Review of: "The Emergence of Consciousness in a Physical Universe"

Anitha Velu

Potential competing interests: No potential competing interests to declare.

This research article addresses major missing elements like reality and formalism of information processing from physical interaction in the formulation of consciousness. The formalism further enables a general mechanism to construct arbitrary structured and abstract semantics or object descriptions, as well as a powerful mechanism of population coding to represent it. The manuscript covers an emerging research area, so I recommend a minor revision based on the current version of the paper, which is publishable once the revisions have been carried out.

1. Quantify the proposed semantic-structured population coding mechanism in order to assess the viability, efficiency, and possible implications of the predictions to stand out from the state-of-the-art.
2. The testable predictions provided by the author are interesting, but there isn't enough methodological information in the paper to elaborate on how these experiments could be carried out.
3. The author has used semantic descriptions between the statements, but there is no clear description of the reasoning that has been implemented to predict consciousness.
4. The proposed research work seems to be more theoretical and algorithmic, where it can be strengthened by more practical implications and the respective responses for a better understanding of neural processes.
5. A comparison study with other research works in the same field, considering various, can help the work to stand alone; it seems to be missing in the manuscript.