8-1996

The First Step in the Case for Great Ape Equality: The Argument for Other Minds

Kristin Andrews
York University

The First Step in the Case for Great Ape Equality: The Argument for Other Minds

Kristin Andrews

A defense of equality for great apes must begin with an understanding of the opposition and an acknowledgement of the most basic point of disagreement. For great apes to gain status as persons in our community, we must begin by determining what the multitude of different definitions of "person" have in common. Finding that great apes fulfill the requirements of any one specific theory of personhood is insufficient, for these theories are highly controversial, and a critique of the theory will undermine the status of great apes as persons. Instead, the first step in the argument for ape equality must be a defense of their self-consciousness. This notion is one thing all plausible theories of personhood have in common.

Contrary to most people's common conceptions, many philosophers have argued that great apes, as well as all nonhuman animals, lack consciousness.[1] This notion must be demolished before any argument for the equality of great apes can be fully defended. Here it will be helpful to distinguish the conceptions of consciousness I will be using in this paper. The debate surrounding the issue of consciousness makes a precise definition impossible. For the scope of this paper it will suffice to present two general conceptions of consciousness. The types of consciousness usually at the center of controversy regarding animal minds are perceptual consciousness and reflective consciousness. Perceptual consciousness is the general awareness of one's surroundings. Many behavioral scientists and philosophers believe it is likely some animals have this type of consciousness.[2] Reflective consciousness, however, is more often considered to be a uniquely human capacity. For this variety of consciousness one has immediate awareness of her own thoughts as distinguished from the subject of

Kristin Andrews is completing her doctorate in philosophy at the University of Minnesota. Her work in animal cognition began at Kewalo Basin Marine Mammal Laboratory, in Honolulu, Hawaii, where she studied the cognitive capacities of bottle-nosed dolphins. She is continuing work in the philosophy of mind and is pursuing related interests in ethics.

Etica & Animali 8/96

Etica & Animali: The Great Ape Project, August 1996: 131-141.

those thoughts. This consciousness is not simple phenomenological awareness, but pertains to some propositional attitudes referring to one's self. It is this reflective consciousness that I will focus on for the argument from analogy and will be what I am referring to in all subsequent uses of "consciousness".

The view that humans are different and enjoy an elevated moral status rests on the belief that humans alone are self-conscious rational beings. Justification for that belief, however, reflects a faulty conception of the mental lives of many animals, especially the great apes. In this paper I will argue that our justification for accepting other human minds suffices to justify the existence of great ape minds as well. One who accepts the existence of human minds is then rationally compelled to accept the existence of great ape minds in general. Once it can be shown that we have good reason for believing that great apes are conscious rational beings, the case for personhood is easy to make and will be hard to deny.

The Traditional Argument for Other Minds

Each of us must accept that we can only have knowledge of another's behavior, movements, appearance, scent, etc.; none of us ever has direct access to another's mind. Typically, the philosopher simply accepts the existence of other human minds and moves on. The traditional philosophical justification for other minds is the argument from analogy. [3] Though I cannot experience your mind, I can experience other things which give warrant for the conclusion that you have a mind. If those things which give me evidence that you have a mind can be shown to be things that great apes have in common with us, then we can further conclude that great apes have minds as well.
The argument for other human minds can be formulated as follows:

1. Every human with property x of which I know whether or not she possesses consciousness does possess consciousness (namely, myself).
2. Jones is a human with property x.
3. Therefore, it is probable that Jones is conscious.

The same argument can be used for any human who possesses the reference property x. The question that arises pertains to those sub-properties which constitute the reference property. If it can be shown that the reference property is shared by both humans and great apes, one is compelled to accept the existence of ape minds. I will discuss the question of specific reference properties in the following sections.

The argument from analogy is at the basis of most people's acceptance of other human minds. Though there have been many attacks leveled against this particular argument, they need not be addressed here. [4] I make no claim that

this argument or the argument for great ape minds is strong. Instead, I argue that the acceptance of the argument for other human minds entails the acceptance of the parallel argument for great ape minds.

Weak Versions of the Argument from Analogy for Animal Minds

Historically, the question of animal sentience has been addressed in the course of utilitarian ethics. As Jeremy Bentham puts it, "the question is not, Can they *reason*? nor, Can they *talk*? but, can they *suffer*?"[5] Because of this concern, the focus of many arguments touching on animal consciousness has been the animal's ability to feel pain rather than the animal's consciousness itself. This method of attempting to establish the consciousness of animals is not passe. Recently, David Cockburn addresses this formulation of the argument in his article "Human beings and giant squids".[6] He argues that the analogical method for demonstrating the consciousness of animals necessarily fails, stating that any argument of this sort can only undermine the conclusion it hopes to reach. Cockburn's argument follows the tradition set by the utilitarians and continued by contemporary philosophers such as Peter Singer,[7] James Rachels,[8] and Bernard E. Rollin.[9] I will show that Cockburn's use of pain behavior as the reference property in an argument from analogy causes some of the problems he addresses.

Cockburn refers to Peter Singer's argument for the animal experience of pain. This argument could be stated as follows:

1. Humans feel pain.
2. When humans feel pain, they exhibit behaviors x, y, and z in certain situations.
3. Animals exhibit behaviors x, y, and z in the same type of situations.
4. Therefore, it is likely animals feel pain.

Though Singer further defends this argument by referring to the biological and evolutionary similarity of human and animal nervous systems, he declares that animal behavior alone is "sufficient justification for the belief that they feel pain". [10]

Cockburn's contention is that the bodies and behaviors of humans are so different from those of other animals that the argument stands on shaky ground. He argues that Singer's argument is open to the criticism of anthropomorphism since the reference properties are not determined objectively. Though Cockburn is correct in criticizing Singer's argument, the solution he offers does little to help the case for animal minds.

In his method of determining the similarities between humans and animals, Cockburn wisely attempts to describe animal behavior in such a way as to

avoid loaded descriptive terms such as "writhing" or "moaning". However, his method of avoiding loaded terms entails that it is physically impossible for the argument from analogy to conclude an animal is conscious. I will show why this is so in the following paragraphs.

Cockburn claims that in order to avoid emotionally compelling descriptions, the resemblances between humans and other animals must be at the level of what he calls "geometrical similarity". Geometrical similarity requires a resemblance at the basis of physical similarity. Though Cockburn feels we can hear pain in a dog's yelp, the description in geometrical terms requires that the yelp is described solely in terms of the pitch and tone. The facial contortions of a dog present additional problems for Cockburn:

> At the level of a geometrical description the dog's face is radically different from a human face. With many breeds of dog the differences start at the most basic structural level: in place of the relatively flat surface in which eyes, nose and mouth are embedded we have a protruding cone. This difference has immediate implications for the possible placing and structure of the mouth: described in geometrical terms a spaniel's mouth is, and inevitably so, radically different from a human mouth. And that difference inevitably makes it obscure what it could mean to say that "the dog's mouth moved just as that human being's mouth moved". [11]

Cockburn uses this description of animal behavior to weaken Singer's argument. His point is that the human behaviors x, y, and z cannot be judged to be sufficiently similar to the animal behaviors x, y, and z. His argument could be stated as follows:

1. Humans feel pain.
2. When humans feel pain, they vocalize in x pitch and y tone, and have facial contortions z.
3. Animals do not vocalize in x pitch and y tone.
4. Because of the different structure of the animal's body, the animal does not have facial contortions z.
5. Therefore, it does not follow that animals feel pain.

There are two problems with Cockburn's use of geometrical similarity as the reference property. It is apparent from the passage that Cockburn makes the requirement for attribution of pain physically and "inevitably" impossible to be fulfilled by any animal apart from humans. Because of differences at the physical level, using geometrical similarity to argue for animal consciousness is doomed from the start. For example, because of the differences between the human and nonhuman vocal-laryngeal apparatus, it is physically impossible for nonhuman animals to vocalize in a manner similar to humans.

Cockburn's fundamental criticism of the argument from analogy regarding nonhuman minds is that reference to any spec similarities between humans and animals in order to prove animal consciousness would be begging the question. According to this criticism, one who claims that certain properties (e.g. number of legs or arrangement of eyes) are relevant to the argument from analogy is already begging the question in favor of animal minds. Cockburn claims the choice of reference property is determined by one's initial unphilosophic intuitions regarding the consciousness of an animal What follows is that the bias in the choice of reference will determine the conclusion of the argument. That is, by picking out certain properties as relevant, one first assumes animals are conscious, and only then notices certain similarities between himself and an animal.

Cockburn's main criticism is flawed in its misunderstanding of the argument from analogy. Any adequate argument from analogy requires some relevant reference property. His argument seems to rest on the assumption that all possible reference properties would be based at some level on intuition. However, it is possible to find a reasoned account of relevant reference properties that is not based on the conviction that animals are conscious. An examination of the argument from analogy for human minds can determine relevant reference properties without begging the question regarding animal minds. I will demonstrate how this can be done shortly.

Though Cockburn specifically rejects the use of reference properties in his argument, he still accepts having a body and geometrical similarity as reference properties. Due to his desire to avoid begging the question, Cockburn chose reference properties so specific that he biased the argument against animal sentience. Taken to the extreme, geometrical similarity could even fail to prove that other humans have minds.

It is no wonder Cockburn concludes that the analogical argument fails. If evidence based merely on the geometrical similarity of physical appearance must be used to determine sentience, one would have to agree that there is not overwhelming support for the case of ape consciousness.

The Reference Property

At this point the question of relevant properties needs to be addressed. Cockburn focused on geometrically physical similarities as the reference property, but geometrical similarity is not what causes the belief in the consciousness of another. A severely deformed human would suffer from this reference property. I would not be able to determine that the facial gestures of a human devastated by fire in any way resembled my own, yet this would not cause me to conclude the person is not conscious. As noted earlier, utilitarian ethics has considered the experience of pain fundamentally important. The

experience of pain has also historically been used in the argument for other minds. [12] But if it is simple pain behavior that drives us to call another conscious, one would be required to call the irritant response of a single-celled organism proof of its consciousness. Because we do not consider a single-celled organism conscious, pain behavior as the reference property would result in absurd conclusions. This absurd consequence is part of the problem with Cockburn's argument. This brings us back to the question I avoided earlier: what properties do humans exhibit which lead me to believe they are conscious?

For the examination of the reference properties one need not beg the question in favor of great ape consciousness. *Contra* Cockburn, use of specific reference properties would not beg the question since one need not refer to animals in the account of relevant reference properties. The reference properties can be determined by examining what properties are accepted in the argument for other human minds. There need not be any specific appraisal of nonhuman animals in this investigation.

I would like to point out that I do not mean to imply that the reference properties are necessary for consciousness; a claim such as that could not be sufficiently justified. This examination of relevant characteristics will not conclude with a list of the necessary and sufficient conditions for consciousness. I only wish to determine those properties humans possess which lead us to believe others are conscious.

It seems as if we look for a combination of sub-properties to justify our belief that someone is conscious. Language use, tool use and creation, culture, and the ability to learn and teach have been considered integral to consciousness and could be used as the reference properties. I wish to demonstrate that the argument from analogy does not use the mere fact of physical similarity as the reference property. The relevance is not the similarity of another's body to my own, but the similarity of specific behaviors. There is no reason why a certain type of body is necessary for a creature to use language, make tools, etc.

My claim in this paper is that a union of three sub-properties composes the reference property in the argument from analogy. Two properties psychologists attribute to conscious beings are the dispositional capacity for language and rational tool use. If a person is unable to learn to communicate with others, the question stands, how is she able to achieve self-awareness? How is she able to organize her world? Language is the best communicative tool humans have, and it is often thought to be what makes us different from other animals. Though some linguists have argued that even language trained apes do not employ a formal grammatical language, the intent behind language is communicative, and it is this notion which we can examine. Communication is not simple rule following because it requires the intentionality of an agent. According to H.P. Grice, there are certain intentions an agent must possess in order for that agent to mean something by an utterance. As well, meaning is not limited to vocal utterances;

Grice also allows for non-verbal behavior as sometimes sufficient to express meaning. [13] Grice has been interpreted by Daniel Dennett as requiring at least a third order intentionality in order for genuine communication. [14] According to this view, a computer would not be communicating if it was simply following the rules with which it was programmed. The notion of language is also tied to society because of the role language plays in interpersonal relations. This notion assumes the existence of mental thoughts which are meaningfully expressed. One of the sub-properties needed for the argument from analogy would be the dispositional capacity for communication with others.

The invention and use of tools are thought to be correlated with rational thought because the agent discovers a solution to a perceived problem. Humans recognize a problem, and then determine a method to solve it. Tool use is only one of many methods we use to solve problems. This type of behavior suggests rational thought because it presents the agent acting with minimum effort to achieve a desired goal. This type of instrumental rationality is a property typically considered unique to humans. Instrumental rationality, then, will be the second sub-property to compose the conjunctive reference property.

I believe there is one final requirement involved in our attribution of consciousness to other humans. Humans are biological organisms which possess brains. Any human who communicates and exhibits tool use is thought to be conscious. However, if we were to build a machine which looked like a human and was proficient in human speech and problem solving, we would hesitate to call the machine conscious. This is not to say that it is impossible for a computer to be conscious, though one of our pre-philosophical reasons for considering other humans conscious is their possession of a biological brain.

It is necessary to use the conjunction of communicative ability, instrumental rationality, and having a biological brain as the reference property for consciousness. If only one of these properties was used, the argument would fail. In assuming only communicative behavior one might mistakenly attribute meaning to certain signs which are unintentional and uncommunicative in nature. In considering only instrumental rationality, the argument would be a *reductio* ad absurdum. Accepting instrumental rationality as the sole reference property would entail the consciousness of many machines. An argument based solely on having a biological brain would simply not be compelling. At this point I will address the empirical evidence showing that nonhuman great apes exhibit these properties.

Empirical Evidence for the Consciousness of Great Apes

Since ancient times humankind has been differentiated from the rest of the animal world by the word "rational". As the "rational animal", humans consider themselves to have a unique dignity, a moral standing above all other

animals. Without entering into the debate on the nature of rationality, I wish to show that not only humans are able to think rationally. I will first focus on instrumental rationality, and present evidence that great apes possess certain problem solving abilities. Anecdotal evidence and cognitive research suggest that great apes have at least instrumental rationality. For example, chimpanzees pass those non-verbal cognitive tests that are typically passed by three year old children. [15] I will then present evidence suggesting that great apes possess the dispositional capacity for communication, since some apes can linguistically communicate on the level of young children.

Instrumental Rationality

Comparative psychologists and ethologists have spent much time examining the problem solving abilities of great apes. Studies run by Wolfgang Köhler in 1925 were designed to create specific problems for his chimpanzees in accessing their food. He hung food out of reach overhead, locked it in a box, and kept it outside their cage. Köhler found that almost always the animals would find a solution to the problem of gaining the food, simply by using common objects kept in the cage. [16] This suggests that the chimps have the ability to manipulate the physical world in order to achieve a desired end which, in turn, suggests their possession of instrumental rationality.

The manipulation of found objects to serve certain purposes is a variety of tool use. The actions of Köhler's chimpanzees mirror the tool use great apes demonstrate in the wild. Chimpanzees use at least five types of tools to gather insects, nuts, and honey. Some use hammers or anvil type tools to open nuts. Often the animal will collect these tools far from her food source and bring them back to complete a nut opening task. They also use tools as weapons to threaten or attack intruders. Chimpanzees have also been observed using leaves to clean their body of blood and feces. As well, orangutans construct shelters to protect themselves from rain. Some tool use behaviors are taught to one animal by another, and other tool use behaviors are discovered by the animal on her own. [17]

Further research suggests that chimpanzees have the ability to solve conceptual analogy problems. The subject of David Premack's research, a chimp named Sarah, succeeded in labeling "same" or "different" various pairs of sentences depending on their expression of an analogous concept.[18] Sarah was trained to read and construct sentences composed of magnetized plastic symbol "words".

Communicative Ability

Language is often thought to be the definitive separation between humans and all other animals. Some believe language is the measuring stick for rationality.[19] It is becoming clearer and clearer, however, that great apes are

able to comprehend and utilize a rudimentary language, or at least engage in obviously communicative behaviors. Current research in animal language is being done by Sue Savage-Rumbaugh, who uses keys identified with geometric symbols which light when touched as a means for the subject to "talk". [20] She is working with Kanzi, a male bonobo who is unique in animal language research because he began to acquire symbol use simply by observing the attempts to train his mother. No effort had been made to train Kanzi, and he was not rewarded with food, as is typical, for demonstrating symbol usage. Kanzi also began responding appropriately to spoken English, and he shows sensitivity to word order and even invents grammatical rules.

The latest research with Kanzi was an examination of his comprehension of spoken English. His success is compared with the success of a two year old child, Alia, who was raised in the same language environment by the same caretaker, and who was subjected to both spoken English and the lexical system from birth. Both subjects were tested on their response to a large number of novel sentences.

The results of the test are quite interesting. Kanzi was correct on 72% of all trials, and Alia was correct on 66% of all trials. What these results indicate is that a bonobo can respond appropriately to spoken English at a rate better than a human child of two years.

Many language trained great apes demonstrate sophistication in language production and comprehension of grammatical nuances. For example, Kanzi can differentiate the meanings between "Me tickle you" and "You tickle me". As far as specific utterances, there is a large amount of literature quoting great apes talking about everything from apples to where others go after death.

The Argument for Great Ape Minds

The argument from analogy for other minds can be used as an argument for great ape minds. I will present a reformulation of the traditional argument for other minds which begins with the assumption that humans are conscious (instead of the traditional beginning point that I am conscious) and conclude that great apes are conscious as well. The argument follows strictly from the traditional argument from analogy, where x is the conjunctive property of instrumental rationality, communicative ability, and having a brain.

1. Every great ape with property x of which we know whether or not she possesses consciousness is conscious; all humans with the reference properties are conscious.
2. Nonhuman great apes are a member of the class of all great apes that generally possess property x.
3. Therefore, it is probable nonhuman great apes are generally conscious.

The argument seems inductively adequate. I have spent the body of the paper arguing for the relevance of the properties and the truth of the premises. The strength of the argument rests on the specific sub-properties used in the argument, communicative ability, instrumental rationality, and having a biological brain. The only criticism that might be leveled would be against the strength of the argument that nonhuman great apes possess these three properties.

The importance of the argument is twofold; not only is it a strong inductive argument for the consciousness of nonhuman great apes, but it also compels a rational person who accepts the argument from analogy for other minds to accept the conclusion of the argument regarding other great apes.

I did not prove that great apes are conscious; the quest for demonstrative certainty requires something stronger than an inductive argument. What is concluded, however, is that if one believes another human is conscious based on the argument from analogy, the rational conclusion is to believe that other great apes are conscious as well. This conclusion gives the supporters of equality for great apes the first step they need in their crusade to have great apes recognized as persons. If a being is rational and communicative about those things she feels and thinks, it would be nothing more than basic prejudice to deny her personhood. [21]

Notes

[1] For example, see Peter Harrison's article "Do animals feel pain?", *Philosophy* 66 (January 1991) pp. 25-40; Michael P.T. Leahy's book *Against Liberation: Putting Animals in Perspective* (Routledge, London, 1991); Daniel Dennett's *Consciousness Explained* (Little, Brown and Company, Boston, 1991); and Donald Davidson, "Rational animals", *Dialectica* 36 (1982). Historically, the question of animal consciousness has been answered negatively by Aristotle, Aquinas, Descartes, and Kant, among others.

[2] For example, Dorothy L. Cheney and Robert M. Seyfarth, *How Monkeys See the World* (University of Chicago Press, Chicago, 1990), and Daniel Dennett, *Consciousness Explained*.

[3] This argument has been presented by Descartes (in *Discourse on Method*), Locke (in *Essay Concerning Human Understanding*), Hume (in *Treatise of Human Nature*), Mill (in *An Examination of Sir William Hamilton's Philosophy*), Ayer (in *The Problem of Knowledge*), and Plantinga (in *God and Other Minds*), among others. This formulation of the argument is my own.

[4] For a discussion of the criticisms leveled against the argument from analogy see Alvin Plantinga, *God and Other Minds: A Study of the Rational Justification of Belief in God* (Cornell University Press, Ithaca, N.Y., 1967).

[5] *The Principles of Morals and Legislation* (Hafner Publishing Company, New York, 1948), p. 311.

[6] In *Philosophy* 69 (1994) pp. 135-150.

[7] *Practical Ethics* (Cambridge University Press, Cambridge, 1993).
[8] *Created from Animals: The Moral Implications of Darwinism* (Oxford University Press, Oxford, 1990).
[9] *The Unheeded Cry: Animal Consciousness, Animal Pain, and Science* (Oxford University Press, Oxford, 1990).
[10] *Practical Ethics*, p. 69.
[11] "Human beings and giant squids", p. 141.
[12] See Alvin Plantinga's *God and Other Minds* for a historical account of the arguments for other minds.
[13] See H.P. Grice's article "Utterer's meaning and intention", *The Philosophical Review*, April 1969.
[14] Daniel Dennett, *The Intentional Stance* (MIT Press, Cambridge, MA, 1987).
[15] David Premack and Verena Dasser, "Theory of mind in apes and children", in Andrew Whiten (ed.), *Natural Theories of Mind* (Blackwell Publishers, Oxford, 1991).
[16] Wolfgang Köhler, *The Mentality of Apes* (Viking Press, New York, 1925).
[17] For a rich description of primate tool use, see Cheney and Seyfarth's *How Monkeys See the World*.
[18] David Premack, *Gavagai! or the Future History of the Animal Language Controversy* (MIT Press, Cambridge, MA, 1986).
[19] This view has been expressed by Peter Van Inwagen in *Metaphysics* (Westview Press, Boulder, CO, 1993), and historically by Saint Thomas Aquinas in *Summa Contra Gentiles* (Benzinger Brothers, New York, 1928).
[20] This research, as well as the history of research done in ape language, is described in Savage-Rumbaugh *et al*.'s monograph *Language Comprehension in Ape and Child* (University of Chicago Press, Chicago, 1993).
[21] I wish to thank Quentin Smith, Arthur Falk, Paola Cavalieri, and Eric Hockett for comments on earlier versions of this paper.