Review of: "On the subject part I: what is the subject?"

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The author declares that the purpose of this work is to provide a rigorous scientific and philosophical foundation of what subjective being does in the objective world. The philosophical thought of Immanuel Kant determines a distinction between the "phenomenon", which is our subjective experience of the world, and the "noumenon" which is the objective reality that we experience and the author suggests that subjectivity has at its origin an "objective" nature. In addition, opposing those who proposed the genetic program as "information" for the realization of the living being, the author suggests that the "subjectivity" as a property, that all organisms possess (from unicellular organism (bacteria) to multicellular ), as a "feeling" of the external environment surrounding the organism itself. It could be the real driving force capacity, pushing forward along the evolution process within adaptation and complexity. Subjective experience moves towards increasingly comprehensive semiotic representations of the external world through the improvement of the organism’s ability to interact with the object by exerting a control (or power) over the “object” by the use of its theoretical reason. “Knowledge is power, at least potentially”

As biologist I’m interested in understanding what animates life and which evolution pathway are permitting the organisms all existing over the time and to improve these aspects on the significance of the origin of life, that would need to be mentioned. Organisms are distinctive entities structural coupled to external surrounding world and many organisms, despite the adverse external world, remain persistent in their existence though reproduction and selective pressure or contrast as operated by the environment. In concrete, “subjective”, as discussed by the author, appears as a mere property of the organisms and in a such way do not justify the emerge of the living organism and in conclusion “subjective” itself in humans being. In addition the author states that "subjectivity" plays a role in pushing forward the evolution pathway realizing the adaptation and the complexity of the living organism, even if a radically evolutionary perspective based on the subjective. This would assume that it should explain how simultaneously with the appearance of organisms “subjective” as a driving force start to work at the origin of living organism constitution or in alternative “subjective” as a by-product of an evolution driving force assume a role in the evolution pathway that leads to complexity and adaptation in a real dynamic world as well as organisms. In the semiotic theories, the umwelt states that the mind and the world are inseparable because the mind interprets the world for the organism. However, it is important to explain and/or hypothesize how the subjectivity could emerge from the objective and abiotic world. Because of the individuality and uniqueness of the history of each single organism, the umwelten of organisms differ and Maturana and Varela, pioneers in defining difference and meanings of objective and subjective world suggested to the scientific community that “everything said, is said by an observer to an observer who could be him/herself”, believing that through such self-observation it is possible to interact with our own descriptions and that it is possible describe ourselves in an endless recursive process. Francisco
Varela proposed co-emergence (enaction) of life in what we call self in all its existence dimension as alternative to radical functionalism that, does not help, to understand subjectivity without the use of a representation of external objective world over the body or human brain (homunculus). In a functional cognitive prospective brain and mind become synonyms of control center system like that identifiable in a computers or machines. Umwelt and/or pro-subjectivity are bio-products of living that makes one organism to evolve and acquire knowledge depending on the organism structure that trace the evolution pathway for that organism in a different way from another, since different organisms get different organization and umwelt. The only thing that is important in life is “living” and the relationship between animals with its environment is essential dynamic and unforeseeable. Although the outside world is known from inside, a uniform reading of what subjectivity is in animals respect to what is it in humans or other organisms is misleading. In humans, something different happens compared to other organisms that cannot be reduced to connectivity, evolution, and complexity. In fact, in humans umwelt appears as a separation between the organism and the surrounding world to which humans being needed necessarily hang up through a continuous dynamic relationship persisting as long as they live. In addition to the term “relation” proposed by Maturana and Varela in human beings assume a deeply meaning and the “urge to move” become desire, attention volition cultural evolution and life itself. During his life Humberto Maturana extensively described how the existence of language domain in which human beings live by constructing their own inter-subjective existence and reality. Reality is continuously constructed and re-founded by the continuous dynamic interaction and relations between human beings in the language inter-subjectivity domain in which human beings, in a recursive way operate.

**Major:**

Some other authors described subjectivity and agency in biology and, in humans, as the awareness and/or meta-cognition separate human beings from other animated organisms. In other words, awareness becomes sense of agency. The author should cite this further information in the manuscript.

It seems that the last sentence of the abstract lacks a conclusion.

In introduction, the author state that “A more recent way of interpreting biology displays the same distinction”, talking about objective reality. This sounds an interesting point. It should be extended, possibly with practical examples.

In introduction, the author state that phenomenon paradigm as defined by Kant, is evolving. This point is interesting and deserve more space. In fact, science is evolving too.

In introduction, the author cited a non-published paper from himself. It should be avoided. It would be preferred to simply state what is the point.

In Figures 1 and 2 it would be appreciated to briefly summarize in legend what the figure is representing.