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Commentary on **Ristau** on *Donald Griffin*

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Abstract: Carolyn Ristau offers a stellar investigative biography of Donald Redfield Griffin and his influence on the science and philosophy of animal minds. This commentary focuses on his aim to study animal minds through an ethological lens—that is, by examining the evolved, adaptive functions of mental capacities and consciousness in natural environments, rather than confining research to controlled laboratory settings. I argue that, far from being romantic, this approach can be firmly grounded in modern life history theory.

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1. Father of modern animal minds research. In *Birds, Bats and Minds. Tales of a Revolutionary Scientist: Donald R. Griffin*, Carolyn Ristau has offered a stellar three-volume biography of the life of Donald Redfield Griffin (Ristau, 2024a, 2024b). Despite his co-discovery of bat echolocation with fellow Harvard undergraduate Robert Galambos, Griffin's rich history of other scientific contributions, and his later efforts to encourage the study of animal minds—including their conscious experiences—in the field he called 'cognitive ethology', is rarely mentioned in the post-2010 revival of animal consciousness science. This is undeserved and I hope that Ristau's volumes and précis (Ristau, 2024) will do their part to have Griffin recognized as the modern father of animal minds and especially consciousness research.

2. Studying animal consciousness from an evolutionary perspective. One of Griffin's core messages was to study consciousness in an evolutionary manner, just as ethologists, unlike their behaviourist contemporaries, did for behaviour. Animal consciousness research is unfortunately still stuck in the behaviorist mindset, restricting legitimate evidence to highly constrained lab experiments. As Ristau (1992) put it in an earlier publication, the "cognitive ethologist focuses on problems faced in an animal's natural world; which is of course the difference between classical ethology and comparative psychology come again" (Ristau, 1992, p. 125). Ristau's biography highlights beautifully how Griffin's successes were at least in part due to the significant time he spent in nature, exploring the environments to which animals had evolved. Yet laboratory scientists continue to question the scientific validity of more ecologically grounded studies—

whether observational or interventional. Was Griffin guilty of romanticism? Not at all. He took Darwin's message seriously: that animal minds evolved to address the unique challenges of their natural environments. But how can we avoid the charge of merely telling so-called 'just-so stories'—plausible narratives that are ultimately untestable? This very challenge, faced by Griffin, inspired me to develop what I called the pathological complexity thesis in my dissertation and my book*, A Philosophy for the Science of Animal Consciousness* (Veit 2023).

3. The pathological complexity thesis: "The function of consciousness is to enable the agent to respond to pathological complexity" (Veit, 2023, p. 113). Pathological complexity is the life history complexity faced by organisms in the Darwinian pursuit of fitness-maximization. Ethologists needed to distinguish healthy from pathological behaviors to include them in the Darwinian revolution, and the same must be done for the mind in a true cognitive ethology (Veit, 2022). The key tool here is modern life history theory, which examines different species in terms of their strategies in pursuit of fitness. What trade-offs do animals face in their daily decision-making? Through the lens of the pathological complexity framework, we can better appreciate the unique adaptations of other species and move beyond the all-too-common anthropocentric tendency to ask what it would be like for us to be in their bodies—instead of considering their distinct biological challenges. This becomes especially clear in the case of bats, whose lifestyles and echolocation systems pose unique challenges and opportunities, involving complex trade-offs they must navigate. This lifestyle-based perspective was implicitly present in ethologists like Griffin and Konrad Lorenz, shaped by years of observing animals in their natural environments. Today, research on animal minds can make this approach more rigorous by turning to the modern counterpart of the ethologist's ethograms: the ecological study of animal life histories. This will help us to design ecologically valid experiments such as the mirror self-recognition tests in the cleaner wrasse *Labroides dimidiatus* (Kohda et al., 2019, 2022).

References

Kohda, M., Hotta, T., Takeyama, T., Awata, S., Tanaka, H., Asai, J., & Jordan, A. L. (2019). If a fish can pass the mark test, what are the implications for consciousness and self-awareness testing in animals? *PLOS Biology*, *17*(2), e3000021.

Kohda, M., Sogawa, S., Jordan, A. L., Kubo, N., Awata, S., Satoh, S., Kobayashi, T., Fujita, A., & Bshary, R. (2022). Further evidence for the capacity of mirror self-recognition in cleaner fish and the significance of ecologically relevant marks. *PLOS Biology*, *20*(2), e3001529.

Ristau, C. A. (2024a). Birds, Bats and Minds. Tales of a Revolutionary Scientist: Donald R. Griffin. (Vols 1-3) WBI Studies Repository.

Ristau, C. A. (2024b). Précis of: "Birds, Bats and Minds: Tales of a Revolutionary Scientist, Donald R. Griffin". Animal Sentience, 9(35).

Ristau, C. A. (1992). Cognitive ethology: Past, present and speculations on the future. *PSA: Proceedings of the Biennial Meeting of the Philosophy of Science Association*, *1992*(2), 125–136.

Veit, W. (2022). Integrating evolution into the study of animal sentience. *Animal Sentience*, *7*(32).

Veit, W. (2023). *A philosophy for the science of animal consciousness* (First edition). Routledge.