

## Review of: "Quantum Theory of Soul"

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I had a more satisfactory idea of the problematics related to the soul by reading Aristotle's chapter "About Soul," written 23 centuries ago, than by reading the present paper.

In fact, this paper is not a scientific study. It uses scientific labels, some without any definition, to advance personal convictions and assumptions related to philosophical and religious aspects.

The authors propose the soul to be defined as the "content of the information" carried in the "quantum vibrational field" of a person (abstract).

Despite the fact that the quantum vibrational field is the principal physical entity upon which the whole paper is based, they define the quantum gravitational field by a tautology: "...everything at the quantum level is a quantum vibrational field. This vibrational field is made of quantum vibrations" (below Fig.1). "Quantum vibrations are the various periodic oscillations extending over space and time". Therein, one can understand that the quantization of the oscillating (vibrating) vector potential of the electromagnetic field and the corresponding energy quantization yield the physical notion of photons. But, the authors should define which vibrational field(s) quantization yields the mesons, leptons, baryons, and any other fundamental physical constituents of the universe. Furthermore, in "Principle One" (in fact, Postulate One) on page 6, they postulate that the "basic constituent of all things is the quantum vibrational field which carries matter, energy, and information," defining the term "matter" by "anything that can be physically measured, detected, and observed such as light, weight, and body." So, the basic constituent of all things carries weight, bodies...(?).

Obviously, the notion of the quantum vibrational field presented by the authors is very confusing and needs further clarification.

Regarding the "content of information" included in the definition of the soul, the authors, based on Shannon's works, define it as the "entropy from the probabilities of the possible states" (page 5). It comes out that the soul is defined as "the entropy from the probabilities of the possible states of the quantum vibrational field of a person". Since a person is composed of electrons, baryons, atoms, molecules, cells, organs,...etc., each one of those having its "own soul" (p. 9), the soul of a person is the result of a synthesis (or combination) of the souls of all his constituents. Hence, a fundamental question arises: After the death of a person, the chemical constituents of his body are progressively dispersed in nature and combine with other elements continuously. The total entropy from the probabilities of the possible states changes radically, and the soul of the late individual has nothing to do with the soul he had when he was alive. Consequently, this fact, issued from the authors' definitions, strongly conflicts with their prediction II advanced in p. 12 "when the physical



body stops functioning and dies... the soul can still exist and continue its journey."

In Chapter 3, the authors claim that:

- 1. "classical physics cannot help us understand how a body can have conscious experience". As far as we know today, this is also true for quantum physics, since we do not have any experimental demonstration showing how consciousness emerges from quantum phenomena. The authors continue by affirming, "consciousness, **as shown above**, is a quantum phenomenon". In fact, they **have not shown above**, they have simply advanced in "Principle Two" (p.7) that the perception by the senses (including detectors) of physical phenomena (not only quantum, as they pretend, e.g., the sound) leads to "subjective conscious experience". This is absolutely not a scientific demonstration that consciousness is a quantum phenomenon. Consciousness is an extremely complex property of living beings, and its eventual relationship with the soul is an open question that has persisted for many thousands of years.
- 2. "classical physics cannot explain the brain waves". Quantum physics neither, at least for the moment.
- 3. Classical physics is unable to describe the microscopic world, but this is already well known and does not demonstrate that consciousness is a quantum phenomenon.

In Chapter 4, the proposal of a "scientific definition of the soul" is associated with new postulated notions like "the spiritual heart" and "mind". All these notions are used in Chapter 6 to advance "predictions about the soul," mainly compared with religious texts and without any scientific character. In fact, what the authors call "predictions" are simply postulates or assumptions without any scientific proofs. For instance, the soul can continue its journey after the death of the body, the soul is eternal, souls can communicate among them…etc. Finally, the "Akashic Records" is a quite old concept of some philosophical-religious beliefs and has absolutely no scientific existence.

The "experimental proof" presented in chapter 7 rests uniquely on the legendary literature that some extraordinary abilities like remote viewing can be acquired by some specific religious practices. Also, some persons, like Edgar Cayce, had similar abilities naturally. However, we may seriously wonder whether this is really a scientific experimental proof of the soul or of the quantum nature of consciousness. In fact, the human brain is extremely complex with still unknown capacities. It is demonstrated scientifically that humans use roughly 7-10% of their brain functions. Remote viewing, as well as other extraordinary abilities, could be the result of still unknown capacities of the brain and consequently have nothing to do with the soul.

To conclude, this paper is not a scientific study and can only be published in philosophical-religious journals to stimulate discussions on the subject.