



To be conscious or not to be

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Commentary on [Ristau](#) on Donald Griffin

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Abstract: Carolyn Ristau has done a fine job summarizing the work and life of the zoologist Donald Griffin. Most scientists now accept the existence of animal *sentience*, but identifying which species possess *consciousness* remains controversial. Griffin defined consciousness as "the subjective state of feeling or thinking about objects and events." Nonconscious processes are faster and more energy-efficient, however, and often drive behavior. Consciousness probably evolved for complex decision-making, shaped by evolutionary continuity, with feelings as a common currency for evaluating outcomes. Its survival advantage may be limited, and its presence across species varies depending on evolutionary trajectories.

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1. Which animals? Griffin died in 2003. In his day, many scientists considered the idea that animals had any form of consciousness as unscientific. Today, most seem to agree that sentience is not unique to humans, and that evolution added this feature to select advanced nervous systems. The question of *which* species is still controversial. The term 'cognitive ethology' makes sense, as it is about how animals use their brains for behavioral decisions; I nevertheless prefer words such as consciousness and sentience. Sentience is for me the basic form of consciousness and includes the capacity to feel. I prefer to restrict the term feelings to "valenced" feelings. If there is no positive or negative aspect, I use the term sensation.

Ristau's (2024a,b) book points out that consciousness in animals is necessarily different from the way we humans sense the world. All species are unique whether, you look at anatomical features such as noses and limbs or at differences in perception and cognition. Thus, asking whether dogs are conscious can be compared to asking whether they have noses. Some would say 'yes', others 'no, they have snouts'. Mental features are more difficult to observe and measure; and we tend to depend even more on words coined for the human version. This means that the answer to the 'which animal' question is, to some extent, a semantic choice.

2. Definition. To my mind, the key issues are: (1) Who has anything sufficiently similar to human consciousness for the same term to apply? (2) Why do they have it? Both topics require an attempt to understand the evolutionary trajectory (or trajectories) leading to

consciousness. I would have loved the opportunity to discuss this with Griffin, but I have only the text to carry his voice.

Griffin offers the following definition: “*Consciousness is the subjective state of feeling or thinking about objects and events*” (Ristau 2024a, [Vol. 3, Chapter 7 Part 2: p. 85](#)). As to which species are conscious, he suggests three criteria to be considered:

“1) evolutionary continuity and the similarity of neural structures and processes in humans and non-human animals, 2) the versatility shown by animals in meeting novel challenges and 3) the window into animal minds as revealed by their own natural communication and artificial language studies” (Ristau 2024a, [Vol. 3, Chapter 17, Part 1, Section 3, p. 83-84](#))

I strongly agree with the first criterion, but I am somewhat uncertain as to the second and third. Although conscious decisions tend to be more versatile, nonconscious decisions may also be highly versatile and variable, on the basis of the capacity to detect and learn from minor variation in the environment. This point can be investigated by looking at what humans can do nonconsciously.

3. Nonconscious capacity. I believe consciousness evolved for the animal to make better decisions in complex situations (Grinde, 2023). However, the drawbacks of using this strategy, in terms of its slowness and energy requirements, imply that it should only be engaged for particular purposes. For example, when spotting something resembling a snake, the reflexive ‘jump-back-reaction’ is nonconscious. The conscious reaction, including the feeling of fear, comes later. A conscious response is too slow to be suitable for the situation. There are numerous other examples of behavior based on nonconscious processing, including subliminal perception, blindsight, and activities during sleepwalking. They demonstrate that the brain is perfectly capable of interpreting sensory information and launching a behavioral reaction nonconsciously.

Even when we are most attentive, the senses broadcast only a fraction of the information consciously, meaning that nonconscious processing is better suited to orchestrate behavior. Consciousness evolved as the novel option of bringing certain tasks to a higher level of processing, involving feelings and cognition, but the nonconscious capacity for directing behavior was (partly) retained.

In short, consciousness is not required, nor necessarily an advantage, when it comes to responding to environmental cues. If this is the case in the species that has what is presumably the most advanced form of consciousness, *Homo sapiens*, we should be careful about postulating consciousness in animals distant from us even if they perform what seem like marvels of behavior – like the dance of bees and problem solving in octopuses (cf. Klein & Barron 2016; Mather 2019).

4. Success? I believe an important element in answering the question of ‘which species’ is to try to outline the evolutionary scenario leading to consciousness. What was the adaptive advantage? Although we humans tend to assume consciousness is the pinnacle of what evolution can offer, in biological terms it seems to be a dubious strategy (Grinde, 2024). The most successful phylum is the arthropods (Crump et al. 2002), while species with the most advanced form of consciousness, the apes, are not doing very well. With one exception – us. However, our success came as a result of cumulative culture long after the genetic constitution was established. Going back some 100 000 years, there were probably eight or more species or subspecies of humans; all but one are now extinct (Timmermann et al. 2024).

5. Feelings. Griffin seems somewhat uncertain as to whether feeling is a subject worth pursuing in this context. I believe it is. Consciousness presumably evolved because there were tasks a nonconscious brain could not handle, and the only feature I am convinced qualifies, is the use of feelings.

It has been hypothesized that (“valenced”) feelings evolved as a strategy for making decisions by weighing potential positive and negative outcomes in terms of pleasure and pain (Cabanac et al., 2009; cf. Carranza-Pinedo, 2023). To have a common currency for evaluating pros and cons, we need the capacity to *feel*. This capacity could subsequently expand and eventually led to our advanced form of consciousness.

A range of observations, including physiological, neurological, and behavioral correlates, suggest that feelings evolved in the early amniotes (Grinde, 2018; cf. Mallatt & Feinberg 2017). Consequently, I would expect reptiles, birds, and mammals to have some form of nascent consciousness. (Whether the term “consciousness” is suitable would depend on how broadly we want to use the term.)

If these hypotheses are correct, consciousness in other phyla requires convergent evolution. As I argue elsewhere (Grinde, 2023), consciousness does not have enough survival value to make that likely; and to the extent that the brains of, for example, octopuses evolved in a related direction, the result would probably not warrant the same concept.

As to whether all mammals (or all amniotes) are conscious, one would also need to consider the possibility of degenerative evolution. Some moles have lost their capacity for vision; it is conceivable that some species lost their capacity for sentience. That is, evolution may have moved them back to the more efficient option of solely nonconscious decisions.

Most organisms on this planet are unable to feel what it is like to be alive; humans are among the lucky few. Without consciousness there would be nothing in it for us; so it is a question of “to be or not to be.”

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