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## Cognitive Ethology and the Cost of Anthropomorphiphobia

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## Cognitive ethology and the cost of anthropomorphophobia

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**Animal Minds: Beyond Cognition to Consciousness.** By Donald R. Griffin, Chicago: University of Chicago Press, 2001, 376 pages. \$27.50 softcover

**The Smile of a Dolphin: Remarkable Accounts of Animal Emotions.** Edited by Marc Bekoff, New York: Discovery Books, 2000, 240 pages. \$35.00 hardcover

**Minds of Their Own: Thinking and Awareness in Animals.** By Lesley J. Rogers, Boulder, CO: Westview Press, 1998, 224 pages. \$19.00 softcover

Griffin's smooth writing style and his remarkable survey of the relevant literature and important concepts make his book, a revised version of his 1992 text, one of the most impressive ethological texts I have ever read. He states that "Cognitive ethology presents us with one of the supreme scientific challenges of our time, for it constitutes the final chapter of the Darwinian revolution, and it therefore calls for our best efforts of imaginative and critical investigation" (p. 285). Such words are appropriate from the individual most researchers consider to be the founder of modern *cognitive ethology*, a term he seems to have coined (Beer, 1992).

The three books I review here respond to Griffin's call. Bekoff presents 63 accounts of animal behavior that are suggested to indicate various emotions. Using the terms for describing human emotions (although they may not be appropriate for animal emotions), these behaviors are associated with the subjective feelings of love, empathy, fear, anger, depression and grief, joy, jealousy, and deception. Numerous taxa are represented, although social species such as primates, canids, and cetaceans receive most of the attention. Representing the wide range of current attitudes about animal emotions are the individual anecdotes, the Foreword by Stephen Jay Gould, and the Introduction by Bekoff. Gould warns the readers of anthropomorphism, that is, "ascribing human characteristics to nonhuman things" (*Webster's New Encyclopedic Dictionary*, 1993, p. 41), whereas Bekoff encourages readers to break free from the intellectual bondage of behaviorism. The anecdotes made so famous (or infamous?) by authors such as Romanes (1882) were dismissed as subjective by radical behaviorists such as Watson (1913) and Skinner (1987).

The common complaint was that any reference to internal mental processes would doom psychology to fail as a science. With this in mind, both Gould and Bekoff acknowledge the value of case studies (objective descriptions of an animal's behavior in a particular context) in the development of scientific theories. The descriptions of animal behavior in Bekoff's book,

together with the observer's interpretations, are interesting and demand attention. In fact, many of the observations Bekoff describes are discussed by Rogers, Griffin, or both.

These three texts have been published as part of an avalanche of examinations of animal cognition and consciousness, many of which are cited in Griffin's preface. It is ironic that the possibility of animals having emotions and consciousness is being discussed in a guarded and hesitant way. Simultaneously, theorists such as LeDoux (1996,2002), Damasio (1999), and Rolls (1999) have not hesitated to use data from other animals to analyze consciousness, cognition, and emotions in humans. Damasio (1999) argued that "emotion is integral to the processes of reasoning and decision making, for worse and for better" (p. 41). He defined three stages of neurobiological processing: "a *state of emotion*, which can be triggered and executed nonconsciously; a *state of feeling*, which can be represented nonconsciously; and a *state of feeling made conscious*, i.e., known to the organism having both emotion and feeling" (p. 37).

Apparently Griffin, in chapters 1 and 14, would separate Damasio's third category into perceptual consciousness and reflective consciousness. "An animal may think consciously about something, as opposed to being influenced by it or reacting to it without any conscious awareness of its existence or effects. It is convenient to call this *perceptual consciousness*" (p. 15). *Reflective consciousness* means "that one is aware of one's own thoughts as well as [of] the objects or activities about which one is thinking" (p. 15). Griffin suggests that most of the empirical evidence in his book supports the existence of perceptual consciousness—but not necessarily reflective consciousness—in animals. For anyone concerned that the term *conscious awareness* is redundant, please consider the concept of *blindsight* (originated by Humphrey and Weiskrantz in 1967; Weiskrantz, 1997). In blindsight, a person (or monkey) is not conscious of any visual input but can point accurately toward objects in the room (Griffin, pp. 35, 160-161,273; Rogers, p. 89).

The suggestion that some animals, at least, experience consciousness, awareness, and emotions has been repugnant to many psychologists who study animals, particularly the radical behaviorists (Skinner, 1987; Watson, 1913). What should be emphasized, however, is that the behaviorists who deny that the concept of consciousness has any scientific utility do so for all animals, including humans. In addition, they do not deny the existence of consciousness but instead argue that the concept is distracting or counterproductive for scientists. Typically, behaviorists have endorsed a continuity of psychological mechanisms across species (Darwin, 1859), basing most of their theories of human behavior on data collected from other animals (Mazur, 2002; Powell, Symbaluk, & MacDonald, 2002). If behaviorists could be convinced that the idea of consciousness is valuable for explaining human behavior, then they could have no reasonable objection to applying the same concept to other animals. Whether consciousness exists for (some) animals and whether the concept has scientific value for describing their behaviors are separate issues.

Griffin builds his argument for the possibility of animal consciousness on several critical insights. The first is that "Recognizing that an animal's consciousness may be quite different

from any human thoughts and feelings makes the problem of identifying and analyzing it more difficult" (p. 6). As indicated, the critical feature of anthropomorphism is ascribing "human characteristics to nonhuman things" (*Webster's New Encyclopedic Dictionary*, 1993, p. 41). One may argue that, for humans, both consciousness and upright (bipedal) walking are important characteristics. Suggesting that some animals, at least, experience consciousness (or awareness, or emotions) should be no more controversial than suggesting that animals "walk." One might need to be more careful and say that humans and other animals locomote in different manners, but they all locomote. In the same way, perhaps humans and (some) other animals have emotions, or consciousness, or both, but of different types. We must distinguish between suggesting that animals may be conscious and suggesting that they are necessarily conscious in the same way as humans. Concerns about anthropomorphism would apply only to the latter suggestion. I have long believed that, in an attempt to correct the sins of our intellectual fathers (Romanes, 1882), not to mention mothers (Washburn, 1908), we have become overly and unnecessarily afraid of attributing human characteristics to other animals—a sort of *anthropomorphophobia* (Dale, 1994). Griffin's first insight should help us overcome this disorder.

Griffin also reminds us of the point that humans often are consciously aware of reflexive behaviors:

Consciousness of one's bodily activities falls into two general categories: we may consciously anticipate, plan, and intend to perform some action; or the behavior may "just happen" as our bodies do something without any conscious expectation, and perhaps without our being able to affect the action. Yet even in the second case we may be completely conscious of what our body is doing. (p. 280)

Griffin's point seems obvious: Even when an animal is performing reflexive or species-specific behaviors, one cannot assume that it does so unconsciously.

Griffin (p. 11; chap. 13) appears to sympathize with Bradshaw's (1998) recommendation that

The traditional scientific assumption that animals are automata devoid of consciousness is now outdated and the "precautionary principle" borrowed from environmental law should be adopted. As interpreted to apply to animals, we should assume animals do have consciousness in case they do; if they do not it does not matter. (1998, p. 113)

Here, Bradshaw (1998) is suggesting that we make a bet analogous to Pascal's wager concerning the existence of God (Hajek, 2(01)). The perceived balance between the costs and benefits of research conducted on animal subjects will shift dramatically if we accept "Bradshaw's wager"—if we assume that harming a conscious animal is worse than harming an unconscious one. To cite one important example, what are the appropriate justifications for experimenting on or keeping captive any of the great apes? Will we use what we learn to help humans, to help the species involved, to improve our knowledge of the particular species, or to improve that of animals in

general? General acceptance of the *precautionary perspective*, by scientists as well as by members of the public, would have a dramatic influence on the ways in which animals are used.

It is worth mentioning that an argument against Pascal's wager is that we have no empirical evidence for the existence of God (Hajek, 2(01). In contrast, the books by Bekoff, Griffin, and Rogers provide us with considerable empirical evidence for the existence of emotions and consciousness in animals.

In any case, many citizens are not waiting for scientists to make up their minds on the issue of animal emotions. Whether based on a view that we have a moral obligation toward animals or one that animals have rights because they feel and think, people are taking steps to protect nonhuman species. For example:

1. The European Union has decided to improve housing conditions for egg laying (battery) chickens by 2012 (Hardy, 1999).
2. The New Zealand Parliament has passed a law severely limiting research with the great apes (Born Free Foundation, 1999).
3. Floridians for Humane Farms have a campaign to outlaw gestation crates on pig factory farms (Huemer, 2(01).
4. Many municipalities in Canada (British Columbia Society for the Prevention of Cruelty to Animals, 2(02) and governmental agencies in the United States (Woolf, 2(01) have banned, or are trying to ban, circuses that travel with captive animals.
5. Congress is considering banning "canned hunts" (The Fund for Animals, 2001).
6. The Supreme Court of Canada recently upheld the right of the Canadian Department of Fisheries and Oceans to prohibit the commercial killing of harp seal pups (whitecoats) and hooded seal pups (bluecoats; Environment News Service, 2002).

Often we must make decisions in the absence of complete knowledge. It is clear that the decision to promote animal welfare cannot wait until we are sure whether animals are conscious.

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