

Anything as a Mind: Defining and Measuring Gradations of Consciousness
Inspired by Panpsychism

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Inspired by Panpsychism

Consciousness is an enigmatic phenomenon that has fascinated humanity since ancient times. In the present, while the definition of consciousness remains elusive, many research projects are conducted to decide which creatures have consciousness. This is often researched with behavioural tests, such as the MSR (mirror self-recognition test) originally developed by Gallup (1970). However, there still is no consensus within the research community regarding which beings belong to the 'elite' group of conscious beings. Wildly varying theories around consciousness are under debate (Andrews, 2020, Chapter 4), contributing to inconsistent evaluations of consciousness in research.

In this essay, I argue for a drastic change of the binary perspective on consciousness by considering a broad perspective regarding consciousness and entities that have a mind. I propose a panpsychism-inspired theory on gradations of consciousness, including a way to measure consciousness in a holistic and non-anthropocentric way by using clustered indicators of consciousness, that could be achieved by any entity.

Definitions

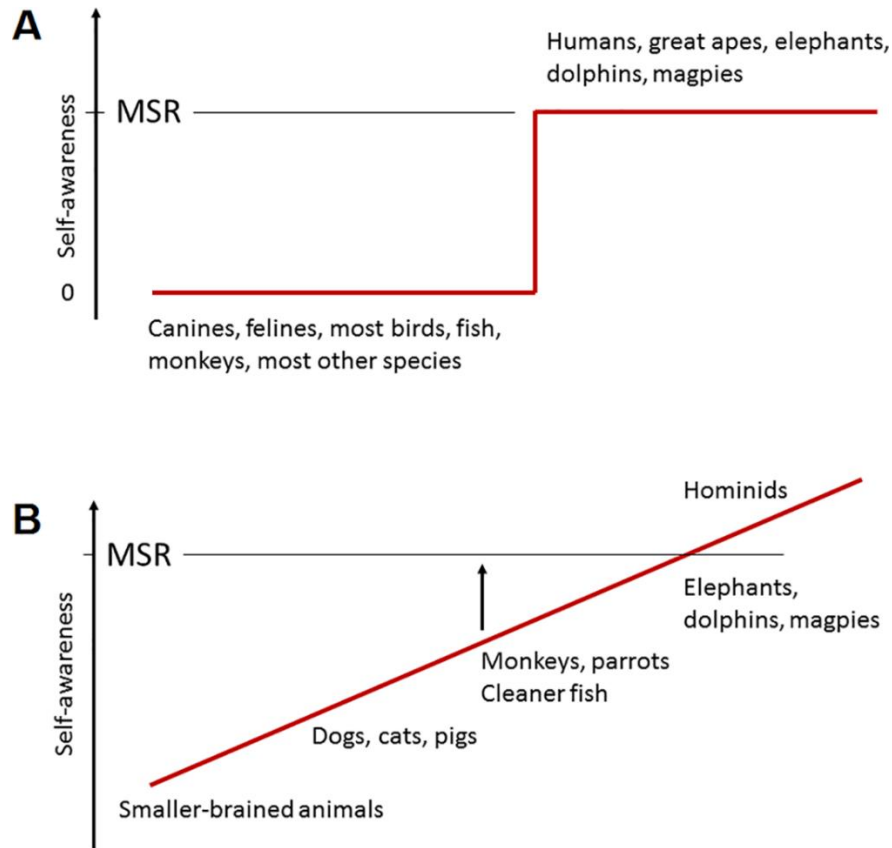
Since the exact definition of consciousness is under debate, it is important to clarify how consciousness will be defined in this essay. Greenfield (2002) proposes three relevant aspects in defining consciousness. In her view, the brain houses the consciousness and mind, the mind is the content of our subjective experience. Greenfield (2002) differentiates the mind from consciousness by linking consciousness to awareness. In this essay, the definition of phenomenal consciousness according to Block (1998) (as cited in Andrews, 2020) will be used, this entails that consciousness is seen as a subjective experience. Thus, the mind and consciousness according to Greenfield (2002) will be considered one.

The Theory

The incomprehensible, subjective nature and disputed definition of consciousness makes a gradual, non-deterministic perspective appealing (De Waal, 2019), see Figure 1.

Figure 1

Two different perspectives on the evolution of self-awareness



Note. From “Fish, mirrors, and a gradualist perspective on self-awareness,” by F. J. M. De Waal, 2019, *PLoS Biology*, 17(2). Copyright 2019 by Frans B. M. De Waal.

Pennartz et al. (2019) even deems it ‘unavoidable’ to use gradations. If we acknowledge that different forms and gradations of consciousness can exist, we can account for these variations, even if it might be impossible to entirely understand how it is to be an other (Nagel, 1974).

The existence of multiple forms of consciousness is plausible according to the scientifically successful evolution theory (first proposed by Darwin (1859)). This approach argues that consciousness slowly evolved in beings through the bottom-up process of evolution. Consciousness would be beneficial in natural selection because it gives subjects the possibility to understand the context of their world and themselves, which can help in successful decision-making (Pennartz et al., 2019).

Accordingly, animalistic theories on consciousness, wherein it is seen as a spiritual substance that suddenly appeared (Descartes, 1968, as cited in Zeman, 2001), seem not as grounded in established scientific consensus as the evolution theory. Adhering to Lloyd Morgan's Canon (Lloyd Morgan, 1903, Chapter 3), it would be more plausible for consciousness to be evolved from minimal origins rather than a sudden miracle. Additionally, I find the notion that humans as special entities uniquely have consciousness, to be biased from an anthropocentric perspective that neglects the possibility of consciousness in other life forms or even inanimate objects.

The bottom-up and gradual view from the evolution theory, fits surprisingly well with the philosophical concept of panpsychism. According to this view, which goes back to the ancient world, the mind is inherent to the universe and appears, as in the evolution theory, in a bottom-up process composed of other entities (think here about cells that make up a human body, trees that make up a forest or electronic parts that make up a robot) (Skrbina, n.d.). Seeing consciousness as inherent to the universe (although in different gradations), would solve the explanatory gap and thereby the hard problem of the origin of consciousness (Chalmers, 1995, as cited in Andrews, 2020). It would mean that anything has in theory potential to house consciousness. Therefore we should not make harsh conclusions on what entities to treat as conscious. Being cautious in this regard, will foster empathy and avoid unethical situations (Browning & Veit, 2020).

Theory in Practice

Considering this broad perspective of possible forms and gradations of consciousness, we can imagine a scale of consciousness where many existing theories, such as first-order and higher-order theories (Andrews, 2020), can exist as different gradations.

According to panpsychism, anything could be positioned somewhere on the scale. At the beginning of the scale, the least evident levels of consciousness could reside. According to the Integrated Information Theory (first proposed by Tononi (2004)), it could be argued that anything that shares information through a feedback loop has a level of consciousness. This could also include inanimate objects, Godfrey-Smith (2019) illustrates this in the following quote:

... entities with “points of view” are everywhere. A rock, ... could be said to have something like a point of view. It has a location in relation to other things that affect it, and its responses show some specificity; there are ways it is sensitive and ways it is insensitive to what happens around it. If warmed, it retains heat which dissipates slowly. (p. 9)

(Godfrey-Smith (2019) actually dismisses the case of the rock as an unhelpful explanation in his paper, but in this case it illustrates the extent of the gradualist perspective rather well.) In this case, the rock interchanges information by changing temperature. On the other side of the scale, we could look for metacognitive abilities such as metathoughts and autonoetic awareness.

Pennartz et al. (2019) conducted extensive research on indicators of consciousness and defined several markers, such as the qualities named previously (information sharing, metacognition) that are associated with consciousness experience. They took multiple forms of consciousness into account, not necessarily equivalents to the phenomenology of human consciousness. Rather than one marker being decisive, the more indicators are applicable, the higher the level of consciousness will be in an entity. By clustering markers as Andrews (2020) proposes, a more objective and general definition of consciousness can emerge.

Conclusion

This essay proposes a comprehensive theory on gradations of consciousness following a holistic view, influenced by panpsychism. The theory provides a definition of consciousness that is applicable to any entity, human, animal, artificial or otherwise.

A method to operationalize this gradual definition of consciousness is given through a scale based on dynamic markers that indicate consciousness. By encompassing much of the existing theories on consciousness, this theory could help to finally define consciousness in research, and make it possible to measure consciousness in an objective and consistent way.

I hope to have shown the benefits of a holistic view of consciousness and how anything in essence can have a mind. Who are we as humans, to decide how phenomenal consciousness experience should be experienced?

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