

Is knowing enough to change human attitudes and actions?

Commentary on [Marino & Merskin](#) on *Sheep Complexity*

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Abstract: Marino & Merskin present evidence on key aspects of cognition, such as theory of mind, learning, emotional valence, and sociality, to make a convincing argument that sheep are due consideration as individual sentient beings. With this information, what will it take to produce a real, meaningful shift in our attitudes and actions towards other animals, including a species as disadvantaged as sheep? What else do we need to know?

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The very moment I began to write this commentary on Marino & Merskin (2019) (M&M), I received a news notification that 15 sheep in France have been enrolled as students at a primary school to offset falling numbers in the student population. The sheep were enrolled with birth certificates and given names such as Baa-bete and Saute-Mouton.¹ This occurrence is rife with the contradictions and the disingenuousness with which we treat non-human animals. It exemplifies the stereotypes of sheep that M&M lay bare in their target article – docility, passivity, objects of human use, and (ironically in this school context) unintelligence.

Our species has done much to separate itself from other animals. We have long domesticated animal species, artificially selecting traits to serve human values. The degree to which we exploit and harness resources – for food, lodging, technology – has created a parallel version of human life, disparate from all others that inhabit the Earth with us. In this separation, we have constructed physical and emotional boundaries, discriminating animals as ‘other’. We have left other animal species to exist precariously at the whim of human convenience and contradiction, in the shadows of human existence.

M&M present empirical evidence on key aspects of cognition to make a convincing argument that sheep are due consideration as individual sentient beings. This raises questions as to why this persuasion is needed and whether such information can effect real change on behalf of sheep as individuals.

Let us look briefly at the human relationship with the dog, *Canis familiaris*, in all its glorious forms (see also Kujala, 2017). The domestic dog is reputedly the most privileged non-human

¹ <https://news.sky.com/story/sheep-registered-as-pupils-in-bid-to-save-classes-at-french-alps-primary-school-11714338>

animal. Americans alone spend close to US\$70 billion on pets each year, averaging about \$1300 for a dog each year. Chinese citizens will spend nearly US\$3 billion on pet-related costs in 2019 (up 50% from 2016).² As of 2015, off-leash dog parks have been the fastest growing park type in the US.³ There are upwards of 17 research labs dedicated to non-invasive methods of studying dog cognition at major universities worldwide, with at least 12 in the US (e.g., Cook et al., 2019).⁴ Despite the close affection humans have towards dogs, the belief that they have individual personalities and experience emotion, and despite the cognitive evidence to support these sentiments, dogs are still viewed with a utilitarian attitude. About 3.3 million dogs enter the shelter system, with about 700,000 killed each year in the US. Moreover, dogs still remain a 'laboratory animal', commonly used in toxicology tests in the biomedical field (Hasiwa et al., 2011). In Asia, 30 million dogs a year were slaughtered for consumption as meat in 2016 (Humane Society International, 2016).

The dog evidence shows that even with the species that we individuate almost as much as our own species, we treat other animals as generic commodities. What, then, for the animals we see almost entirely as a mere commodity? The 2016 worldwide estimate for sheep consumption was 550 million (Sanders, 2018). Alongside other food animals, such as pigs, cows, fishes, and chickens, sheep may face the greatest hurdles to achieving ethical considerations. This is in part because of the attributes ascribed to them that have almost entirely effaced their individualities. This is further reflected even in the word 'sheep', whose plural and singular are the same, as for other commodified animals, such as fish, swine, cattle, and poultry.⁵ The fact that a sheep (Dolly) was the first cloned mammal in 1996⁶ certainly plays into the overall narrative of sheep as fungible goods. Paradoxically, humans have a tendency to lose sight of animal individuality among highly social, cooperative, and eusocial species (e.g., bighorn sheep, prairie dogs, bees).

How do we individualize sheep in our collective consciousness? Cross-cultural studies show that humans get better at perceiving facially expressed emotions with increased exposure and familiarity (Elfenbein and Ambady, 2003; Reyes et al., 2018). Moreover, empathy and compassion across races and cultures are higher among more diverse communities (e.g., Sidanius et al., 2008). Thus, the opportunity to see others, and to see them as individuals, is important for developing meaningful and enduring ethical attitudes. Yet with captive Asian elephants, scientific knowledge, education, and even the high valuing of the species have gone only so far in reducing harm. A comprehensive welfare assessment of Asian elephants (in Thailand) suggests that while welfare conditions for tourist elephants have improved, the number of elephants who experience the poorest welfare conditions has increased (Schmidt-Burbach, 2017).

To demonstrate the intelligence, complexity, and individuality of sheep, M&M review the evidence of cognitive capacities such as theory of mind, learning, emotional valence, and sociality. But especially with a species as disadvantaged as sheep, what will it take to induce a real, meaningful shift in our attitudes and actions? What else do we need to know?

² <http://theconversation.com/americans-spend-70-billion-on-pets-and-that-money-could-do-more-good-102467>

³ <https://www.tpl.org/media-room/dog-parks-lead-growth-us-city-parks#sm.0001q5tk0m9idzt11v828qfycncg>

⁴ <https://dogcog.unl.edu/other-dog-labs>

⁵ <https://www.theguardian.com/notesandqueries/query/0,-197456,00.html>

⁶ <https://dolly.roslin.ed.ac.uk/facts/the-life-of-dolly/index.html>

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