

Peer Review

Review of: "Emergence ex Machina: Correlates of Consciousness"

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This review provides an exceptionally broad and ambitious survey of consciousness theories, spanning informational, computational, physical, biological, neural, behavioral, and embodied frameworks, and its major strength lies in its integrative scope and structured categorization of correlates (Table 1), which helps readers navigate competing models such as IIT, GNW, HOT, OrchOr, and embodied/extended mind approaches. The manuscript demonstrates impressive philosophical literacy and engagement with both classical and contemporary literature, and it correctly emphasizes the need for experimentally accessible correlates rather than purely metaphysical speculation. However, the paper often reads as an encyclopedic compilation rather than a critical synthesis: theoretical positions are described sequentially without sufficient comparative evaluation, hierarchy of evidence, or clarification of which frameworks are empirically stronger versus philosophically speculative. Some sections (e.g., quantum consciousness, panpsychism, plant sentience) are presented with similar narrative weight as well-validated neural models, which may blur epistemic distinctions. The manuscript would benefit from sharper analytical structuring, explicit criteria for evaluating correlates (e.g., falsifiability, predictive power, empirical reproducibility), reduction of repetition in neural sections, clearer differentiation between levels of explanation (metaphysical vs. mechanistic), and a concluding integrative model or diagram that proposes a testable synthesis rather than a descriptive overview. Strengthening critical comparison, clarifying terminology (especially emergence, sentience, and levels of consciousness), and condensing overly philosophical digressions would substantially improve coherence and scientific impact, potentially elevating the manuscript toward

Declarations

Potential competing interests: No potential competing interests to declare.