matter*" (vacuum fluctuations in strongly curved space-time of wormhole tunnels with *anti-gravitational effects* [3,13]) – really observed in *transpersonal psychokinetic manifestations* of prana / qi / vital energy / uncreated light [3,35-40].

[See also videolink <http://www.youtube.com/watch?v=2JSk4T9IN3I> of extraordinary *psychokinetic abilities* of Serbian boy (with healing inborn abilities, which clearly testify in support of his strong vital energy), whose breast is sticking metallic, plastic or glass objects weighted up to several kilograms (probably due to *anti-gravitational cancellation* of local gravity field on the boy's chakra points, spontaneously supplied by strong vital energy through transpersonally opened energy channels, as in Pranic, Qigong & Reiki healing practices)!]

On the other hand, according to our extended *quantum-holographic / quantum-gravitational theoretical framework* [3,15], the similar *highly-non-inertial transitional processes* should be expected in *highly non-inertial microparticle interactions* in quantum-measurement-like situations (fully equivalent, according to Einstein's *Principle of equivalence*, to strong gravitational fields – where opening of wormhole-tunnels is expected [3,13]). The question of how it is possible that these highly-non-inertial micro-particle processes with *inevitable opening of miniature wormhole tunnels* (accordingly also *quantum-gravitationally stabilized by exotic matter*) were not taken into account within quantum mechanics that is yet extremely accurate theory (?) – could be answered as

Ad.8. Within our quantum-holographic / quantum-gravitational theoretical framework of consciousness & psychosomatics, *explanation of the long standing open problems of the physical nature of psychosomatic acupuncture system & consciousness, including exotic transpersonal aspects of qi / prana / vital energy* (essentially important for our functioning according to Eastern traditional medicine) – should presumably be sought on deeper quantum-gravitational level as well.¹³

Notes on Possible Experimental Tests

Ad. 9. Mapping of field-related collective consciousness in *meditation-guided creativity tests on small & large scales*.

Ad.10. Mapping of field-related collective consciousness in *post-hypnotic regression tests on small & large scales*.

Ad.11. Optimizing of field-related collective consciousness in *prayer-disentangling tests on small & large scales*.

Ad.12. Testing of decreasing quantum entropy of acupuncture systems in *acupuncture-based & consciousness-based anti-stress treatments*.

they possibly were (!) but implicitly within von Neumann's projection postulate [3,21,82], thus supporting *quantum-gravitational objective reduction (OR)* [3,15,56,57] of the wave function in quantum-measurement-like situations (which would imply that von Neumann' *ad hoc projection postulate has its physical origin in deep quantum-gravitational-phenomena!*).

[Thus, *such macroscopically accumulated exotic OR-induced anti-gravitational imprint* might possibly be observable on cosmological scale (or have been already detected (!) by recent advances in the cosmological tests, that invite again the *Einstein's cosmological constant* and related concept of hypothetical "*dark energy*" or "*quintessence*", which permeates all of space and tends to accelerate the expansion of the universe [83]!?)

¹³ The *exotic aspect of these space-time tunnels & vital energy* might be extended to *acupuncture channels* [7-11] (of peculiar vacuum-like $n = 1$ refraction index [19] with *vacuum-like outside inflow of vital energy / prana / qi* [84] – implying that such type of exotic transpersonal communication enables *continuously-refreshing interaction* between the two mentally-addresses persons & *transpersonally stabilized quantum-entanglement* of their acupuncture systems / consciousnesses i.e. *prevents dis-entanglement* of their macroscopic quantum-entangled non-stationary states by *decoherence-like* interaction with their local somatic environments (*contrary to situation in microworld* without such stabilizing mentally-addressing exotic transpersonal effects, where laboratory-created quantum-entangled pairs of particles must be *well isolated form environment* in order to prevent their subsequent quantum-decoherence [25])! Regarding extremely unusual vacuum-like $n = 1$ refraction index of *acupuncture channels* – based on the principles of *photonic crystals* and *photonic bandgap guiding* (where the confinement of photons in some low-index hollow-core 3D-defect might be achieved by exploiting *photonic bandgap reflectivity* of the surrounding higher-index (quasi) periodic medium [85]!) – the EM MW experiments [19] inspired us to suggest an interesting possibility [7-11] to consider *acupuncture channels* as *3D photonic crystal channel waveguides of propagated EM MW photons* (influencing backward the structure & ionic conductivity of the channels) – *confined* by the surrounding higher-index (*quasi*) *periodic cellular body medium* outside channels (of $n = 5\div 6$ in the cellular cytoplasm & $n \gg 1$ in the cellular membranes of metabolic depending striking polarization of the volume ion density [86]), with *non-propagated EM MW evanescent photons* [7-11,87] pervading our body.

[On these lines, application of fundamental quantum-field theoretical formalism of *spontaneous symmetry breaking*, points to biological room-temperature *macroscopic condensates of virtual quasiparticles* of the effective mass and charge, so-called *evanescent photons in water* (non-propagated / tunneling longitudinal modes of quantum EM field embedded by biological macroscopic ordered localizations of the electric dipole field of water [87]), as a *possible quantum basis* of functioning of cells in general, and consciousness in particular!]

Ad.13. Testing of increasing quantum correlations of healers' & healees' acupuncture systems in *transpersonal anti-stress treatments*.

Ad.14. Testing of healers' quantum-exotic vital energy & out-of-body extensions of acupuncture channels in *transpersonal anti-stress treatments*.

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