

Pogledi/ Views

NIKOLA TESLA – CASE STUDY FOR
UNDERSTANDING QUANTUM-HOLO-
GRAPHIC NATURE OF CREATIVITY

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NIKOLA TESLA – STUDIJA SLUČAJA ZA
RAZUMEVANJE KVANTNO-HOLOGRAFSKE
PRIRODE KREATIVNOSTI

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Fenomen *dubokih kreativnih uvida* poznat je mnogim stvaraočima u oblasti nauke i umetnosti. Najčešće, posle izvesnog napora da se razreši neki problem, rešenje se iznenađujuće pojavljuje. Međutim, sam čin kreacije odigrava se na podsvesnom nivou, i do sada je izmicao racionalnoj naučnoj analizi. Upravo zato su *Tesline introspektivne analize* svojih sopstvenih kreativnih faza dragocena "studija slučaja" za razumevanje same *biofizičke prirode kreativnosti*.

Tesla je bio apsolutno ubeđen u sličnost naučnih i umetničkih ideja: 'One dolaze iz istog izvora.' To gledaš je slično *Platonovom*, ali Tesla do njega nije došao kroz filozofske spekulacije, već je *iskusio svet ideja još od detinjstva*: 'Kada bi se pomenula neka reč, lik objekta koji je ona predstavljala bi se pojavio tako živo u mojoj svesti da sam često bio sasvim nesposoban da razlikujem da li je to što vidim opipljivo ili nije ... Nekada bi on ostajao fiksiran u prostoru iako sam gurao ruku kroz njega' ... ['kvantni hologram', u izmenjenom stanju svesti!?' (prim. D.R.)] Znatno kasnije, tokom boravka u Budimpešti (1881/1882), u potrazi za poslom posle napuštanja studija, Tesla je bio opsednut potrebom da odvoji ... 'komutator od mašine' ... Postigao je ... 'odlučan napredak' ... još u Pragu (1880/1881), ali je znao da mora da postigne više, da prokrci novi put: 'Počeo sam prvo zamišljanjem u glavi kako pokrećem pravu autentičnu mašinu i pratim joj promjenljivi tok ... Zatim bih zamišljao sisteme koji se sastoje od motora i generatora i kako ih pokrećem na razne načine. Slike koje sam gledao bile su savršeno stvarne i opipljive'.

Čitava njegova životna snaga, svi impulsi i nagoni bili su usmereni ka rešenju, zahtevajući sve više i više, uvek s njim, prisutni čak i u snu, bliže njemu nego išta drugo: on je morao naprezati misli do krajnjih granica, nije imao strpljenja i, nekoliko nedelja od početka zaposlenja, potčinio se svome ... 'neprestanom razmišljanju' ... i dobio 'potpuni nervni slom' ... Njegovo fizičko stanje je potpuno propalo. Nervni slom je ubrzao i izoštrio njegova opažanja stotinama puta tako da 'sam mogao da čujem otkucaj džepnog sata kroz tri sobe između mene i sata. Muva koja bi sletjela na sto proizvodila je tup udarac u moje uhu. Zvižduk lokomotive ... potresao bi stolicu na kojoj sam sjedio ... u mraku sam mogao razaznati predmet na udaljenosti od tri-četiri metra po naročitim jezivim osjećajima na čelu ... U nekim slučajevima vidio sam vazduh oko sebe prepun živih plamičaka.' Boravio bi u kući,

Phenomenon of *deep creative insights* is known to many creators in the fields of science and art. Most frequently, after significant effort to resolve some problem, the solution suddenly appears. However, the very act of creation is going on at subconscious level, escaping from rational scientific analysis to date. That is why *Tesla's introspective analyses* of his creative phases are so precious *case study* for understanding the very *biofysical nature of creativity*.

Tesla was absolutely convinced in similarity of scientific and artistic ideas: 'They are coming from the same source.' This viewpoint is similar to *Plato's*, but Tesla did not come to that speculating philosophically, but *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', in altered state of consciousness!?' (D.R. note)]. Later on, 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' ... He had made a ... 'decided advance' ... in Prague (1880/1881), but knew he had to reach higher, break new ground: 'I started by first picturing in my mind a direct current machine, running it and following the changing flow ... Next I would visualize systems comprised of motors and generators and operate them in various ways. The images I saw were perfectly real and tangible'. His entire life force, all impulses and urges, were directed toward the solution, demanding more and more, always with him, present even in his sleep, closer to him than anything else: he had to press his thoughts to their limits, had no patience, and within weeks of starting his employment, succumbed to his ... 'incessant thinking' ... and had 'a complete nervous breakdown' ... His physical state had completely deteriorated. The breakdown quickened and sharpened his perspective a hundredfold, so that he ... 'could hear the ticking of a watch with three rooms between me and the timepiece. A fly alighting on a table in the room would cause a dull thud in my ear. The whistle of a locomotive ... made the chair on which I sat vibrate ... in the dark I ... could detect the presence of an object at a distance of twelve feet by a peculiar creepy sensation on the forehead ... In some instances, I

u pidžami i pod pokrivačem, neprekidno drhteći od tutnjave kolskih točkova i konjskih kopita, verglaša, zvona i glasova nerazgovetnih i stranih. I sam vazduh ga je povređivao ... Jednoga dana kolega sa posla, Antal Sigeći, došao mu je u stan i rekao da, kad već ne zna od čega boluje, bar zna to da šetnja na čistom vazduhu i svetlosti nikome ne škodi i pokazao mu je gradski park, Varošliget, i pozvao ga da pođu u šetnju ... 'Ovo smo praktikovali svakoga dana i ja sam brzo dobijao snagu. I moj um je izgleda postajao živahniji, pa kad se moje misli vrte ka predmetu koji me je obuzimao, bio sam iznenađen u svoje uvjerenje u uspjeh. Jednom prilikom, koja će mi uvijek ostati u uspomeni' ... za vreme jedne šetnje u parku, krajem februara, Tesla je posmatrao zalazak sunca i počeo recitovati slavni odlomak iz Geteovog *Fausta* [...] Tesla je odjednom stao, zanemio ukočen i zapanjen, jer je ugledao očima proroka Isaije ono što je toliko dugo tražio ... 'Dok sam izgovarao ove riječi, sinu mi ideja kao munja ... i u trenu se istina otkri. Grančicom sam u pijesku nacrtao dijagram moga motora ... tajne prirode koje sam ... otrgnuo od nje uprkos svih smetnji i po cenu samog života ... Gledaj kako glatko ide. Nema komutatora, nema četkica, nema iskri. Dok tok jednog kalema slabi, u susjednom kalemu raste, kalem za kalemom, stvarajući nova magnetna rotirajuća polja i neprestano vrteći osovinu.' ... On je, eto, ipak bio u pravu, u Gracu (1875/1877): varnice, točak i sada elektromagnetno polje. Njegova strela je pogodila cilj. Možda je poremećaj njegovih čula ipak bio neophodan. On je ušao u zajednicu džinova nauke. Njegov život je sačuvan za neku određenu svrhu ... Zamislio je s lakoćom nove motore: 'Za manje od dva meseca razvio sam sve tipove motora i modifikacije sistema, sada poznate pod mojim imenom ... bilo je to mentalno stanje sreće tako potpuno za kakvo sam ikad znao u životu. Ideje su dolazile u neprekidnom toku i jedina teškoća koju sam imao bilo je da ih čvrsto zgrabim.'

have seen all the air around me filled with tongues of living flame. He stayed indoors, sunk in his night shirt and beddings, shivering continually under the thunder of cart wheels and horses, organ grinders, bells, and the sound of voices, incomprehensible and foreign. The air itself hurt ... One day, a co-worker, Antal Sigeći, came to his lodging, and said that, while he had no clue as to what was ailing him, knew that a walk in the fresh air and light never harmed anyone, and pointed toward the City park, Varošliget, and invited him to come for a stroll ... 'We exercised every day and I gained rapidly in strength. My mind also seemed to grow more vigorous and as my thoughts turned to the subject that absorbed me I was surprised at my confidence of success. On one occasion, ever present in my recollection' ... 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* [...] Tesla stopped, speechless and transfixed, for he saw with the eyes of the prophet Isaiah, what he had been seeking so long ... '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.' ... He had been right in Graz (1875/1877). The fire, the wheel, and now the electromagnetic field. His arrow had hit the target. Perhaps the disarrangement of his senses had been necessary. He had joined the community of the giants of science. His life had been preserved for a purpose ... He visualized with ease the new motors: '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.'

DVA MODUSA SPOZNAJE

Navedeni Teslini iskazi nedvosmisleno govore o tome da su Tesline vizije i otkrića ostvarivane u kontrolisanim izmenjenim i prelaznim stanjima svesti, koja su manifestacija makroskopske kvantne prirode i nelokalnosti svesti, sa značajnim kognitivno-kreativnim implikacijama o dva modusa spoznaje (saglasno našim istraživanjima) [1]: kvantno-koherentnom direktnom (religijsko/kreativnom, u izmenjenim i prelaznim stanjima svesti) i klasično-redukovanom indirektnom (čulno/racionalno posredovanom, u normalnim stanjima svesti). Posebno je zanimljivo, u kontekstu dobro dokumentovanih direktnih kreativnih uvida i pronalazaka Nikole Tesle (neposredno vizualizovanih u svesti sa detaljima funkcionisanja naprava, bez ikakve primene Maksvelove elektromagnetike) razmotriti mogućnost kontrole kreativnih procesa u kontekstu našeg teorijskog modela, koji predviđa anticipativna svojstva psihe u kvantno-holografskim kratkotrajnim kvantno-koherentnim izmenjenim i prelaznim stanjima svesti (sa potonjom klasično-redukovanom-ekstrasenzornom-percepcijom mentalno-adresiranog vantelesnog komplementarnog okruženja, koje može biti i Jungov 'arhetip' problema-sa-rešenjem na nivou kvantno-holografске kolektivne svesti, što svakako budi asocijacije i na Platonov 'svet ideja'!). Da bi se potom, po povratku dislocirane kvantno-koherentne svesti u telo, tako dobijena klasično-redukovana informacija osvestila do nivoa normalnog stanja svesti, potrebno je da dobije i prioritet savladavanjem moždanih pragovno-prioritetnih filtara.

TWO COGNITIVE MODES

The above Tesla's quotations undoubtedly reveal that Tesla's visions and inventions were realized in controlled altered and transitional states of consciousness, which are manifestations of macroscopic quantum nature and nonlocality of consciousness, with significant cognitive-creative implications of two modes of consciousness (according to our investigations) [1]: quantum-coherent direct one (religious/creative, in altered and transitional states of consciousness) and classically-reduced indirect one (sensory/rationally mediated, in normal states of consciousness). It is especially interesting, in the context of well documented direct creative insights and extraordinary inventions of Nikola Tesla (directly visualized in consciousness with functioning details of devices, without any application of Maxwell electromagnetics), to consider possibility of controlling creative processes related to our theoretical model, which predicts anticipative properties of psyche in quantum-holographic short-lasting quantum-coherent altered and transitional states of consciousness (with subsequent classically-reduced-extrasensory-perception of the mentally-addressed out-of-body complementary environment, which might be also Jung's 'archetype' of the problem-with-solution on the level of quantum-holographic collective consciousness, which arises associataion on the Plato's 'world of ideas' too!). After returning of the displaced quantum-coherent consciousness into the body, in order that transpersonally acquired information ascends to the level of normally conscious state, it is also necessary to overcome brain's threshold-priority filters.

KONTROLA KREATIVNOSTI

Prema našim teorijskim istraživanjima, svi gore pomenuti uslovi se u *budnom stanju* mogu realizovati u kvantno-koherentnom stanju *meditacije* (ulaskom u ovo prolongirano izmenjeno stanje svesti, sa *mentalnim adresiranjem* rešavanog problema, što je Tesla i činio mentalnim fokusiranjem na rešavani problem!), dok se u periodu *spavanja* oni mogu realizovati pri kvantno-koherentnim prelaznim stanjima *uspavljivanja* i kvantno-koherentnim stacionarnim stanjima *REM-sanjanja* (sa prethodnom *intenzivnom koncentracijom* na rešavani problem pre spavanja, uz potonje nesvesno pojačanje dobijenog klasično-redukovanog odgovora najčešće u formi simboličkog sna, kojeg treba *pravilno interpretirati* u kontekstu unutrašnje lične simbolike pojedinca) [1]. Svakako, za rešavanje konceptualno složenih *naučnih problema* potrebno je i da je pojedinac *ekspert* u datoj oblasti, kako bi se potom naučno *racionalizovao* odgovor koji predstavlja odgovarajući naučni pomak. Slično važi i za *umetnička kreativna iskustva* i njihove potonje *ekspresije* odgovarajućim umetničkim sredstvima [Mocart kao izvanredan primer!], pri čemu sama *umetnička dela* potom predstavljaju i svojevrsne *mentalne adrese 'arhetipova'* sa kojima je umetnik bio u kvantno-holografskoj komunikaciji tokom kreacije (pa zato i *duboki umetnički doživljaji* publike mogu imati jaku *spiritualnu notu*, kroz *spontano mentalno adresiranje* umetničke publike na remek delo i *emocionalno-indukovano pobuđivanje* u prelazno stanje svesti; a slično važi i za *duboke spiritualne doživljaje* vernika kroz *mentalno adresiranje* na ikone). Na kraju, s obzirom na izuzetne kreativne domete Teslinih iskustava u ovakvim egzotičnim stanjima svesti, postaje jasnija njegova uverenost da *'kada počnemo proučavati 'nefizikalne pojave', napredovaćemo za deset godina više nego za sve vekove dosad.'*

CREATIVITY CONTROL

According to our theoretical investigations, all mentioned conditions might be realized in *waking quantum-coherent state of meditation* (by entering in this prolonged altered state of consciousness, with *mental addressing* on the solved problem, which Tesla has been doing by mental focusing on the solving problem!), while during the *sleep state* they can be realized in quantum-coherent transitional states of *falling asleep* and quantum-coherent stationary states of *REM-sleep phases* (with previous *intense concentration* on the solving problem before sleep, and subsequent amplification of the obtained classically-reduced answer mostly in the form of symbolic dream, which should be then *correctly interpreted* in the context of personal internal symbolism) [1]. 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 that represents corresponding scientific shift. The similarly holds for *artistic creative experiences* and their subsequent *expressions* [Mozart as an extraordinary example!], while very *art-works* then behave like *mental addresses of 'archetypes'* being in contact with artists in transpersonal communications during the acts of creation (and whence *deep artistic experiences* of the public might have strong *spiritual note* too, through *spontaneous mental addressing* of the artistic audience on the masterpiece and *emotionally-induced excitation* into transitional state of consciousness; similarly holds true for *deep spiritual experiences* of the believers through *mental addressing* on holy icons). Finally, regarding extraordinary creative ranges of Tesla's experiences in these exotic states of consciousness, his conviction that *'when we start to study 'non-physical' phenomena, we will progress more in ten years than we have for centuries' becomes clearer'.*

[1] D. Raković, Integrativna biofizika, kvantna medicina i kvantno-holografška informatika: psihosomatsko-kognitivne implikacije (IASC & IEFGP, Beograd, 2008), Gl. 5.

[1] D. Raković, Integrative Biophysics, Quantum Medicine, and Quantum-Holographic Informatics: Psychosomatic-Cognitive Implications (IASC & IEFGP, Belgrade, 2009), Ch. 5.