

Review of: "Towards Modeling Artificial Consciousness"

Birgitta Dresch-Langley¹

¹ French National Centre for Scientific Research

Potential competing interests: No potential competing interests to declare.

The present article represents an attempt at providing a formal (mathematical) model of what the author calls “artificial consciousness”. The model has the same major limitations as others of this kind. To begin with, there is hitherto no such thing as “artificial consciousness”, and whether there could ever be such a thing may be doubted. Conscious is an emergent property of living brains. It has evolved with the brain, across the species, to finally produce human consciousness. Although animals are capable of awareness, the latter does not have the unique properties of human consciousness in terms of 1) awareness of a Self in interaction with the “Other(s)” (the physical world of objects, other living beings), 2) ability to represent states of the Self in interaction with the “Other(s)” as states that have been (past), that are (present), or that could be (future). Such capacity ultimately separates human brain states of being fully conscious from physical space and the objects it contains, and from the physical presence of other living beings. Consciousness has evolved as the driving force of creativity and imagination, and a conscious experience may relate to not yet existing (possible, imagined) states of the outside world. While such mental ability originates from functional neural network synergies in the brain (such as bottom-up and top-down signal activities for memory representation, for example), it is not reducible to any singular form of representation of the Self with regard to a an object or another being in the physical world at any given moment in time. A deeper discussion of this limitation of the model presented here appears mandatory.

References:

Jaynes, J. (1990). *The Origin of Consciousness in the Breakdown of the Bicameral Mind*. Boston, MA: Houghton-Mifflin.

Churchland, P. S. (2005). A neurophilosophical slant on consciousness research. *Prog. Brain Res.* 149, 285–293. doi: 10.1016/S0079-6123(05)49020-2

Paulson, S., Hustvedt, S., Solms, M., and Shamdasani, S. (2017). The deeper self: an expanded view of consciousness. *Ann. N. Y. Acad. Sci.* 1406, 46–63. doi: 10.1111/nyas.13403

Kotchoubey, B. (2018). Human consciousness: where is it from and what is it for. *Front. Psychol.* 9:567. doi: 10.3389/fpsyg.2018.00567

Paoletti, P., and Ben-Soussan, T. D. (2020). Reflections on inner and outer silence and consciousness without contents according to the sphere model of

consciousness. *Front. Psychol.* 11:01807. doi: 10.3389/fpsyg.2020.01807

Dresp-Langley B (2022). Consciousness Beyond Neural Fields: Expanding the Possibilities of What Has Not Yet Happened. *Front. Psychol.* 12:762349. doi:10.3389/fpsyg.2021.762349