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Animals, science, behaviour and ethics

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The nature of our relationship with the other inhabitants of this planet has become increasingly clear as science has begun to help us understand our neighbours. Credit: Sutiporn Somnam/Getty Images

The moral status of animals has a long and fraught history in the West, much of it reflecting poorly on our ethical understanding. While the scientific account of non-human animals is playing an



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who study animal behaviour and philosophers trying to navigate the ethical minefield of human-animal relations.

The sixth century BCE Greek philosopher and mathematician Pythagoras, best known for his work with triangles, was perhaps the first Western thinker to take the moral status of animals seriously. [Pythagoras](#) held that “all animate beings are of the same family”, and on that ground seems to have been vegetarian.

The later philosopher [Eudoxus](#) wrote of him that “he not only abstained from animal food but would also not come near butchers and hunters”. While ancient sources disagree exactly how far his vegetarianism went, it seems clear that Pythagoras accorded animals a high moral status.

In the fourth century, the rather more famous [Aristotle](#) was less kind to our animal cousins, rating them far below humans due to what he saw as a lack of rationality. This Aristotelian view had a profound impact on following centuries, fostering a pervasive sense of human superiority, or anthropocentrism, which has yet to fully dissipate.

The Enlightenment saw mixed views, with philosophers split as to the moral status of animals. The French philosopher [René Descartes](#) claimed that animals “lack reason, and perhaps even thought,” leading him to view them as nothing more than soulless automatons and unworthy of moral concern. On the back of such mechanistic thinking, he was thus an early advocate of vivisection.

On the other hand, [Voltaire](#), the famed Enlightenment writer and thinker found such practices abhorrent, writing “Answer me, mechanist, has Nature arranged all the springs of feeling in this animal to the end that he might not feel?”

But the nature of our relationship with the other inhabitants of this planet has become increasingly clear as science has begun to help us understand our neighbours.

Darwin’s [evolutionary theory](#) has helped us to appreciate our genetic and historical links to the many parts of the animal kingdom, and the biological sciences are providing us with an increasingly demystified and accurate account of the behavioural and cognitive capacities of non-human animals.

In their recent article, Christine Webb from Harvard University, US, Peter Woodford of Union College, US, and Elise Huchard of the Institut des Sciences de l’Evolution de Montpellier, France point out the extensive list of animal capacities once thought unique to humans.

The list is confronting: tool use, culture, complex animal vocal communication with what seems like emerging grammar, self-awareness, mental time-travel, a wide emotional repertoire, including grief and joy, empathy, social intelligence, conflict resolution, and the modelling of other’s mental states.



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Indeed, these findings have fuelled a near-exponential growth in the discipline of animal ethics, “the field of philosophy concerned with the moral status of animals”, over the last two decades.

Yet, strangely, the scientists behind such findings have remained mostly silent about the philosophical implications of their work. “In other words,” they write, “although animal behaviour scientists’ work has been integral, it is non-scientists who have primarily pioneered the integration of science and ethics.”

Webb and colleagues argue that this state of affairs is unsatisfactory and that as animal ethics develops “then more active participation on the part of animal behaviour scientists has great potential – not just for moving animal ethics debates forward but for scientists themselves.”

To overcome this gap between science and ethics, one must understand the reason for its existence. The authors point to a number of reasons: the difficulty in surmounting disciplinary boundaries between science and philosophy, an ongoing “mutual defiance and scepticism” driven by philosophical critiques of animal treatment in scientific experimental protocols, and a disciplinary culture in behavioural science which routinely attempts to smother researchers’ empathy toward animal study subjects, both to maintain objectivity and as emotional defence.

Much of this they see as misguided or curable. However it is achieved, the gap must be bridged to encourage animal behavior scientists to become involved in animal ethics. The authors suggest there are good reasons for this.

The first is that they see a social responsibility on the behalf of researchers to engage in “public debates on ethical issues that are related to their scientific activities.” Just as scientists involved in revealing the capacity for pain in human infants became advocates against neonatal surgeries without anesthesia in the 1980s, so too animal researchers are morally obliged to speak out in analogous cases.

Doing so may well help scientists to justify the benefits of their work to society – an increasingly common requirement. It will also expand their public profile: while they now routinely speak publicly about the conservation implications of their work, they should be emboldened to address a wider array of issues relating to the moral status of non-human animals.

Perhaps we need more scientific public intellectuals speaking to our relationships with the other inhabitants of the web of life.

Another reason for scientists to engage with the philosophy of animal ethics is that it might help them confront topics that have been traditionally off-limits: in particular, the notion of animal minds. While minds are difficult enough to talk about in humans, this difficulty is exacerbated when it comes to non-human animals.



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complex or confusing to derive into, but whose inputs and outputs become the subject of study.

“This poses a deeper, more fundamental epistemological problem,” say the three researchers, “in the sense that building a whole field of scientific inquiry around what is currently a black box inherently hampers ultimate explanatory and predictive efforts.”

Engaging with animal ethics will also aid scientists to navigate one of the most fraught and feared topics in the biological sciences: anthropomorphism, which is the projection of human traits onto non-human animals.

While such projection seems commonplace to those of us steeped in cat and dog memes, the traditional fear has been that anthropomorphism will irredeemably void any possibility of objectivity. This has led to the “avoidance of attributing – or even studying – morally-relevant traits such as agency, interests, or motivations and goals to nonhuman animals,” and has actually become something of a research bias in itself. This occurs, note the authors, “even when studying species that are closely related to us, a revelatory context regarding such a bias, referred to as *anthropodenial* by [famous primatologist Frans] de Waal.”

These considerations, taken together, could lead to a richer vocabulary, a wider theoretical and conceptual repertoire and an abundance of new approaches for those sciences concerned with the behaviour and cognition of animals.

Philosophy can aid science, but Webb, Woodford and Huchard also suggest ways in which science could help enrich the theory and practice of animal ethics in both academia and politics, as well as helping to draw the fields together.

The authors urge behavioural scientists to reach out to philosophers, separated as they are by the institutional divide between the sciences and the humanities. By actively fostering links through “joint teaching, reading groups, research programs, and conferences” and by hosting philosophers in labs and research teams, scientists could help to better integrate the theories and practices of animal behavior and ethics.

Scientists could also tweak their research agendas in such a way as to generate and make available knowledge that would be of enormous benefit for philosophers. While the facts about the biology of various species might not tell us directly what is right or wrong, “knowledge on the natural behavior of different species, in relation to their phylogenetic position and ecology, can help in setting species-specific criteria for animal ethics agendas.”

They could also provide such knowledge to politicians and lawyers, to help devise and implement evidence-based policy regarding human-animal relations. Biological researchers with a “deep understanding of evolutionary theory, allied with the intimate experiences that people who work



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animal ethics holds the promise of a wealth of benefits for science, philosophy and the non-human animals that we share our planet with. With an eye-wateringly high extinction rate and industrial agriculture in full swing, the necessity and urgency of this interdisciplinary meeting can't be overstated.

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Stephen Fleischfresser

Stephen Fleischfresser is a lecturer at the University of Melbourne's Trinity College and holds a PhD in the History and Philosophy of Science.

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