Franks, Becca; Webb, Christine; Gagliano, Monica; and Smuts, Barbara (2020)
[Conventional science will not do justice to nonhuman interests: A fresh approach is required.](#) *Animal Sentience* 27(17)

DOI: 10.51291/2377-7478.1552

Date of submission: 2020-02-01

Date of acceptance: 2020-02-07

This article has appeared in the journal *Animal Sentience*, a peer-reviewed journal on animal cognition and feeling. It has been made open access, free for all, by WellBeing International and deposited in the WBI Studies Repository. For more information, please contact wbisr-info@wellbeingintl.org.

Conventional science will not do justice to nonhuman interests: A fresh approach is required

Commentary on [Treves et al.](#) on *Just Preservation*

Becca Franks

Environmental Studies, New York University

Christine Webb

Department of Human Evolutionary Biology, Harvard University

Monica Gagliano

Biological Sciences, University of Western Australia

Barbara Smuts

Department of Psychology, University of Michigan

Abstract: Treves et al. (2019) make a convincing case that conservation efforts need to go beyond an anthropocentric worldview. Implementing that vision, however, will require *human* advocates to represent *nonhuman* interests. Where will the knowledge of those interests come from? How can humans know what is in the best interest of another animal, a plant, or an ecosystem? We discuss how the values embedded in current scientific practices may be ill-suited to representing nonhuman interests and we offer some ideas for correcting these shortcomings.

[Becca Franks](#), Visiting Assistant Professor, Department of Environmental Studies, New York University, studies well-being and motivation, with a focus on aquatic animal welfare. [Website](#)

[Christine Webb](#), College Fellow, Department of Human Evolutionary Biology, Harvard University, studies primate empathy and conflict resolution, human-animal relations, and animal ethics. [Website](#)

[Monica Gagliano](#), Research Associate Professor of Evolutionary Ecology, University of Western Australia, and Research Fellow, Australian Research Council, has written many articles on animal and plant behavioural and evolutionary ecology. She pioneered the new research field of plant bioacoustics and recently extended the concept of cognition to plants, reigniting the discourse on plant subjectivity and ethical standing. [Website](#)

[Barbara Smuts](#), Professor Emerita of Psychology, University of Michigan, studies social relationships in domestic dogs, dog evolution and interspecies relationships. [Website](#)

Treves et al. (2019) observe that the current values dominating conservation biology — anthropocentrism, speciesism, and instrumentalism — are destabilizing planetary health. Along with several of the commentators (Attfield, 2019; Baker, 2019; Washington, 2019) and in line with the existing literature (Crist, 2014; Jensen, 2016; Meijer, 2019), we heartily agree with this diagnosis. As part of the treatment plan, Treves et al. envision a court that enacts multispecies justice by appointing advocate-trustees who have been “well-trained in the capabilities and variable sensory, cognitive, and socio-emotional capacities of the non-humans they represent.” However, as conservation biologists, the authors admit to having little to say about how such advocate-trustees will gain the information needed to carry out their mandate. We pick up where Treves et al. leave off by asking: *What science will serve nonhuman interests best?* We focus on animal behavior science, our field of study, but we believe that the issues and principles discussed here apply more broadly to any program of research aimed at understanding the interests of its subjects.

As Treves et al. point out, the values that scientists hold matter. Values drive research questions, methodological choices, statistical interpretation, and the framing of results; despite being ignored (or denied when science is touted as “value-free”), values can influence empirical knowledge as much as the data (Midgley, 2001). In the quest for information about the interests of nonhuman animals, the values driving the science can amplify human presuppositions about nonhuman lives.

Animal welfare science — which, as a field aiming to improve the lives of nonhuman animals, is a natural place to turn for understanding animal interests — tends to use industry standards (e.g., indoor housing for dairy cows, shoe-box cages for rats) as default husbandry practices. Although this value enables the field to generate practical, near-term solutions to alleviate animal suffering in existing systems, it may be less useful for understanding animal interests *per se* (Franks, 2019; Yeates, Röcklinsberg, & Gjerris, 2011). In valuing the systems of use over the interests of the animals themselves, questions about preferences for mate selection, reproductive control, autonomy, exploration, discovery, learning, positive emotion, multispecies interaction, and stable social groups are usually not tested. Restrictive treatment can even constrain animals’ behavioral, cognitive, and emotional potential, diminishing the expression of their interests because of anhedonia and disengagement (Franks, Champagne, & Higgins, 2013; Fureix & Meagher, 2015).

Modern animal scientists are trained to think and write in ways that deny animal sentience (Crist, 1999; Lestel, 2014); hence they rarely engage in debates in animal ethics (Webb, Woodford, & Huchard, 2019). Similar impediments to adequately representing animal interests exist across most animal science subfields. At a minimum, to determine the interests of another individual requires (1) accepting the individual *has* interests (rather than being just a collection of mechanistic processes) and (2) giving the individual the opportunity to discover and convey their interests. Asking anthropocentric, mechanistic questions and treating individuals in a detached, callous way, animal behavior science can undermine rather than unveil nonhuman interests.

Fortunately, there is growing recognition of the need for new values and practices, exemplified by the compassionate conservation movement (Ramp & Bekoff, 2015), positive animal welfare (Lawrence, Vigors, & Sandøe, 2019; Mellor, 2019), and novel ethological

frameworks pioneered by Vinciane Despret, Dominique Lestel, and Roberto Marchesini (Bussolini, 2013). To represent nonhuman animal interests adequately, scientists will need to give priority to those interests, as follows:

1. Use language that recognizes and respects animal sentience (Crist, 1999)
2. Pay attention to the ethical implications of the work — both the immediate concerns of the individuals involved in the research and its longer-term, broader consequences (Washington, 2019; Webb et al., 2019)
3. Allow the interests to be sophisticated and diverse:
 - a. Learning, agency, choosing, creating (Franks, 2018; Franks & Higgins, 2012; Lestel & Herzfeld, 2005; Špinka, 2019)
 - b. Forming intraspecific and interspecific friendships (Lestel & Taylor, 2013; Sridhar & Guttal, 2018)
 - c. Diverging from human interests (e.g., the importance of smell to dogs (Duranton & Horowitz, 2019)
4. Rely on sources of knowledge that are currently perceived as unconventional:
 - a. Personal, empathetic connection and intersubjectivity with study subjects (Bradshaw, 2010; Bussolini, 2013; Lestel, 2014; Smuts, 2001; Wels, 2013)
 - b. Local and indigenous knowledge (Jino et al., 2018)
 - c. Anecdotes and critical anthropomorphism (Bates & Byrne, 2007; Bekoff, 2006; Burghardt, 1991)
5. Transdisciplinary collaboration, especially with philosophers, political scientists, and cultural and legal scholars

As other commentators have noted, the legal and ethical foundations on which conservation biology is built require further debate (Gupta, 2019; Palmer & Fischer, 2019). Regardless of the underlying structure, however, the question of how to determine nonhuman interests will remain. Existing scientific practices were not designed with those interests in mind; they instead favor academic trends (e.g., positivism; Fraser, 2009), existing institutions (e.g., human exceptionalism; Chapman & Huffman, 2018), or profit (e.g., animal agriculture). To meet the modern crises of climate change, environmental pollution and degradation, and mass species extinction, animal interests (including the interests of the particular animals involved in the research) must be given priority over external considerations.

References

- Attfield, R. (2019). [Futurity, selves and further organisms](#). *Animal Sentience* 27(4).
- Baker, L. (2019). [To preserve or to conserve?](#) *Animal Sentience* 27(7).
- Bates, L. A., & Byrne, R. W. (2007). [Creative or created: Using anecdotes to investigate animal cognition](#). *Methods*, 42, 12–21.
- Bekoff, M. (2006). Animal passions and beastly virtues: Cognitive ethology as the unifying science for understanding the subjective, emotional, empathic, and moral lives of animals. *Human Ecology Review*, 13(1), 39–59.

- Bradshaw, G. (2010). [You see me, but do you hear me? The science and sensibility of trans-species dialogue](#). *Feminism and Psychology*, 20(3), 407–419.
- Burghardt, G. M. (1991). Cognitive ethology and critical anthropomorphism: A snake with two heads and hognose snakes that play dead. In C. A. Ristau (Ed.), *Cognitive ethology: The minds of other animals: Essays in honor of Donald R. Griffin* (pp. 53–90). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Bussolini, J. (2013). [Recent French, Belgian and Italian work in the cognitive science of animals: Dominique Lestel, Vinciane Despret, Roberto Marchesini and Giorgio Celli](#). *Social Science Information*, 52(2), 187–209.
- Chapman, C. A., & Huffman, M. A. (2018). [Why do we want to think humans are different?](#) *Animal Sentience* 23(1).
- Crist, E. (1999). *Images of animals: Anthropomorphism and animal mind*. Temple University Press.
- Crist, E. (2014). Ptolemaic environmentalism. In G. Wuerthner, E. Crist, & T. Butler (Eds.), [Keeping the wild: Against the domestication of earth](#) (pp. 16–30). Washington, DC: Island Press.
- Duranton, C., & Horowitz, A. (2019). [Let me sniff! Nosework induces positive judgment bias in pet dogs](#). *Applied Animal Behaviour Science*, 211, 61–66.
- Franks, B. (2018). Cognition as a cause, consequence, and component of welfare. In J. A. Mench (Ed.), *Advances in agricultural animal welfare: Science and practice*.
- Franks, B. (2019). [What do animals want?](#) *Animal Welfare*, 1–10.
- Franks, B., & Higgins, E. T. (2012). Effectiveness in humans and other animals: A common basis for well-being and welfare. In J. M. Olson & M. P. Zanna (Eds.), *Advances in experimental social psychology* (Vol. 46, pp. 285–346). New York, NY: Elsevier Academic Press.
- Franks, B., Champagne, F. A., & Higgins, E. T. (2013). [How enrichment affects exploration trade-offs in rats: Implications for welfare and well-being](#). *PLoS ONE*, 8(12).
- Fraser, D. (2009). [Animal behaviour, animal welfare and the scientific study of affect](#). *Applied Animal Behaviour Science*, 118(3–4), 108–117.
- Fureix, C., & Meagher, R. K. (2015). [What can inactivity \(in its various forms\) reveal about affective states in non-human animals? A review](#). *Applied Animal Behaviour Science*, 171, 8–24.
- Gupta, R. (2019). [Just preservation: From vision to reality](#). *Animal Sentience* 27(9).
- Jensen, D. (2016). *The myth of human supremacy*. New York, NY: Seven Stories Press.
- Jino, N., Judge, H., Revoh, O., Pulekera, V., Grinham, A., Albert, S., & Jino, H. (2018). [Community-based conservation of leatherback turtles in Solomon Islands: Local responses to global pressures](#). *Conservation and Society*, 16(4), 459–466.
- Lawrence, A. B., Vigers, B., & Sandøe, P. (2019). What is so positive about positive animal welfare? — A critical review of the literature. *Animals*, 9, 1–19.
- Lestel, D. (2014). [Toward an ethnography of animal worlds](#). *Angelaki - Journal of the Theoretical Humanities*, 19(3), 75–89.
- Lestel, D., & Herzfeld, C. (2005). Topological ape: Knots tying and untying and the origins of mathematics. In P. Grialou, G. Longo, & M. Okada (Eds.), *Images and reasoning*,

- interdisciplinary conference series on reasoning studies* (pp. 147–162). Tokyo: Keio University Press.
- Lestel, D., & Taylor, H. (2013). [Shared life: An introduction](#). *Social Science Information*, 52(2), 183–186.
- Meijer, E. (2019). [When animals speak: Toward an interspecies democracy](#). New York City: New York University Press.
- Mellor, D. J. (2019). [Welfare-aligned sentience: Enhanced capacities to experience, interact, anticipate, choose and survive](#). *Animals*, 9(7), 440.
- Midgley, M. (2001). Rationality and rainbows. In *Science and poetry* (pp. 38–46). Routledge.
- Palmer, C., & Fischer, B. (2019). [Just policy paralysis?](#) *Animal Sentience* 27(3).
- Ramp, D., & Bekoff, M. (2015). [Compassion as a practical and evolved ethic for conservation](#). *BioScience*, 65(3), 323–327.
- Smuts, B. (2001). Encounters with animal minds. *Journal of Consciousness Studies*, 8(6–7), 293–309.
- Špinka, M. (2019). [Animal agency, animal awareness and animal welfare](#). *Animal Welfare*, 28(1), 11–20.
- Sridhar, H., & Guttal, V. (2018). [Friendship across species borders: Factors that facilitate and constrain heterospecific sociality](#). *Philosophical Transactions of the Royal Society B: Biological Sciences*, 373(1746).
- Treves, A., Santiago-Ávila, F. J., & Lynn, W. S. (2019). [Just preservation](#). *Animal Sentience* 27(1).
- Washington, H. (2019). [Justice for nature](#). *Animal Sentience* 27(2).
- Webb, C. E., Woodford, P., & Huchard, E. (2019). [Animal ethics and behavioral science: An overdue discussion](#). *BioScience*, 69(10), 778–788.
- Wels, H. (2013). [Whispering empathy: Transdisciplinary reflections on research methodology](#) (p. 360).
- Yeates, J. W., Röcklinsberg, H., & Gjerris, M. (2011). Is welfare all that matters? A discussion of what should be included in policy-making regarding animals. *Animal Welfare*, 20(3), 423–432.

Call for Papers

Special Issue of the [*Journal of Consciousness Studies*](#)

Plant Sentience: Theoretical and Empirical Issues

Guest Editors: Vicente Raja (Rotman Institute of Philosophy, Western University)
Miguel Segundo-Ortin (School of Liberal Arts, University of Wollongong)

In this special issue, we address the issue of plant sentience/consciousness from different disciplines that combine both **theoretical** and **empirical** perspectives. Some of the questions to be addressed in the special issue include the following:

- Plants exhibit interesting behaviors; does this entail that they are conscious to some extent?
- What are the requirements for a living organism to be conscious? Do plants meet these requirements?
- What does the possibility of plant sentience/consciousness entail for the study of the evolution of consciousness?
- Is it just a categorical mistake to attribute consciousness to plants?
- Can we talk about different levels or degrees of consciousness?

How to submit?

Deadline: **June 1st, 2020**

Please submit your papers (max. 9000 words including footnotes, references, abstract, etc.) to vgalian@uwo.ca with subject "Paper Special Issue JCS".

For more information, including bibliography and more detailed descriptions of the topics and questions to be addressed in the papers submitted to the special issue, please contact the guest editors at vgalian@uwo.ca (Vicente) or mso693@uowmail.edu.au (Miguel).