

In this article I will discuss three basic visions about quantum Topological Geometroynamics (TGD). It is somewhat matter of taste which idea one should call a vision and the selection of these three in a special role is what I feel natural just now.

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\item The first vision is generalization of Einstein's geometrization program based on the idea that the Kähler geometry of the world of classical worlds (WCW) with physical states identified as classical spinor fields on this space would provide the ultimate formulation of physics.

\item Second vision is number theoretical and involves three threads. The first thread relies on the idea that it should be possible to fuse real number based physics and physics associated with various p-adic number fields to single coherent whole by a proper generalization of number concept. Second thread is based on the hypothesis that classical number fields could allow to understand the fundamental symmetries of physics and and imply quantum TGD from purely number theoretical premises with associativity defining the fundamental dynamical principle both classically and quantum mechanically. The third thread relies on the notion of infinite primes whose construction has amazing structural similarities with second quantization of super-symmetric quantum field theories. In particular, the hierarchy of infinite primes and integers allows to generalize the notion of numbers so that given real number has infinitely rich number theoretic anatomy based on the existence of infinite number of real units.

\item The third vision is based on TGD inspired theory of consciousness, which can be regarded as an extension of quantum measurement theory to a theory of consciousness raising observer from an outsider to a key actor of quantum physics.

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The basic aspects of quantum classical correspondence are discussed.

Strong form of General Coordinate Invariance implies strong form of holography and effective 2-dimensionality. Weak form of electric magnetic duality and simple general condition on preferred extremals of Kähler action imply that TGD indeed reduces to almost topological QFT defined by Chern-Simons terms located at space-like at ends of CD s and light-like 3-surfaces defined by the orbits of partonic 2-surfaces defining wormhole throats at which the signature of induced metric changes. A further reduction of action to sum of areas of minimal surfaces is conjectured on basis of effective 2-dimensionality. Feynman diagrams have direct interpretation in terms of space-time topology and ZEO leads to a dramatic simplification of the Feynman diagrammatics and suggest a close connection with twistorial diagrams. Induced gauge field concept makes impossible the superposition of classical fields in TGD Universe. This is a grave objection circumvented by simple observation: only the superposition of their effects is observed and many-sheeted space-time implies it.

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