

A baby bonobo at the Lola Ya Bonobo sanctuary in the Democratic Republic of the Congo.

PRIMATOLOGY

## A wild empathy

Christopher Boehm relishes a wide-ranging assessment of primate morality.

Trans de Waal's latest book, *The Bonobo* **◄** *and the Atheist*, is both an exceptionally good read and a tour de force of scholarship. In it, de Waal states his argument for the evolution of human empathy with the sophistication of a well-grounded, risk-taking scientist who can venture into philosophy.

De Waal draws on his own ethological research with chimpanzees and bonobos, as well as on biology and evolutionary psychology, to probe empathy as a key precursor for moral behaviour. The origins of human morality are not new territory for the primatologist and ethologist, who engaged with the question in Peacemaking Among Primates (Harvard University Press, 1990) and who, with Jessica Flack, has examined the evolutionary building blocks of morality. The novel element in The Bonobo and the Atheist is that de Waal analyses today's moral landscape, in particular the schism between militant atheism and religion.

De Waal views extreme strains of atheism as getting "all worked up about the absence of something", at one point using the fanci-

ful device of a talking bonobo as his mouthpiece (hence the book's title). His view is that religion is undeniably in our bones — even

**◇ NATURE.COM** For Christian Keysers on Frans de Waal, see: go.nature.com/plb4cq though evidence of primate precursors seems less than substantial. This does not mean that he is pro-religion, however. The Bonobo and the Atheist is permeated with the ethos of secular humanism, using the Renaissance painter Hieronymus Bosch's The Garden of Earthly Delights — a vision of humanity freed from narrow moral constraints as a touchstone for his arguments.



320 pp. \$27.95,

£18.99

In his discussion of empathy and morality, de Waal has little time for what he calls "veneer theories" that reduce altruism to 'natural' selfishness. As he shows, human altruism has analogues in a wide range of species, even though sterile ants' care for the offspring of their queen can hardly be labelled empathy. When dolphins assist humans struggling in the water, we may at least suggest some basic similarities. But when a chimpanzee, sharing more than 95% of our DNA, helps an unrelated member of its group to lick a wound it cannot reach, a type of empathy very near the

human is surely coming into play.

Many evolutionists favour chimpanzees as ancestral models. Whereas de Waal does look frequently to chimpanzees as exemplars of primate altruism, he champions the less violent bonobo — not least because its habitat, like that of our common primate ancestor, remains the tropical forest, whereas chimpanzees and humans have evolved into ecological generalists.

De Waal looks to mothering and infant care by non-kin, a basic form of empathy discussed by primatologist Sarah Hrdy in Mothers and Others (Harvard University Press, 2011), as the foundation of human altruism and complex cooperation, and as his prime evolutionary building block for morality. He also emphasizes the importance of emotion in moral choices, citing the work of psychologist Jonathan Haidt, author of The Righteous Mind (Allen Lane, 2012). Haidt's empirical investigations of subjects' disgusted reactions to incest demonstrate that when it comes to morality, raw emotions trump rationality.

The Bonobo and the Atheist does leave a gap of sorts in explaining moral origins. In discussing his building blocks, de Waal seems relatively unconcerned with the actual mechanisms of natural selection that keep them in place, be this through kin selection, mutualism, reciprocal altruism, group selection or social selection.

These theories can help to explain why nice guys don't necessarily finish last. Group selection theory may be making a comeback, as seen in a 2010 paper in Nature by E. O. Wilson and others; there are also social-selection arguments in Richard Alexander's The Biology of Moral Systems (Aldine Transaction, 1987), where he suggests that people's altruistic reputations may seriously enhance reproductive success. In my own Moral Origins (Basic Books, 2013) I suggest that social selection in the form of groups punishing moral deviants has profoundly shaped human gene pools, and given us a conscience — an argument de Waal does discuss.

De Waal's style is refined yet lively; his humanism both highbrow and lowbrow. One minute he is referencing the art of Bosch, the next comparing himself to an Australian toilet frog, showered over the decades by distastefully superficial sociobiological explanations of human altruism. The Bonobo and the Atheist is a synthesis on all levels, masterfully marshalling ethology, psychology, philosophy and anthropology in its drive to understand ourselves through the lens of other primates.

Christopher Boehm is professor of biological sciences and anthropology and director of the Goodall Research Center at the University of Southern California, Los Angeles, USA.

e-mail: cboehm1@msn.com