Cognitive Ethology, Take Three: Fascinating and Frustrating Questions about Animal Minds


Donald Griffin was a highly respected experimental biologist when, much to the surprise of many of his colleagues, he turned to the study of animal minds in the 1970s. The result of his early research was the pioneering and bold book The Question of Animal Awareness: Evolutionary Continuity of Mental Experience. Griffin has been called, and bears the burden of being crowned, “the father of cognitive ethology.” In Animal Minds and elsewhere, Griffin appeals to Charles Darwin’s views about variations among animal minds being differences in degree rather than differences in kind. A natural historian at heart, Darwin emphasized the importance of evolutionary mental continuity among animals.

Griffin was greatly influenced by his colleague at Rockefeller University, the philosopher Thomas Nagel, whose paper “What Is It Like to Be a Bat?” (1974) stimulated Griffin and many others to study animal minds, using this question to frame their research. Over the years, Griffin’s main agenda has been to learn more about animal consciousness. He stresses that it is the flexibility and versatility of behavior that provides strong evidence of animal consciousness. When the environment changes and animals need to adjust their behavior to new situations, or when some fine-tuning is necessary, conscious thinking and planning are used. Griffin also argues that we should not conflate the difficulty of coming to terms with animal consciousness with the impossibility of doing so.

This edition of Animal Minds updates and expands Griffin’s arguments about the evolution of consciousness. He provides anecdotes and data in such areas as social and symbolic communication, tool use, predatory behavior, foraging, and deception and manipulation. He also discusses new research on the neurobiology of consciousness. Griffin believes that as the physical or material basis for animal consciousness becomes better known, skeptics who dismiss animal consciousness or consider it less than human consciousness will become converts. I am not so sure, but neither am I a skeptic, even in the absence of neurobiological details. Anyone who watches animals cannot fail to see that individuals of some species behave as if they (like humans) are conscious at least some of the time, and the most parsimonious explanation for their behavior is that they are thinking, pondering alternatives, and making future plans by using information from past experiences and the situation at hand.

Griffin also asks skeptics to bear the burden of proof. Why can’t it be that we assume that at least some animals are conscious beings and have rich emotional lives and have to prove otherwise, rather than vice versa? Why not give animals the benefit of the doubt? Much skepticism of the field of animal cognition is timeworn (and frankly boring): Animals behave “as if” they are conscious or feel pain, but “as if” is not good enough. True, incontrovertible proof about the nature of animal minds and what is in them is impossible to gather, as is absolute proof or truth about many biological phenomena, but this doesn’t mean that animals don’t have minds or that—even if we conclude they do—there is little in them. Griffin urges us to abandon the double standard whereby greater proof is required in cognitive ethology than it is in other sciences and to stop bickering and do the research that can be used to settle as conclusively as possible the issues at hand. We have the tools to do these sorts of investigations, but the research must be ethically defensible (Bekoff 2002). Observational and descriptive research, along with experimental studies in behavior, neurobiology, and endocrinology, help us along immensely, a point underscored by Griffin and many others.

Over the past two decades, cognitive ethology has matured into a science that is considerably more than just the study of animal consciousness (Hauser 2000, Matsuzawa 2001, Bekoff et al. 2002). Cognitive ethologists are concerned not only with animal consciousness and self-awareness but also with the comparative, evolutionary, and ecological study of animal minds and mental experiences including how they think, what they think about, their beliefs, how information is processed, and the nature of animal emotions.

Griffin remains relatively silent on the ethical implications of research on animal cognition, specifically on how discoveries of animal cognitive and emotional capacities would inform and guide us in what we can and cannot do to animals when we use them for research, education, amusement, or for food or clothing. Some resistance to cognitive ethology stems from those who seem to be concerned that learning about animal cognitive and emotional capacities might hamper animal use, because it is so very obvious that many animals experience intense pain and suffering. Dale Jamieson (2002) claims that because of “moral lessons,” cognitive ethology can become a subversive science. At a meeting in the mid-1990s, I was actually confronted by
someone claiming that I was merely pursuing my own research on cognition and emotions to “put him and his colleagues out of business.” Surely, nothing could be further from the truth, but Jamieson and others are correct in noting that such serious concern, expressed as strong and demeaning skepticism, might grow as we learn more about animal cognition and emotions. But this does not have to be the case, because knowledge about animal minds and animal emotions can help to design better and more ethical research. (It was for this reason that Jane Goodall and I founded Ethologists for the Ethical Treatment of Animals, www.ethologicalethics.org). Furthermore, it is highly significant and good for cognitive ethologists that the editors of Nature magazine recently concluded that “Given the passions raised by animal experimentation...the science of animal suffering and cognition should be given a higher priority” (Anonymous 2002, p. 351).

It would be misleading to claim that Animal Minds provides the only reliable answers to the myriad of questions centering on animal cognition and animal consciousness. Animal Minds is not a rigorous analytical work in philosophy of mind, nor was it meant to be. Griffin, himself, knows that his book is not the last word. But, Animal Minds does lay out most of the major issues, presents them in an accessible manner, and serves as a valuable springboard for future reading, discussion, and research. What more can one ask for? I find that students enjoy the book immensely, and most do, indeed, go beyond the text when something sparks their interest.

All in all, Animal Minds is a very useful summary of the literature and is a good choice for courses in animal cognition. I use it in my course on animal cognition. While I am not alone in taking this stance, there are some who are not as sanguine and some who are downright critical and dismissive of Griffin and the field of cognitive ethology as a whole (for reviews, see Allen and Bekoff 1997, Bekoff and Allen 1997, Hauser 2000, Matsuzawa 2001, Bekoff 2002, Bekoff et al. 2002). I am afraid, however, that skeptics about animal minds and consciousness will still not be convinced, because they claim there is still a paucity of “hard data.” Nevertheless, this doesn’t diminish the importance of this informative and well-written book. Reading Griffin in conjunction with other books has worked very well for me and my students for it forces us to think about the fascinating and frustrating questions that abound in the exciting, challenging, and flourishing field of cognitive ethology.

References cited

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