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Justice

The Moral Lives  
of Animals

Marc Bekoff  
and Jessica Pierce

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**MARC** DEDICATES THIS BOOK TO HIS PARENTS, WHO TAUGHT HIM THE VALUES OF COMPASSION AND JUSTICE EARLY ON. CLOSE ENCOUNTERS WITH NUMEROUS ANIMALS ALSO TAUGHT HIM THESE VALUABLE LESSONS.

**JESSICA** DEDICATES THIS BOOK TO THE ANIMALS SHE HAS KNOWN AND LOVED.



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## PREFACE INTO THE WILD

*It is quite possible that there are . . . a number of intelligent men and women who are not yet aware of the fact that wild animals have moral codes, and that on average they live up to them better than men do theirs.*

WILLIAM HORNADAY, *The Minds and Manners of Wild Animals*

A teenage female elephant nursing an injured leg is knocked over by a rambunctious, hormone-laden teenage male. An older female sees this happen, chases the male away, and goes back to the younger female and touches her sore leg with her trunk. Eleven elephants rescue a group of captive antelope in KwaZulu-Natal; the matriarch undoes all of the latches on the gates of the enclosure with her trunk and lets the gate swing open so the antelope can escape. A rat in a cage refuses to push a lever for food when it sees that another rat receives an electric shock as a result. A male diana monkey who has learned to insert a token into a slot to obtain food helps a female who can't get the hang of the trick, inserting the token for her and allowing her to eat the food reward. A female fruit-eating bat helps an unrelated female give birth by showing her how to hang in the proper way. A cat named Libby leads her elderly, deaf, and blind dog friend, Cashew, away from obstacles and to food. In a group of chimpanzees at the Arnhem Zoo in the Netherlands individuals punish other chimpanzees who are late for dinner because no one eats until everyone's present. A large male dog wants to play with a younger and more submissive male. The big male invites his younger partner to play

and restrains himself, biting his younger companion gently and allowing him to bite gently in return. Do these examples show that animals display moral behavior, that they can be compassionate, empathic, altruistic, and fair? Do animals have a kind of moral intelligence?

We're in an "animal moment." Cornell University historian Dominick LaCapra has claimed that the twenty-first century will be the century of the animal. Research into animal intelligence and animal emotions has come to occupy the agenda in disciplines ranging from evolutionary biology and cognitive ethology to psychology, anthropology, philosophy, history, and religious studies. There is tremendous interest in the emotional and cognitive lives of animals, and there are daily revelations that surprise and even confound some of our assumptions about what animals are like. For example, fish are able to infer their own relative social status by observing dominance interactions among other fish. Fish also have been observed to display unique personalities. We know too that birds plan future meals and that their ability to make and use tools often surpasses that of chimpanzees. Rodents can use a rake-like tool to retrieve food that is out of reach. Dogs classify and categorize photographs the same way humans do; chimpanzees know what other chimpanzees can see, and show better memory in computer games than do humans; animals from magpies to otters to elephants grieve for their young; and mice feel empathy. For anyone who follows scientific literature or popular media on animal behavior it's obvious that we're learning a phenomenal amount.

New information that's accumulating daily is blasting away perceived boundaries between human and animals and is forcing a revision of outdated and narrowminded stereotypes about what animals can and cannot think, do, and feel. We've been too stingy, too focused on ourselves, but now scientific research is forcing us to broaden our horizons concerning the cognitive and emotional capacities of other animals. One assumption in particular is being challenged by this new research, namely the assumption that humans alone are moral beings.

In *Wild Justice* we argue that animals have a broad repertoire of moral behavior and that their lives together are shaped by these behavior patterns. *Ought* and *should* regarding what's right and what's wrong play an important role in their social interactions, just as they do in ours. Even

if you feel somewhat skeptical, we ask that you have an open mind and invite you to view animals differently. Indeed, we hope that even the most skeptical readers will come to change their views about the idea of moral behavior in animals.

The term *wild justice* is meant as provocative shorthand. Animals not only have a sense of justice, but also a sense of empathy, forgiveness, trust, reciprocity, and much more as well. In this book we present a unified picture of research concerning moral behavior in animals. We show that animals have rich inner worlds—they have a nuanced repertoire of emotions, a high degree of intelligence (they're really smart and adaptable), and demonstrate behavioral flexibility as they negotiate complex and changing social relationships. They're also incredibly adept social actors: they form intricate networks of relationships and live by rules of conduct that maintain social balance, or what we call social homeostasis.

We also consider the evolution of moral behavior. A cover story in *Time* magazine in December 2007 asked “What Makes Us Moral?” and reviewed the current state of research on the evolution of human morality. In this context the essay gave brief mention to the possibility of moral behavior in animals. If we think that morality has evolved in humans, we're led willy-nilly to ask about its presence in other animals. For a long while there's been agreement that humans and other animals share common anatomical structures and physiological mechanisms. In particular, humans and other mammals have remarkably similar nervous systems.

For readers familiar with evolutionary biology, what we're saying is that arguments for evolutionary continuity—the idea that the differences between species are differences in degree rather than differences in kind—are being supported for a wide variety of cognitive and emotional capacities in diverse species. We believe that there isn't a moral gap between humans and other animals, and that saying things like “the behavior patterns that wolves or chimpanzees display are merely building blocks for human morality” doesn't really get us anywhere. At some point differences in degree aren't meaningful differences at all and each species is capable of “the real thing.” Good biology leads to this conclusion. Morality is an evolved trait and “they” (other animals) have it just like we have it.

We also on occasion reference the notion of group selection because our discussion of moral behavior has implications for ongoing debates about individual versus group selection. As we were completing this book a number of articles appeared with catchy titles such as “Survival of the Nicest” and “Survival of the Selfless” in which it was argued that individuals might indeed work “for the good of the group in which they live.”

In *Wild Justice*, along with reviewing new research on animals, we offer some larger challenges to how social animals are understood and studied. We challenge the domination—the hegemony, you might say—of the competition paradigm that has monopolized discussions of the evolution of social behavior. The predominance of this paradigm in ethology and evolutionary biology is both misleading and wrong, and momentum is building toward a paradigm shift in which “nature red in tooth and claw” sits in balance with wild justice. The innumerable situations in which we see individual animals working together aren’t merely veneers of cooperation, fairness, and trust, but the real thing. Cooperation, fairness, and justice have to be factored into the evolutionary equation in order to understand the evolution of social behavior in diverse species. To this end, we spend a good deal of time discussing social play behavior, an activity that has been overlooked by just about all scholars interested in the evolution of morality. Patterns of behavior observed during play strongly suggest that morality has evolved in animals other than humans.

To support our arguments we consider numerous species in addition to the great apes, especially social carnivores such as wolves. Indeed, even among the great apes there’s a good deal of behavioral variation when comparing, for example, chimpanzees and pygmy chimpanzees (bonobos), and this lack of a consistent primate pattern causes trouble for comparative research. We advocate a species-relative view of morality, recognizing that norms of behavior will vary across species. Even within species there might be variations in how norms of behavior are understood and expressed. For example, what counts as “right” in one wolf pack might not be exactly the same as in another wolf pack because of the idiosyncrasies of individual personalities and the social networks that are established among pack members. There isn’t one “wolf nature”

but rather “wolf natures,” just as the renowned biologist Paul Ehrlich argued that there isn’t one human nature but rather human natures.

Finally, we argue that the evolution of moral behavior is tied to the evolution of sociality, and that social complexity will be a distinctive marker for moral complexity. We provide examples of nuanced morality when discussing species in which individuals live either predominantly alone or in longlasting social groups in which there are enduring bonds. For example, we’d expect to see more nuanced or fine-tuned morality in packs of gregarious wolves than in less social coyotes and red foxes.

A quick note on terminology. Humans should be proud of their citizenship in the animal kingdom. Yet because of the conventions of the English language, we’re apt to forget that humans are animals too. Nonetheless, we use the word *animals* to refer to nonhuman beings because always writing “nonhuman animals” gets tiresome.

Readers may wonder why we’re collaborating—Marc Bekoff, a cognitive ethologist, and Jessica Pierce, a philosopher. We first met over roasted artichokes and good merlot at a dinner party thrown by Lynne Sullivan, a mutual friend. We began discussing various aspects of animal cognition and the evolution of moral behavior and it became immediately clear that we had a shared interest, and that collaborating would bring together different fields of expertise and different points of view. As we make clear here, any investigation of the evolution of morality demands discussion and debate across disciplines, and this is precisely what we do. And as we were working on *Wild Justice* it became clear that people in different disciplines use the same words differently, thus, our collaboration forced us to clarify the jargon that’s used to refer to various aspects of social behavior.

We’re very excited about our interdisciplinary project and invite others to join us in further developing the study of animal morality, a field that is in its infancy. A mature understanding of the moral lives of animals will require patience and hard work by researchers who are willing to cross disciplinary boundaries and by nonresearchers who share their stories about our moral kin.

The information contained in *Wild Justice* has profound implications for our moral relationship with, and responsibilities toward, other animals. We will not explore these implications, but we feel that it is

important to note that what animals think and feel has to be factored into how we treat them.

*Wild Justice* travels over hills, into valleys, and around turns. In the first chapter we give an overview of the research on moral behavior in animals. We canvass the social behavior of various species and tell you which we think are the moral animals. We define morality and then sharpen our definition to offer a “species-relative” account of moral behavior.

In chapter 2 we discuss foundations for wild justice, including how scientists make sense of what animals do. We consider the disciplines that have made the most significant contributions to understanding animal morality: cognitive ethology (the study of animal minds), social neuroscience, moral psychology, and philosophy. Researchers in all of these areas have helped to unravel some of the mysteries concerning the cognitive and emotional capacities of animals and how these in turn fold into a discussion of moral behavior. We discuss the use of analogy in science and the value of careful anthropomorphism. We also consider individual and group selection, possible links between intelligence and sociality, and the notion of moral intelligence.

The heart of wild justice is the suite of moral behaviors that fall into three rough “clusters” (groups of related behaviors that share some family resemblances) that we’ve used as a fulcrum to organize our material: the *cooperation* cluster (including altruism, reciprocity, honesty, and trust), the *empathy* cluster (including sympathy, compassion, grief, and consolation), and the *justice* cluster (including sharing, equity, fair play, and forgiveness). We devote a chapter to each cluster and spell out the evidence for each. At the end of chapter 5 we draw connections among the three clusters to offer a unified picture of the repertoire of moral behavior so as to help readers navigate their way to the conclusion that animals can be moral beings.

In the final chapter, the discussion broadens into philosophy to consider the wider implications of wild justice. Much of this conversation centers on coming to a better understanding of what morality is and what happens when we define it so as to include animals. We also explore the implications of wild justice for sticky philosophical problems such as agency, conscience, relativism, and determinism.

Let's now begin our journey into the world of wild justice. The time has come to put wheels on the discussion of moral behavior in animals so that we can see where we're at and where we need to head in the future. We are not the only moral beings.



FIGURE 1. African elephants walking in a row in Amboseli National Park, Kenya. Elephants are highly social and emotional animals who live in large family groups led by an older, experienced female called the matriarch. Courtesy of Thomas D. Mangelsen/Images of Nature.



# 1

## MORALITY IN ANIMAL SOCIETIES AN EMBARRASSMENT OF RICHES

Let's get right to the point. In *Wild Justice*, we argue that animals feel empathy for each other, treat one another fairly, cooperate towards common goals, and help each other out of trouble. We argue, in short, that animals have morality.

Both popular and scientific media constantly remind us of the surprising and amazing things animals can do, know, and feel. However, when we pay careful attention to the ways in which animals negotiate their social environments, we often come to realize that what we call surprises aren't really that surprising after all. Take, for example, the story of a female western lowland gorilla named Binti Jua, Swahili for "daughter of sunshine," who lived in the Brookfield Zoo in Illinois. One summer day in 1996, a three-year-old boy climbed the wall of the gorilla enclosure at Brookfield and fell twenty feet onto the concrete floor below. As spectators gaped and the boy's mother screamed in terror, Binti Jua approached the unconscious boy. She reached down and gently lifted him, cradling him in her arms while her own infant, Koola, clung to her back. Growling warnings at the other gorillas who tried to get close, Binti Jua carried the boy safely to an access gate and the waiting zoo staff.

This story made headlines worldwide and Binti Jua was widely hailed as an animal hero. She was even awarded a medal from the American Legion. Behind the splashy news, the gorilla's story was adding fuel to an already smoldering debate about what goes on inside the mind and heart of an animal like Binti Jua. Was Binti Jua's behavior really a deliberate act of kindness or did it simply reflect her training by zoo staff?

Even in the mid-1990s there was considerable skepticism among scientists that an animal, even an intelligent animal like a gorilla, could have the cognitive and emotional resources to respond to a novel situation with what appeared to be intelligence and compassion. These skeptics argued that the most likely explanation for Binti Jua's "heroism" was her particular experience as a captive animal. Because Binti Jua had been hand raised by zoo staff, she had not learned, as she would have in the wild, the skills of gorilla mothering. She had to be taught by humans, using a stuffed toy as a pretend baby, to care for her own daughter. She had even been trained to bring her "baby" to zoo staff. She was probably simply replaying this training exercise, having mistaken the young boy for another stuffed toy.

A few scientists disagreed with their skeptical colleagues and argued that at least some animals, particularly primates, probably do have the capacity for empathy, altruism, and compassion, and could be intelligent enough to assess the situation and understand that the boy needed help. They pointed to a small but growing body of research hinting that animals have cognitive and emotional lives rich beyond our understanding.

We'll never know why Binti Jua did what she did. But now, years later, the amazing amount of information that we have about animal intelligence and animal emotions brings us much closer to answering the larger question raised by her behavior: can animals really act with compassion, altruism, and empathy? The skeptics' numbers are dwindling. More and more scientists who study animal behavior are becoming convinced that the answer is an unequivocal "Yes, animals really can act with compassion, altruism, and empathy." Not only did Binti Jua rescue the young boy, but she also liberated some of our colleagues from the grip of timeworn and outdated views of animals and opened the door for much-needed discussion about the cognitive and emotional lives of other animals.

## **WILD JUSTICE: WHAT ARE WE REALLY TALKING ABOUT?**

Even a decade ago, at the time that Binti Jua rescued the injured boy, the idea of animal morality would have been met with raised eyebrows and