Program of Dialogue on Science, Ethics, and Religion

Summary

Wild Justice and Fair Play: Animal Origins of Social Morality

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Biologists have long struggled to explain why animals are nice to each other. Could it be that all creatures are born with an innate sense of morality and fairness-or has such a sense of justice and codes of social behavior evolved from more basic survival needs?

To answer the question, animal behavior researcher Marc Bekoff has studied social behavior of animals, especially canines, engaged in play. Dr. Bekoff outlined his findings in his October 16, 2003 lecture sponsored by the Dialogue on Science Ethics and Religion, a program of the American Association for the Advancement of Science. Dr. Bekoff is a Professor of Biology at the University of Colorado, Boulder, and is a Fellow of the Animal Behavior Society and a former Guggenheim Fellow.

Animals have evolved a complex system of signals and social rules that regulate play activities. These signals reassure potential playmates that they are being invited to romp rather than challenged to fight. These play signals, which include pawing, a high-amplitude running gate, short barks and a “play bow,” are unique to play and very obvious across species line. While there is always a chance that a play-signal will be misunderstood and lead to aggression, the fact that these signals are only present during play minimizes the risk.

To illustrate his point, Dr. Bekoff showed a video of animals at play. Shown in real time, the clips depicted animals engaged in typical scenes of play. But when the video of dogs playing was slowed down frame-by-frame, clear patterns emerged. The dogs were continually adjusting themselves to avoid harming the other animal or attacking vulnerable body parts. Such behavior allows canines, even those interacting with significantly larger animals, to play without the activities moving into aggression.

All this, says Dr. Bekoff, leads biologists to some provocative questions. Can some animals be moral beings or do they merely act as if they are? What are the evolutionary roots of trust, fairness, forgiveness and morality? Does being fair make an animal more fit; is there a Darwinian explanation for fairness? And what role does animal morality play in defining what we call human nature? “We can get a handle on the evolution of moral behavior,” Dr. Bekoff says, “by studying play.”

Quoting Darwin, Dr. Bekoff said, “It is a significant fact that the more the habits of any particular animal are studied by naturalists the more he attributes to reason and the less to unlearned instinct.”

“There is some fitness component,” Dr. Bekoff said, “in animal morality…. Cooperation is important in and of itself in the evolution of social behavior.” But animals are capable of more than following a set of social rules, Dr. Bekoff claims. Animals have been shown to have emotions and self-expression comparable to that of humans.

“Art, language, culture and tool use have been used to show that animals and humans are different,” Dr. Bekoff said, but these things “don’t really cleanly differentiate non-human animals from human animals.” Dr. Bekoff cited examples of all these phenomena occurring in non-human animals, including anecdotal evidence of artwork created by monkeys being displayed in an art gallery.

Dr. Bekoff argued that animals are capable of feeling a wide range of emotions, though on different levels. Dog grief, he said, is not the same as chimp grief, and is not the same as human grief. But, he said, “I’m talking about differences in degree, rather than differences in kind.”

Does this capacity for emotion necessarily mean that animals are born equipped with a moral code? “Cashing out the notion of behaving fairly in animal play will help us get a handle in answering this question.” Animals have social expectations when they engage in various social situations, and the violation of these social expectations constitutes a

feeling of being treated unfairly. “Somehow animals have to agree to cooperate,” and this is done through a complex series of play signals.

What about the emotional capacities that underlie being fair? Are some animals capable of the emotions and empathy that seem to be at the foundations of morality? “The answer to me is yes,” Dr. Bekoff said. For example, rats have been known not to take a food pellet from a machine if doing so means that another rat will receive an electric shock.

To study animal morality, Dr. Bekoff says, it is crucial to study animal play. Dr. Bekoff has discovered that much of animal play mimics real-life scenarios that animals must learn in order to survive. To engage in play, animals must learn a complex set of social rules in order to communicate with other animals the intention to play. The “play bow” among canines has been a keystone to understanding how animals engage in play.

These play bows have been noted across canine species lines. In studying the bow, Dr. Bekoff has discovered the bows are used non-randomly to communicate to other animals the intention to play and to qualify the interpretation of rough behavior during play. Animals have also been known to use other methods of indicating play, such as role reversal, when an animal allows itself to be dominated by a smaller animal, and self-handicapping, when an animal does not use its full strength.

“It’s my theory that [in play] animals are learning how to communicate with each other. If they don’t play fairly, then they won’t be able to play. Animals who cheat don’t play.” Coyotes who initiate play, and then allow it to escalate into aggression are not invited to play again.

Such play is crucial for survival. “One reason [animals play] is for socialization.” By engaging in play, animals learn social skills, which are critical to getting along within their pack. Play is also needed for physical and cognitive development. “Animals learn how to negotiate complex environments.”

“Play is very important and animals need to be very sure that they get their requisite amount of play.” Although the amount of play may only be about 2% of the total activity of the animal, that small amount is crucial. In order to get the play they need to be able to engage others and they need to be able to play fairly. “Animals need to hunt and cooperate. They have to be able to interact closely. If they don’t play fairly they can be eliminated from the group.” Animals who are eliminated from a group, he continued, face very little chance for survival.

Dr. Bekoff ended his lecture with the question of whether this evidence of morality in animals has significant consequences for understanding the origin of human morality and the relations of humans to animals.

“What role does human morality play in defining human nature? I don’t know if we do know, but we surely know that animals do make choices to be nice and to be fair. Before we shut the door on the possibility that animals can be moral beings, we should study them.”

Responding to Dr. Bekoff was Dr. Nancy Howell, Associate Professor of Theology and Philosophy of Religion at St. Paul School of Theology. Dr. Howell expanded on Dr. Bekoff’s assertion that morality can no longer be used to distinguish humans from animals. She asked if the desire of mankind to define themselves as the only creatures with souls is really a product of our own egos. Could it be that “our quest for human uniqueness is a manifestation of the sin of pride?”

Relating a parable by St. Francis of Asissi, Dr. Howell showed that the notion of animals as rational beings with a soul and conscience is not a contemporary one. In the parable St. Francis negotiates an end of hostilities between a wolf and townsfolk.

She offered an alternate interpretation of Dr. Bekoff’s claim that differences among animals can be differentiated in degree, though not in kind. Cautioning that such

classifications have been used in the past to justify the oppression and exploitation of other animals, Dr. Howell outlined the concept of the "not-quite-human."

"The language of degree can end up yielding treatment as difference in kind." Dr. Howell cited a diagram, showing three brains, in diminishing sizes. The largest brain represented a highly educated university professor and the smallest, a monkey. In between, was a brain representing an African bushwoman. "We have a history as humans of associating some of our own kind with animals to justify our oppression and exploitation of other humans."

"[Alfred North] Whitehead assumed that animals have souls and subjectivity and we should confer on them a concept of personhood" Animals can express a similar, but not identical form of emotion and ritual activity. Sympathy and deception are evident in animal behavior. "To be truly moral, one has to be able to be bad, too," Dr. Howell said, adding that animals have been observed planning deceptions.

"Animals might have morality and our own morality has a natural basis." This is a difficult concept for some theologians to accept. Much of Western theology is grounded in the uniqueness of mankind, particularly human moral capacity.

"Do animals have souls? Do we have to give up the concept of souls? Can we apply the concept of souls to animals?" To answer such questions, humans may have to turn to a more physicalist interpretation of morality, one that depicts human ethics evolving from more primal material needs. The concept of a soul and morality may not be unique to humans after all. Dr. Howell suggested further, "We may have to think differently about God as well. As we realize the complexity of animals, the being of God is somehow more interesting."

Referencing a study by Craig Stanford, Dr. Howell compared the societal behavior of chimpanzees to that of bonobos (sometimes called pygmy chimpanzees). Chimpanzees are typified by highly aggressive and dominant behaviors, communicating through

violence and intimidation. In contrast, bonobos are often peaceful, relating through social cooperation, sexual communication, and alliance formation. Quoting Stanford, Dr. Howell declared, “perhaps human beings should be seen as standing at a crossroad. One path leads to a chimpanzee world of brute force and violence…while the other to a vision of humanity in which violence is not strength and compassionate strength is not a weakness. It’s not Camelot, it’s Bonobo society.”