Review of: "Quantum Theory of Soul"

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The work titled "Quantum Theory of the Soul" raises questions about whether modern physics can explain esoteric phenomena and certain bioenergetic capabilities of humans, as popularized in non-scientific literature. The authors appeal to the concept of the soul as an embodiment of everything we call esoteric, and they propose that explaining this phenomenon within the framework of modern physics is crucial for understanding everything associated with it. The article discusses quantum mechanics as a theory that could offer solutions for describing transcendent phenomena without specifying the exact manner in which this can be achieved. I agree that in the future, such a theory might be developed, and quantum theory will likely align with it. However, the use of quantum theory in this study is not sufficiently justified, and the use of quantum physics terminology, unfortunately, does not resolve the stated problem.

I agree with the authors that if the soul is the subject of study, it should have a scientific definition. However, every concept used in quantum physics has a corresponding mathematical definition and properties. The introduction of concepts such as the vibrational field and others used in the work lacks analogs in quantum mechanics. Introducing them as analogs to wave functions is controversial from many perspectives. The wave function is not a carrier of energy, matter, or information, as it is not a physically measurable quantity. Nevertheless, providing a scientific definition for the soul requires understanding what experimentally verifiable manifestations of the mentioned phenomena can be considered properties of the soul.

The investigation of human brain properties in this context is far from completion and has not reached a level where the activity of brain cells is so well understood that it can be unambiguously linked to the soul. However, the authors propose their interpretation of quantum mechanics without delving into crucial details essential for scientific research. An example of this is the mention of non-existing vibrational states supposedly described by the wave function.

The authors' statement that "Information determines energy and matter" is not scientifically substantiated. The concept of information lacks a universally accepted definition that will unify classical (Shannon) and quantum (Neumann) information theory. The amount of information strongly depends on the method of acquisition (experiment) and reflects our capabilities in experimentally distinguishing certain states of the system. Information is what we can use to build a model of the system we are studying, but the existence of the system is an objective fact regardless of the model. The inability to conduct an experiment and, therefore, the lack of information about the system under investigation will not cause matter to disappear.

Overall, the authors raise questions that currently lack reliable answers, concerning phenomena known and described long before the scientific method was created and applied to the study of the surrounding world. Our understanding of the

universe will be incomplete without answers to these questions, and the pursuit of these answers will always concern scientists. However, the use of a scientific approach to formulate models of these phenomena should be a mandatory feature of rigorous scientific research, which is unfortunately lacking in this work.