

ANIMAL SENTIENCE

AN INTERDISCIPLINARY JOURNAL ON ANIMAL FEELING

Correia Caeiro, Catia (2020) [Comparative cognition and nonhuman individuality.](#)
Animal Sentience 27(16)

DOI: 10.51291/2377-7478.1550



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Comparative cognition and nonhuman individuality

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

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Abstract: Commentators Washington (2019) and Tiffin (2019) point out that the individual vs. collective dichotomy is much more complex than what is considered in the target article. This commentary will focus on why individuals are more important than collectives. Species differences in cognition and emotional processes and individuals' feelings and experiences need to be taken into account.

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Treves et al. (2019) state that "multispecies justice must incorporate justice towards individual non-humans.... We consider justice for these collectives precisely because they contain *selves*." They add that what we owe these individuals depends on "their capabilities, needs and relationships" and that factors such as "physical and/or psychological integrity, emotional and cognitive functions, social affiliations with others, and ecological interrelationships" should be taken into consideration.

This already addresses the question of "why ... individuals [are] more important than collectives." Gupta (2019) adds a focus on human motivations, although still from a human-centred perspective. Dawkins (2008), in considering the cognitive abilities and emotional experiences of each individual within a species as well as their human-caused suffering, advocates that we treat other animals justly. Like Treves et al., Dawkins urges that we try to make our perception less utilitarian through compassion, and, perhaps more importantly, through empathy (Bègue and Laine 2017; Baker 2019).

Cross-cultural studies have shown that the public see humans as superior to other animals because they lack higher cognition and complex emotions (Haslam et al. 2008; Chapman & Huffman 2018). Yet the scientific community has been showing this perception to be false (e.g., Rogers and Kaplan 2005; Halford et al. 2010; Broom 2010, 2016; Shettleworth 2010). Alexander (2019) cites important neuroscientific evidence for consciousness as grounds for protecting nonhuman species. This also applies to individuals. Evidence of higher cognition and emotional experiences is abundant: Fish feel pain (Braithwaite 2010; Key 2016; Woodruff

2017; Sneddon et al. 2018). Bees can be pessimistic (Bateson et al. 2011). All mammals have the same basic emotional neuroanatomy (Panksepp and Watt 2011). Cognition and emotion are crucial for animal welfare (Boissy et al. 2007) and must be used as basic arguments in favour of an individual regardless of its membership in a collective. This in turn makes it clear that — contrary to what Attfeld (2019) suggests, illogically — not all living organisms should be considered as equal in Treves et al.'s courts, otherwise we would have to include not only plants, but bacteria, mushrooms or amoebas, which lack the biological structures for sentience.

Despite more similarities in cognition and emotion than differences, when human and nonhuman individuals are in conflict, utilitarianism tends to dominate preservation actions wherever the “trolley problem” is recruited to reach a decision (Bègue and Laine 2017). The same is true when the question is about just preservation. In trolley problems involving humans vs. nonhuman animals — such as children falling in zoo enclosures, or bushmeat in remote villagers’ survival — the answer is invariably biased toward the human (who is deciding): the children must be saved, the people must be fed. In a just and impartial court defending sentient nonhuman individuals as equals, what would be the just action?

In human courts, specialised information is key to resolving disputes (Blandon-Gitlin et al. 2011), hence expert testimony can make or break a case. In Treves et al.’s trustee model, would the court always prioritise the interests of the collectives over their individuals? Would there be a hierarchy, where in some cases the individual would be prioritized and in others the collectives? The classical discipline of conservation biology only deals with the collective units, completely ignoring the parts within (as I know from my initial training as an environmental biologist, and as Bergstrom's comment (2019) illustrates perfectly). Even when deciding which collectives to preserve, more or less artificial and arbitrary factors are applied to ascribe conservation value (usually based on human perception of what nature should *look* like). Management practices often involve brutal practices such as aerial shooting of wolf packs to conserve caribous (Hervieux et al. 2014). Neither individuals nor their interests or experiences are important. In the rare instances where individuals are considered, they are merely treated as numbers or genetic profiles and only in relation to the whole unit (e.g., Witzemberger et al. 2011). However, ultimately, who or what benefits from the collective preservation?

Perhaps the discussion would be clearer if we asked why conservationists are interested in conserving ecosystems, species, habitats, etc., collectively, without attending to the individual? Or a more direct question: *Who* are conservationists trying to benefit when conserving these collective entities? In another example given by Washington (2019) on feral cats, we should ask: to whom are wild species more valuable than invasive ones? The concept of invasive species in itself, while useful, is highly unethical, particularly as most species are invasive because of human actions. A more ethical approach would be to consider the perspective of the individuals involved, particularly highlighting their cognitive and emotional experiences: invasive cats are creating suffering for wild local animals and *that's* why it is important to address the issue, not because individuals belonging to local wildlife are more important than individuals from an introduced species (because this really only holds from an anthropocentric view).

Specific examples of how to apply the concepts and ideas being discussed in the target article are thus urgently needed to address the issues raised in the many commentaries. We need to ask the relevant questions if we want to achieve a framework for just preservation. For

every policy and every action, we need to first ask: "Whom will this benefit?". And we need to use comparative cognitive science to inform these decisions, which should consider the individuals. Even though both the target article and the commentators had excellent points, perhaps none of them was fully able to abandon an anthropocentric view and put themselves in the other "selves'" shoes.

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