

Microvita and the Quantum Zeno Effect – Part III

by Dr. Hans-Joachim Rudolph (MD), Microvita Research e.V.

Henry Stapp's interpretation of quantum mechanics profoundly builds upon a framework established by John von Neumann (1). Therein, he concludes that the collapse of the wave function is caused by the consciousness of the experimenter, a view further consolidated by Eugene Wigner, who designed an extension of Schrödinger's cat, labeled as Wigner's friend experiment (2). All these expositions have in common to be non-local and indeterministic (3). Insofar, Georgiev's second objection (4) comes as a surprise: How is it possible to condition "... provided that the mind is able to act only locally at the brain", if the whole theory is non-local. Needless to say that the ideas disseminated in this blog are also non-local and indeterministic.

Regarding Georgiev's first objection (4), it is important to know that Stapp didn't commit himself to a definite metaphysical position. Asked about who or what the "observer" actually is, he replied that there are many ways to answer this question. One possibility is that a "soul-spirit" is instrumental to specific choices, while another is that we may eventually find a mechanical explanation for this

process (5). Consequently, he refrains from ascribing an own wavefunction or density matrix to the observer's mind.

In contrast, the metaphysical position presented in this blog is unambiguous: Purushottama (cosmic nucleus) is considered to be the primary, Atman (individual nucleus) the secondary observer. Both of them develop layers of mind with own imaginary space-times: the macro- and microcosmic Mahattattva, Ahamtattva and Citta. And the matrices used for transformations between these layers represent the mental wavefunctions or density matrices conditioned by Georgiev.

Taking it now for granted that the Quantum Zeno Effect is instrumental in mind-body interaction, we can have a second look at some earlier statements:

In my blog [On the Relativity of Subjective Time](#) I wrote:

In a given period of objective time, i.e. during a defined number of clock cycles, an increase of mental cycles should produce an expansion, and the corresponding decrease a contraction of subjective time.

In the extremes, either the motivity or the experienced time comes to a halt. In the first case, the number of mental cycles is so high that perceptions occur like in extreme slow motion. And in the second case, the mind doesn't change, it remains in a state of high awareness.

With the benefit of hindsight, we can now say that a decrease of mental cycles will amount to prolonged periods of awareness, allowing continuous observation, which, in turn, facilitates the “freezing“ of an unstable quantum system within specific neuronal assemblies. And as long as this continues, subjective time comes to a halt, because its substrate ceases to move.

An increase of mental cycles, on the other hand, amounts to curtailed periods of awareness. And if the attention is not directed towards an unstable quantum system, but towards classical objects, the “freezing“ cannot occur even at high numbers of observation.

Therefore, we arrive at a clearcut dichotomy: With prolonged periods of awareness, much happens externally in almost no subjective time; and in the opposite case, almost nothing happens externally in an extended period of subjective time.

Consequently, my statement in [Microvita and the Quantum Zeno Effect – Part I](#), saying that a continual observation from Citta, Ahamtattva or Mahattattva should allow to prevent motion in the Annamaya Kosha, must be limited to unstable quantum systems. Classical objects, naturally, can't be influenced by the Quantum Zeno Effect.

1. J. von Neumann: [Mathematical Foundations of Quantum Mechanics](#). Princeton University Press, p. 366 (1955)
2. E. Wigner: [Remarks on the Mind-Body Problem](#), in *The Scientist Speculates*, I. J. Good (ed.), pp. 284-302, Heinemann, London (1961)
3. Wikipedia (2012): [Comparison of Interpretations](#)
4. D. Georgiev, [Mind Efforts, Quantum Zeno Effect and Environmental Decoherence](#), *NeuroQuantology*, Volume 10, Issue 3, p. 374 (2012)
5. H.P. Stapp: [Quantum Physics and the Psycho-Physical Nature of the Universe](#), Esalen Center for Theory & Research (2012)