

# Review of: "The Evolution of Consciousness Theories"

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**Potential competing interests:** No potential competing interests to declare.

Prof. Ashkan Farhadi is making a commendable effort in reviewing the existing theories of consciousness, a difficult and intricate subject. Below are some specific recommendations for enhancing certain sections.

**Introduction:** The pursuit of understanding consciousness is not a recent endeavor; this is not explicitly stated in the review and could lead readers to believe it is a modern-day enigma in the realm of science. In fact, the earliest theories of consciousness can be traced back to the ancient Greek philosopher Aristotle, who believed that consciousness was a result of the soul, giving emphasis to the immaterial aspect of consciousness. He believed that the soul has three distinct parts and that the rational soul, which is unique to humans, is the source of higher intellectual ability. His ideas about the soul influenced Western thought and raised questions about our place in the universe.

In the 17th and 18th centuries, the concept of consciousness became more closely linked to the physical brain (Rene Descartes, John Locke). In the 20th century, modern science and advances in neuroscience allowed a better understanding of brain functions. The nervous system acts as a superconductor of consciousness and plays a crucial role in our awareness. In addition, quantum consciousness, a relatively new field of study, proposes that consciousness arises from the quantum processes within the brain and is linked to the quantum properties of the universe. It can explain phenomena such as telepathy, synchronicity, and intuition, which are not explained by other modern theories.

**Neuronal Global Workspace:** Extensive neuroimaging studies provided evidence in support of this theory and how the brain is activated during conscious perception and attention. The integration of information from the different specialized regions of the brain plays a role in the conscious decision-making process. Do these signals consist only of electrochemical activity?

**Consciousness as Episodic Memory:** A concise clarification of episodic memory is required in order to grasp this theory.

**Higher-Order Theories of Consciousness:** According to this theory, consciousness involves not only external stimuli but also higher levels of mental activity (introspection, self-reflection). It does not explain how these higher levels of mental activity arise. This theory gains support from experiments in split-brain patients.

**Psychoanalytic Theory of Personality:** At the core of this theory is the concept of the psyche, which consists of the id, ego, and superego. Based on Freud, the interactions of these components of the psyche shape the personality, and traumatic experiences buried in the subconscious mind may lead to the development of anxiety, phobias, and compulsive

behavior.

**The Trilogy Theory of Mind:** The theory highlights the healthy balance between awareness, decision making, and consciousness. At the deeper level of information processing, how the dialectic ability is critical to decision making is critical? This theory does not consider the role of memory and emotion.

**Feature Integration Theory:** It could be stated that this theory is used in education to design lessons that capture students' attention and in advertising.

**Coherence Theory of Attention:** It has implications in education, marketing, and neuroscience (neural mechanisms involved in attention).

**Limitations of Current Theories of Consciousness:** The current form of this section is relatively brief and could benefit from further expansion.

- These theories rely heavily on subjective experiences and introspection, making it challenging to reach a unanimous understanding of consciousness (this limitation is mentioned by the author).
- Most theories assume that consciousness is solely a result of brain activity, disregarding alternative perspectives.
- The occurrence of altered states of consciousness, such as meditation and psychedelic experiences, also poses challenges for traditional theories to comprehend. While the global workspace theory attempts to address these altered states, it fails to fully encompass the intricate nature of consciousness.
- The differentiation between conscious and unconscious processes poses a significant hurdle for current theories.