

# Review of: "Growing Confidence and Remaining Uncertainty About Animal Consciousness"

Robert A. Stickgold<sup>1</sup>

<sup>1</sup> Harvard University

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

Irwin – Consciousness (2024)

This is a vastly improved draft, and I no longer have any major concerns. Some minor points and questions are listed below, for the author's consideration.

p 1, line 8 (1.8) "awarenessand" should be two words

2.25 It is worth introducing Kuhn's term "preparadigmatic" here, in discussing multiple definitions of consciousness.

4.28 In including the capacity to "initiate volitional activity," you should acknowledge that this presupposes the existence of free will (or that it doesn't, if you disagree with my assessment).

7.6 "centrally-organized" should not be hyphenated.

7.23 Stating that "consciousness became necessary" seems too strong; it is probably more accurate to say that it became "highly desirable" or "valuable."

8.10 It seems that you conflate sufficient and necessary here. You're stating that these nervous systems are sufficiently complex to support consciousness, but then take this to imply that consciousness actually arose. Maybe you want to explicitly state that your hypothesis is that the evolution of consciousness is "easy," in the sense that whenever the necessary conditions arise, consciousness will quickly follow. This is, of course, a very strong claim, but I think it is one that you are implicitly making. Only on line 28 do you tone this down and refer to the appearance of the "capacity for consciousness."

9.17 Your reference to possible "dispersed, non-structural processes" is very obscure. I would recommend that you either add a sentence or two to explain what these might be or remove the comment.

10.3 Your reference to "access to consciousness" here seems backwards. It's not that the incoming information can access consciousness, but that consciousness can access the incoming information. But if this is a common description in the field, I have no problem with it.

11.4 Viz-a-viz Edelman's comments, it's obviously true that "a theory to account for a hurricane is not a hurricane." But such a theory would explain why hurricanes arise and, indeed, why they must arise under appropriate conditions.

Similarly, no one wants a theory of consciousness to BE consciousness. But we do want it to explain why it arises and why it must arise.