Partial intuitive creativity is a transfer of solutions from the quantum computer of our subconscious to the digital computer of our conscious

Abstract

We are living in the 21st century and we still don't understand how intuitive creative work is done. This article describes partial intuitive creativity when the excitation is not high enough to assure collective work of the Subconscious and the Conscious and only separate intuitive solutions are transferred from the Quantum Computer of the Subconscious to the Digital Computer of the Conscious. It is described with probability for transfer of ready solutions through the barrier between the Subconscious and the Conscious. Since the abundant secretion of neurotransmitters of excitation, glutamates, excites the Conscious, the quantum-mechanical expression describing the probability for transfer of solutions from the Subconscious to the Conscious through the barrier, will have coefficients, which are not constants, but are nonlinear function of the amount of released glutamates. The article explains why the mathematical description of partial1 intuitive creativity should be both quantum and nonlinear.

Keywords: partial intuitive creativity explained, nonlinear quantum model of partial intuitive creativity.

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Partial intuitive creativity is a transfer of separate solutions from the subconscious into the conscious through the barrier between them

Gabor, who won the Nobel Prize for holography, best described partial intuitive creativity: *"Creativity is a process partly conscious, partly unconscious. You think out the problem thoroughly, then you sleep on it, wait a while, and if you are lucky it comes out readymade. All the real thinking goes on in your unconscious… There is no creativity without a surprise, without 'jumping a logical gap' and not knowing how you have done it."[2]*

According to the French mathematician Henri Poincare, "to pass through all possible variants, one life, of course, will not be sufficient, but not all the variants are coming into the conscious mind. *In the Conscious are usually coming only the useful and fruitful combinations, which appear to be a result of preliminary sifting. The big a priori work of looking through all possible solutions is done by the Subconscious... but only those, which are interesting, find their way into the field of the Conscious... It is like an exam at two levels - to the second level are admitted only those, who have taken already successfully the first level exam."[3]*

Both cases illustrate partial intuitive creativity, when only separate solutions are transferred from the Subconscious, which works with the waves of our weak NEMF,[4] into the digital computer of our Conscious, which works on biochemical basis. Kant[1] called the subconscious *"midwife of the (creative) thoughts"*. According to the German psychologist Wundt, *"the Subconscious is a creature that works for us and throws ripe fruits in our lap."* Bertrand Russell shares that sometimes he postpones publishing his ideas to give them time to ripe.[5]

"A few complicated scientific problems can ripe in the Subconscious simultaneously, only rarely appearing in the field of our attention to tell us for newly received results."[5] This illustrates that the Subconscious works on a multi-program regime, i.e. on many problems at a time with levels of priority - just like the large contemporary computers do.

Characteristic for partial intuitive creativity is the unpredictability of the moment when the solution of a problem will miraculously pop up from the Subconscious into the Conscious. A widely known historical example is Archimedes' discovery of the law of water displacement when taking a bath in his bathtub. He became so excited over his discovery that he ran naked on the street shouting *"Eureka"*, which means, *"I discovered"*.

Quantum nonlinear approach to partial intuitive creativity

Partial intuitive creativity takes place when the level of excitation is lower than the barrier B between the Conscious and the Subconscious. In this state, only separate solutions are transferred from the Subconscious S into the Conscious C through the barrier. The Digital Computer of our Conscious, which works on biochemical basis, needs to operate on a quantum way to be able to communicate with the Quantum Computer in the Subconscious, which works with the waves of our weak NEMF.[4] This is accomplished with the release in puffs of the neurotransmitters of excitation glutamates.

The neurotransmitters are electrically charged substances synthesized and stored in vesicles at the pre-synaptic membrane, ready to be released when a nerve signal appears. Their transport through the gap (together with ions) changes the post-synaptic membrane. The release of the neurotransmitters in puffs makes the excitation quantized, which allows communication with the Quantum Computer of the Subconscious.[6]

However, in the case of partial intuitive creativity there is a barrier between the Quantum Computer of the Subconscious and the Digital Computer of our Conscious and only the solutions that are exciting (and have higher energy) are making the transfer from the Subconscious to the Conscious through the barrier. The transfer through the barrier is called tunneling in quantum physics.

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Each transfer from the Subconscious into the Conscious through the barrier B, in quantum mechanics is usually described with a probability function $w(S->C)$, which reflects the impossibility to predict the moment when a solution will pop up from the Subconscious into the Conscious. The probability for transfer $S->C$ through tunneling is

$$w(S->C) = B \exp\left[\left(-3A_{sc}/8E'\right)\left(1 + \Delta \in /A_{sc}\right)^2\right], \quad (1)$$

where B is the tunneling coefficient

$$B = k_t Z \exp\left(-3/2E'\right), \quad (1')$$

k_t is tunneling factor, Z = constant, A_{sc} is the parameter of interaction of the Conscious and Subconscious mind, which will be nonlinear function of the amount, of released neurotransmitters of excitation glutamates (see § 4), E' is the energy of excitation, $\Delta \in$ is the energy change due to the interaction of the conscious and subconscious minds.

Since highly emotional individuals have a larger amount of released neurotransmitters of excitation, glutamates, (§ 4) the quant of energy added at each excitation $i\Delta E'$ will be larger. As one can see from the first formula, the larger is $\Delta E'$, the larger is the total energy of excitation $E' = \sum \Delta E'_i$, and the larger is the probability for transfer of separate intuitive solutions from the Subconscious S into the Conscious C, $w(S->C)$, through the barrier.

The highly emotional individuals also have better memory, and more memorized events means a denser set of neurons and neurosynaptic junctions. This fact combined with the fact that for emotional individuals the quant of energy ΔE_i at each excitation i is larger, makes the emotional individual more likely to experience transfer of solutions from the Subconscious into the Conscious, or for them the probability for transfer Subconscious -> Conscious $w(S->C)$ is higher.

Thus, for emotional individuals reaching the Subconscious is easier. One way to reach the Subconscious is through hypnosis and emotional individuals could reach their Subconscious through self-hypnosis. The more emotional is an individual, the larger is his hypnotizability[7] and his intuitive creativity, i.e. the probability to experience transfer of solutions from the Subconscious into the Conscious (or through self-hypnosis to achieve a state of ecstasy, i.e. full intuitive creativity).

Biophysical and biochemical measures of creative abilities

Hypnosis is putting the Conscious to sleep to access the Subconscious. Ravitz[8] first measured hypnotizability electrometrically, which measures how easy it is to reach the Subconscious; it is a *biophysical measure of partial intuitive creativity*. Now (in 2018), when we know that the Quantum Computer in the Subconscious works with the waves of the human NEMF,[9,10] it is understandable why the access to the Subconscious could be measured electrometrically, but in 1950 it was intuitive insight – a jump into the future.

Biochemical measure of partial intuitive creativity would be measuring the total amount of secreted glutamates (the neurotransmitters of excitation relevant to creativity) or their final metabolite N_2O (laughing gas). If N_2O is marked radioactively, intuitive creativity can be measured with PET scanners, which would be safe because the half lifetime of the radioactive isotopes of N and

O is 2 and 10 min. correspondingly, which means that after 2 and 10 min half of the used radioactive isotopes of N and O would be excreted. Such measurement would determine not only the emotional sensitivity of the individuals, but also their creative potential, or their chances to experience transfer of solutions from the Subconscious to the Conscious, i.e. to experience a state of partial intuitive creativity. The higher the amount of depleted glutamates, the higher the intuitive creativity.

Which subconscious solutions make it through the barrier to the conscious?

According to the French mathematician Henri Poincare, "*in the Conscious only the useful and fruitful combinations are usually coming forth, which appears to be the result of preliminary sifting. The big a priori work of looking through all possible solutions is done by the Subconscious but those only, which are interesting, find their way into the field of conscious...*"

The citation contains the answer. Only the solutions that are interesting and can thrill our aesthetic mind, in other words could emotionally excite us, will have high enough energy to make it through the barrier between the Subconscious and the Conscious. This is so, because the Emotional brain, called Limbic System, is in the Subconscious, where our Quantum Computer is, which works with the waves of our nonlinear electromagnetic field (NEMF).[9,10] In the normal quantum mechanics, the particles that have received higher energy as a result of energy fluctuations are passing through a potential barrier. In the case of partial intuitive creativity, the intuitive solutions of the Subconscious that have received higher energy as a result of strong emotional excitation observed as energy fluctuation would pass through the barrier into the Conscious. The nonequilibrium theory of Prigogine[11] states that fluctuations are starting to play decisive role in nonequilibrium states. The states of intuitive creativity, being states of excitement (partial intuitive creativity) or overexcitement (full creativity), are nonequilibrium states, and fluctuations are expected to play essential role in them.

Conclusion

The whole mind, Conscious and Subconscious would require a nonlinear quantum description because the Subconscious mind (the Quantum Computer in it) operates with the waves of our weak nonlinear electromagnetic field (NEMF) and the volt-ampere characteristics of our brain, which are of hysteresis type,[12–14] mean that the brain (and its product the Conscious Mind) are nonlinear and would require nonlinear description. The necessity of quantum description comes from the way the neurotransmitters are released in the brain - in puffs or quants.

In this article, *partial intuitive creativity* was described as a transfer of separate solutions from the Subconscious into the Conscious. Simple expression from the quantum mechanics was offered to describe the probability for transfer, but the coefficients in the expression are not constants, as they would be in the quantum mechanics. Instead, they are nonlinear functions of the individual's excitability measured with the amount of secreted neurotransmitters of excitation, glutamates.

Since both - the easiness to access the Subconscious during hypnosis and our ability to intuitively create, which also require connection to the Subconscious - are related to hypnotizability, the height of the barrier B between the Conscious and the Subconscious in formula (1), can be evaluated from electrometrical measurements

Partial intuitive creativity is a transfer of solutions from the quantum computer of our subconscious to the digital computer of our conscious

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of the individual's hypnotizability.[8] The results can be compared with clinical observations, which relate emotionality to learning, hypnotic abilities, and intuitive creativity.

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Conflicts of interest

Author declares that there is no conflict of interest.

References

1. Kant I. *Essays*. 1952.

2. Rosner S, Abt LE. *The Creative Expression,* USA: North River Press;1976.

3. Poincare H. *Science and Hypothesis*. New York: Dover Publisher;1952:288.

4. Kuman M. *Journal of Proteomic and Bioinformatics.* 2018;7(5).

5. Ponomarev AJ. *Psychika i Intuitsia*. Moscow.1967

6. Kuman M. *Advances in Complimentary and Alternative Medicine*. 2019;3(5).

7. Wickramasekera I. Professional Psychology. *Research and Practice*. 1988;17:437–447.

8. Ravitz L. Elecrometric Correlates of Hypnotic State. *Science*. 1950;112(2908):341–342.

9. Kuman M. *Research in Medicine and Engineering Sciences*. 2018;5(2).

10. Kuman M. New light on the attractors creating order out of the chaos. *International Journal of Complementary and Alternative Medicine*. 2018;11(6):337–342.

11. Prigogine I. *Order out of Chaos*. New York: Bantam First Edition; 1984.

12. Kuman M. A Guide to the Mind's Secrets. *Health & Happiness Books*; 1993.

13. Meilakh BS. *Talisman: Kniga o Pushkine*. Sovremennik.1975.

14. Pushkin VS. *Evristika–Nauka o Tvorcheskom Mishlenii*. Moscow.1967.