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ANIMAL CONSCIOUSNESS

Why it matters

Walter Veit

The last decade has seen an explosion of interest in the subject of animal consciousness. Conferences, journals, and new books are emerging at an accelerating rate. Why is this happening? In this article, I explain the ethical and scientific importance of animal consciousness that has fueled this rising interest in animal minds. First, I will focus on the relevance of consciousness to the status of animals as subjects of moral concern. Second, I will explain the significance of the scientific study of animal consciousness for understanding consciousness more broadly, including insights into ourselves.

Keywords: **animal consciousness**, **animal minds**, **animal welfare**, **evolution of consciousness**, **ethology**.

Animal consciousness is at the heart of many contemporary debates in animal ethics, animal welfare legislation, animal welfare science, and consciousness science (Allen & Trestman, 2017; Browning & Birch, 2022; Veit, 2023; Dawkins, 1998). However, these debates are not merely restricted to their academic setting. Books on animal minds are popping up at an accelerating rate, with scientists (as well as other authors) diving into the scientific research to explain what it might be like to be a bee, an octopus, or a dog, among many other animals (Berns, 2018; Chittka, 2022; Godfrey-Smith, 2016).

The age of the behaviourist denial of animal consciousness within psychology is finally over. This development was not only driven by a scientific interest in what the minds of other animals might be like but also importantly by considerations of animal welfare. Animal consciousness matters most fundamentally because of its relevance to animal welfare (Browning, 2022; Browning & Veit, 2023; Dawkins, 1998, 2012). To put it succinctly, the only creatures who have welfare are those creatures that are conscious, i.e. have subjective experiences. In this article, I hope to highlight the importance of animal consciousness not only for the animals themselves and how we treat them, but also for how this might feed back into our understanding of consciousness as a natural phenomenon with human consciousness as a special case (Veit, 2023). I will begin with the relationship between animal consciousness and welfare, before moving to the connection between animal consciousness and the sciences of the mind.

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ANIMAL CONSCIOUSNESS AND WELFARE

No generation is perhaps as aware of the suffering animals are undergoing in industrial farms than our current generation. The numbers of vegetarians and vegans are on the rise and concern for animal welfare is pushing governments towards more strict legislation to protect animals. But what does it mean

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to have welfare or rather the capacity for welfare? Animal welfare scientists have in the early history of their field largely equated the term with health, which is perhaps no surprise due to the large number of veterinarians at the beginning of this field as well as the lingering influence of the behaviourist tradition (Browning, 2020; Veit & Browning, 2021). But the field has moved on from such behaviourist views towards a mentalistic view of suffering akin to how we treat wellbeing in humans: a subjective state balance between positive and negative experiences. It is here that consciousness becomes relevant. If high welfare means a dominance of positive experiences versus negative ones it does, of course, become obvious that we must assess what the actual subjective experience of the animals are. And *subjective experience* is just another word for consciousness as philosophers are now using the term to capture any kind of experience, rather than just higher forms of cognitive processing unique to humans (Godfrey-Smith, 2020; Veit, 2023).

This connection between consciousness and moral status has been especially emphasized by utilitarian philosophers such as Jeremy Bentham, who had the famous dictum that «[t]he question is not, Can they reason? nor, Can they talk? but, Can they suffer?» (Bentham, 1879, p. 309). While there are a lot of ethicists who defend additional criteria for moral status, e.g. freedom and agency (Browning & Veit, 2021; Delon, 2024), the presence of consciousness is perhaps the most widespread and agreed upon necessary property to be a moral subject – a position that is often called «sentientism» (Baranzke & Ingensiep, 2023; Lee, 2022; Rodogno, 2010; Veit & Browning, 2023). A strong version of sentientism would hold that the balance of positive to negative experiences is the only thing that matters morally. But we do need to hold this more radical view to think that consciousness is the most important factor for animal welfare. A moderate sentientism only holds that consciousness is necessary for moral status, but that there could be states beyond positive and negative experiences that matter morally. Historically, it was popular to think of intelligence and higher cognitive faculties such as human language as important for moral status in order to distinguish humans from other animals, but these views are becoming less common for just the reasons Bentham outlined with his famous dictum.

ANIMAL CONSCIOUSNESS AND THE LAW

This importance of animal consciousness to animal welfare is not only recognized by philosophers, but also law- and policy-makers who have enshrined sentience into recent animal welfare legislations. Indeed, efforts by philosophers have even led to decapod crustaceans and cephalopod molluscs to be included in the UK's animal sentience bill (Birch et al., 2021). Spain recently also moved from considering animals as objects towards a subject-view that recognizes them as sentient beings capable of suffering. Furthermore, the European Union is also requiring member states to recognize the welfare of sentient animals in the Lisbon Treaty, though we should also note that

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the EU has received a lot of criticism recently for their backpedalling on improvements of animal welfare legislation in the EU especially when it comes to farm animals. Unfortunately, much of the emphasis is here only on suffering, in the sense of avoiding negative experiences, but there is another sense of suffering readily understood by humans in the form of the absence of positive experiences. Industrial farm animals rarely have the opportunity to experience positive states, which is only slowly being addressed (Lawrence et al., 2019).

It should thus be clear that we cannot avoid the study of animal consciousness. It is only when we learn about which states cause pleasant and unpleasant experiences to the animals that we will be able to improve their welfare. This is why animal welfare science and animal consciousness research have moved closer together in recent years with a lot of potential for fruitful collaborations (Browning & Veit, 2023).

If we were to merely assume what is good and bad for animals based on our perception of what it would be like for us to «live» in the animal's body, we would be bound to make a lot of mistakes that may cause great suffering to the animals. As Browning (2020) points out, zoo visitors frequently make such mistakes, such as thinking of monkeys in a cage as feeling imprisoned, when the cage actually provides them with a much larger three-dimensional space to roam in than an island surrounded by water would (Browning, 2020, p. 22). While freedom matters to us as humans, it is unlikely that most animals will be able to conceptualize this idea (Browning & Veit, 2021). What matters instead is whether they are undergoing mostly positive rather than negative experiences.

THE SCOPE OF CONSCIOUSNESS

However, this is not the only reason why research into animal consciousness is of ethical importance. The very question of which animals need to be protected requires us to answer the difficult question of which animals are conscious. In the last decades, we have moved on from only considering other Great Apes as conscious towards recognizing mammals more broadly, then birds (though notably restricted to the smartest ones), then to fish, and now vertebrates more generally. Invertebrates such as insects and crustaceans are now considered edge cases that might have consciousness. A special role in the recent literature has been played by octopuses who have received something of an honorary status as a flagship

taxa for animal consciousness. Due to documentaries like the Netflix show *My Octopus Teacher* (2020) and popular books like Peter Godfrey-Smith's *Other Minds: The octopus, the sea, and the deep origins of consciousness* (Godfrey-Smith, 2016), octopuses have become recognized in the public as creatures that could hardly be less similar to us in terms of their bodies and yet share a strange kind of kinship of minds with humans. This is why they are often described as perhaps the closest thing to intelligent alien life on Earth – if it wasn't for the fact that we do share a common ancestor with them. But since few people consider worm-like animals to have consciousness this suggests that consciousness evolved independently at least twice. Some have even suggested that the octopus could have several additional streams of consciousness – one for each of the arms (Carls-Diamante, 2017, 2022; Veit, 2023). This may seem perhaps absurd but since each of the arms of an octopus has more neurons than the brain of a bee – which are now considered as likely candidates for insect consciousness – we should seriously consider the possibility that octopus arms with their partial autonomy could have their own experiences. Here, we will simply need more research to discover what the experiences of other animals are like. Researchers such as Jennifer Mather have begun the hard task of uncovering what the different dimensions of octopus consciousness might be like (Mather, 2019, 2021a, 2021b, 2022).

To summarize this section, animal consciousness matters fundamentally to ethics as the most important property to confer moral status. It is only those animals that are conscious that are capable of suffering and thus capable of undergoing welfare experiences. Therefore, it will be very important to invest into animal consciousness research because it tells us both (i) which animals are conscious and need to be protected, and (ii) which experiences (both negative and positive) animals are able to undergo such that we can intervene to improve their experiences.

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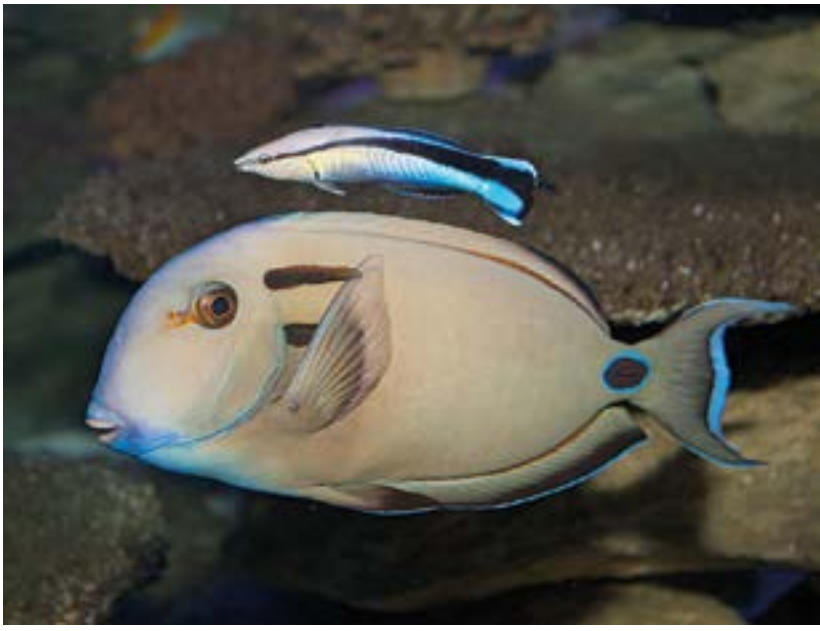

Brian Gratwicke

ANIMAL CONSCIOUSNESS AND THE SCIENCE OF CONSCIOUSNESS

Animal consciousness can, of course, be studied purely for its own sake. There are plenty of scientific research areas that are well-respected without thereby providing direct benefits to humans. But with the increased pressures for researchers to justify the importance of their research we can also point to the indirect benefits

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In the last decades, we have moved on from only considering other Great Apes as conscious towards recognizing mammals more broadly, then birds (though notably restricted to the smartest ones), then to fish, and now vertebrates more generally.

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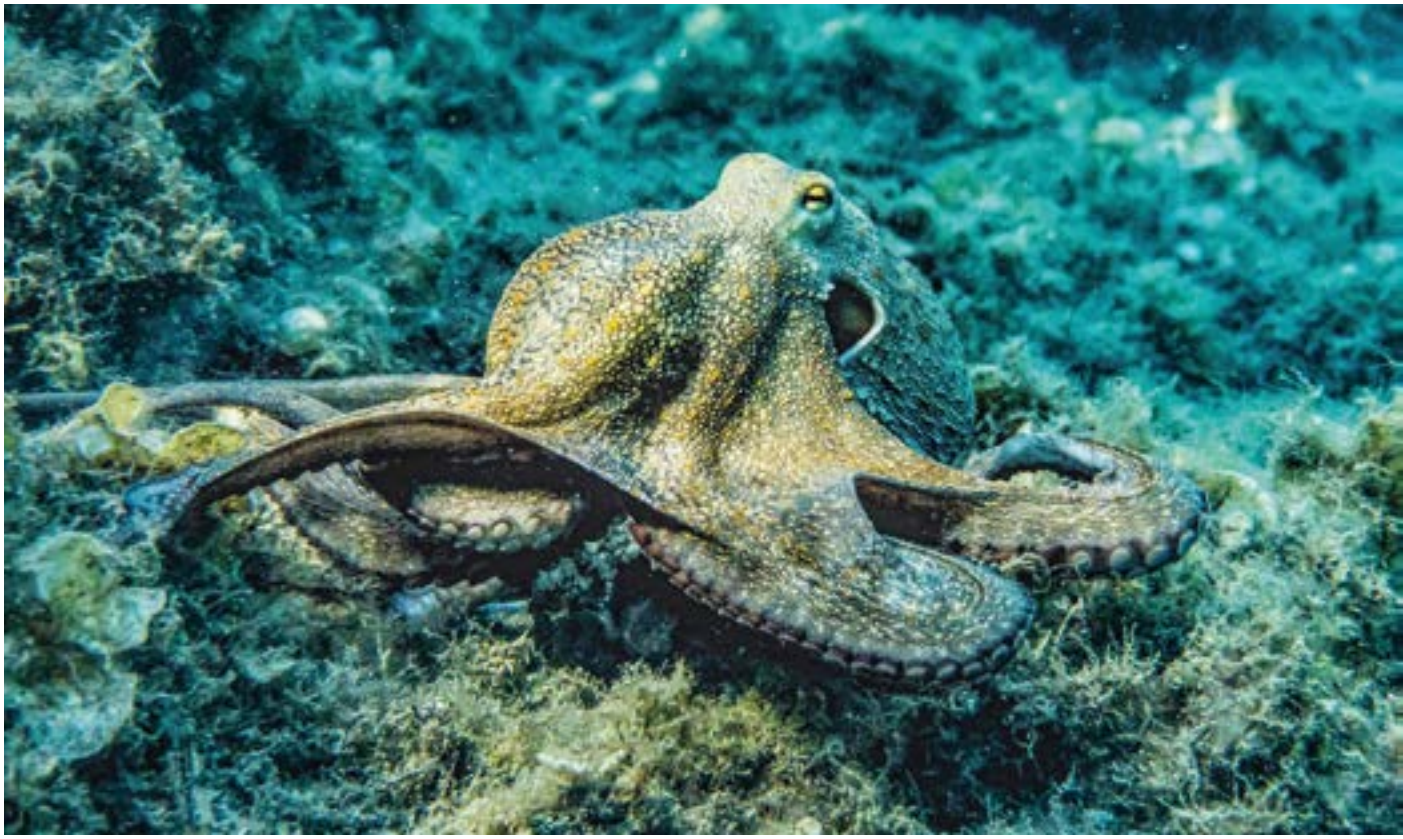
of animal consciousness research towards other areas. While the science of consciousness has gone from a small niche field to a more respectable one where many scientists contribute to, the subject of animal consciousness has always been a mere side-issue (Ginsburg & Jablonka, 2019; Veit, 2022, 2023).

Much of the research done in animals has, in fact, operated on the justification that experiments in animals could help us to understand human consciousness. This is admittedly important. Animal models are used to study all kinds of human phenomena without the risks such research might bring to humans. Invasive research on human brains is often not viable (at least ethically so), which led to a lot of funded research on blindsight in monkeys. Blindsight is the curious phenomenon of the absence of conscious vision, while blindsight patients still appear to be able to process visual information unconsciously. That the same behaviour has been observed in monkeys who had received analogous damage to humans with blindsight in their primary visual cortex led many researchers to conclude that consciousness is not unique to humans. Similar other experimental paradigms led to animals being used as model systems for human consciousness, and it is precisely the success of this research that led researchers to become open to the possibilities of consciousness in animals evolutionarily only distantly related to us (Andrews, 2024).

«Human consciousness is only a recent evolutionary event and its particularities may not extend to other animals»

Research on animal consciousness can help us to learn new things about the functions of consciousness which can feed back into a better understanding of ourselves. Nevertheless, I do not consider this the most important impact of animal consciousness research. Rather than thinking of this research as illuminating human consciousness, it is better to think of it as discovering the dimensions and gradations that consciousness can take in nature. All forms of animal consciousness are simply special cases of this larger complex and multidimensional phenomenon of consciousness in nature and that includes humans as a special case or what can be called *phenomenological complexity* (Veit, 2023). Recently, Birch et al. (2020) have



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Octopuses can perhaps be considered as the flagship of contemporary animal consciousness research. Their minds are likely to be very different from ours akin to the possibility of alien consciousness. Yet, they might also provide us with a model system to study the different forms experience might take in creatures with very different body plans and evolutionary histories than our own.

made an important call to study the dimensions of consciousness across the animal kingdom, which will enable us to better understand the different forms consciousness in nature can come in. Future research on the evolutionary pressures that led to different kinds of experiences will enable us to understand why consciousness exists at all and which benefits it provides to animals.

«Future research on the evolutionary pressures that led to different kinds of experiences will enable us to understand why consciousness exists at all and which benefits it provides to animals»

CONCLUSION AND FURTHER DISCUSSION: UNDERSTANDING THE EDGES OF CONSCIOUSNESS

Animal welfare is growing more and more in importance. As human populations grow, so does the consumption of animals. Billions of animals are slaughtered every year under horrid welfare standards. But to know and understand the conditions under which animals thrive and suffer we do need to address the difficult task of studying their experiences. This is why some researchers have expressed worries that the emphasis on consciousness in modern animal welfare science could undermine the scientific objectivity of the field (Dawkins, 2017). Yet, if it is the experiences of animals that ultimately ground their ethical status and welfare, we will simply not be able to ignore the difficult challenge of studying animal consciousness. Furthermore, as I hope to have made clear above, the study of animal consciousness has also direct benefits to understanding consciousness more broadly.

Human consciousness is only a recent evolutionary event and its particularities may not extend to other animals. The complexity of consciousness in humans may give us the wrong impression that there are impossible hard problems and explanatory gaps between the physical and the mental world that science can never bridge. Thus, just like with complex

biological phenomena such as brains, immune systems, and physiology more generally, the most progress has been made by moving beyond humans as the most important model organism (Veit, 2023). We will learn more about consciousness by studying its simplest forms, which is of course also what we must do in order to figure out which animals have moral status.

Do we need to give welfare considerations to insects, or slugs, and snails – perhaps worms? These difficult questions about the edges of consciousness are now receiving a lot of attention and we may be able to make educated guesses within the next few decades on which to ground sensible policy decisions that balance potential harms versus unnecessary protections. Yet, in making such trade-off decisions between human and animal interests it should also be clear that we should err on the side of caution since billions of animals may experience suffering depending on our choices, while there will be comparatively little benefit to us. This is why may researchers are now calling for the use of a precautionary principle in treating animals as potential conscious creatures capable of suffering, rather than making us wait for a «final» proof of consciousness in non-human species (Birch, 2017; Bradshaw, 1998). Finally, it is my hope that this present article will help to highlight the importance of animal consciousness and its scientific investigation.

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