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Sentience and the science-policy interface

Commentary on [Rowan et al.](#) on *Sentience Politics*

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Abstract: I contrast my picture of the relationship between the science and policy of animal sentience with that of Marian Stamp Dawkins, who thinks “the science of animal sentience and the politics of animal welfare should be kept separate” because they involve irreconcilably different standards of evidence. On my alternative picture, (i) the science of animal sentience, like any other empirical science, delivers evidence but not certainty; (ii) this evidence allows us to make better practical decisions, both within and outside science and (iii) the quality standards we apply to the evidence should be high in all contexts, including the formulation of public policy.

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It is good to see discussion of how the science of animal sentience relates to its ethical and political implications. These issues are important and under-discussed. The target article by Andrew Rowan and colleagues (2022) is a helpful contribution to this debate, but I don't have anything to add to the historical narrative it provides. My comments here are mainly in response to the critical commentary by Marian Stamp Dawkins' (2022). Dawkins's piece is also a helpful contribution, but I disagree with it, and I think it is worth trying to explore the nature of the disagreement.

I think Dawkins sees the situation as follows. For her, there are two different sets of evidential standards: (1) the standards for concluding with certainty, within science, that a claim is true and (2) the standards for accepting a claim for the purposes of animal welfare policy. According to Dawkins, when we say that policymakers should "err on the side of caution" or that we should "give the animals the benefit of the doubt," what we are saying is that the second set of standards should be lower than the first. Less evidence, or lower-quality evidence, is needed to justify accepting a claim in a policy-making context.

I see the situation differently in three main ways. The first is that I don't think the first set of standards actually exists. I think we are never in a position to conclude *with certainty* that any empirical generalization is true [see also Ng 2022]. All empirical sciences are in this predicament, not just the science of animal minds. (If we ever achieve certainty, we achieve it in the area of mathematics and logic, not in the natural or social sciences.) We should not claim certainty even when it comes to generalizations that have exceedingly strong evidence in their favour. Empirical sciences are simply not in the business of delivering certainty. What they do is provide evidence for or against generalizations.

The second difference is that I don't accept a fundamental chasm between decisions made *within* science and decisions made *outside* science. Whenever any of us makes a practical decision, we should consider as much relevant evidence as we can, and let the evidence shape the probabilities we assign to different outcomes. At the same time, we also need to make value judgements: judgements about how good or bad the different outcomes will be. The probabilities and values together allow expected value calculations that guide our decision-making. That is just as true for decisions made by scientists *within science* as it is for broader decisions about animal welfare policy that are made by legislators.

Consider, for example, a lab director who must decide the rules for their own lab. The lab works on rats, and they are in a jurisdiction where rats receive no legal protections. Should the lab director nonetheless regard the rats as sentient and set strict rules for protecting their welfare? Obviously, they should. They should assign great disvalue to a scenario in which the rats are sentient but they treat them as if they were non-sentient. To maximize expected value, they should take precautions against the seriously bad outcomes that would occur in that scenario.

The third main difference is that I don't think the standards we demand in the context of public policy should be lower than those that we demand in other contexts. We do need to avoid costly delays, but this is not the same thing as lowering standards.

To elaborate on this, public policy decisions involving animals are extremely grave, with very high stakes. When the stakes are that high, it can be a serious mistake to delay decision-making to wait for more evidence to arrive. Policy procrastination causes harm. The COVID-19 pandemic has given us many examples (Birch 2021b) [see also Wiebers & Feigin 2020]. That imperative to avoid harmful procrastination is what "precautionary principles" ultimately have in common (see Steel 2014; Birch 2017). But this general imperative should be clearly distinguished from the idea that we should accept or in any way condone lower methodological standards when gathering evidence.

Indeed, when the stakes are high, it is all the more important to demand *high* methodological standards from the scientists working on the problem, because the consequences of careless, low-quality work can be very serious. The standards we expect should be at least as stringent as those we expect from more policy-remote areas of science. We should demand sound experimental design, careful data collection, thorough analysis, and honest communication of uncertainty, using transparent, standardized frameworks.

These principles underlie my own team's 2021 report to Defra (Birch et al. 2021) and our recent target article in this journal (Crump et al. 2022). We made a decision to focus solely on peer-reviewed studies that provided concrete new evidence. We then scrutinized those studies in depth, going into considerable detail about questions of experimental design, data collection, analysis and reliability. Good decisions need to be guided by robust evidence and by open, transparent communication of uncertainty, and our aim was to put ministers in a position to make good decisions.

Let us return to the comparison with Dawkins's (2022) picture. Dawkins clearly agrees about the importance of high methodological standards within science, yet (unfortunately) seems to regard the policy of animal sentience as its own separate world, a parallel universe where these standards are ignored. So, to save high methodological standards within science, we need to divorce the science from the policy and let the parallel universes go their separate ways. I don't see things this way at all. I don't think this reflects the situation as it actually is, and it certainly doesn't reflect the situation as it ought to be.

Rather than trying to create two separate worlds—a world of politically irrelevant science and a world of evidence-free policy—we should strive for an integrated process in which policy is guided by the best available evidence, and in which experts are able to communicate their uncertainty without fear that it will be used as an excuse for procrastination.

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