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Nagel-ing worries about fish sentience

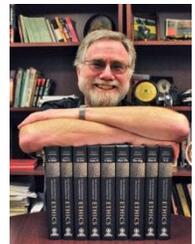
Commentary on [Woodruff](#) on *Fish Feel*

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Abstract: Woodruff (2017) argues that teleosts' more sophisticated behaviors make sense only if they are sentient. Moreover, their neuroanatomy, although different from mammalian, is sufficiently complex to support sentience. I answer some potential objections to Woodruff's argument, and try to trace its moral significance. In so doing, I briefly address Birch's (2017) target article as well.

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In inquiring whether fish (or, more precisely, a large sub-class of fish) are sentient, we are not simply being intellectually curious. This inquiry is markedly different from an examination of fish's blood cells. The former has moral implications; the latter does not. Generally, people believe that if a creature is sentient — i.e., that it is at least capable of experiencing pain — then that creature has some moral status. If nothing else, we should not inflict needless pain on it. As Bentham (1982/1781) put it, “the question is not, Can they reason? nor, Can they talk? but, Can they suffer?”

The motivating idea is simple. The reason it is wrong to put out lit cigarettes on the skin of a human is not *primarily* that the human is intelligent or that it can talk, but that it will experience horrific pain. If that is not clear, think about why it would be wrong to inflict pain on a severely retarded human being unless that pain (say, an inoculation or some life-saving surgery) will benefit her. Her lack of intelligence or emotional sophistication is morally irrelevant; her ability to feel pain is sufficient to explain why it is wrong to burn her or hit her or cut her.

For the same reasons, if a dog or a cat or a rat experiences pain, then that is *a reason* not to inflict needless pain upon it. Of course we can debate what might count as “needless pain.” However, causing an animal pain because we like to hear it squeal or see it flinch is obviously an instance of unnecessary pain (LaFollette, 1989).

Few people now have any doubts that dogs are sentient. When they hear a dog yelp after it has been kicked, or when they see it writhing after it was hit by a car, we don't ask: “Gee, I wonder if it is in pain.” Its behavior, buttressed by our knowledge of its anatomy and its

evolutionary similarities with humans, makes such a question odd, if not proof that the questioner is a budding sociopath.

However, asking whether teleosts are sentient is, pardon the bad pun, a different kettle of fish. For whereas we have neurophysiological, behavioral, and evolutionary reasons for thinking that dogs are sentient, fish are different. Their neurophysiology is different; their behavior is different; they are evolutionarily more distant from humans. Therefore, it is not surprising that, for most of our history, few people seriously entertained the possibility that fish were sentient.

Woodruff (2017) thinks this is a mistake. The aim of his target article is to show that despite first appearances, fish have complex behaviors that make sense only if they are sentient. Moreover, he argues that they have the neurophysiological apparatus to support sentience. Although they lack a neocortex — normally thought to explain sentience in mammals — the “neuroanatomical organization and extrinsic connections of the pallium ... are complex enough to be at least weakly analogous to the circuitry of the cortex and thalamus assumed ... to underlie sentience in mammals.”

I am no biologist. However, Woodruff’s examples and arguments are highly suggestive and probably right. Some who would reject his claims will think that homologous structures are insufficient to support sentience; the structures should more closely resemble those in humans before we can confidently assert that fish are sentient. I disagree. After all, we have numerous instances where different anatomies can lead to similar behavior and similar functions. Although it is safe to say that creatures with a humanlike neuroanatomy are intelligent, we should not assume that only such creatures are intelligent. We know, for instance, that octopuses are intelligent even though their brains differ anatomically from those in mammals (Borrell, 2009). Woodruff’s argument relies on this insight. We can explain fish sentience by showing how their physiology, although different, is homologous to structures supporting mammalian sentience. The “fish pallium exhibits generalized electrophysiological responses correlated with several criteria of sentience in mammals.” Fish have the relevant “neural architecture and connectivity,” and “isomorphic representation of sensory input,” and “neural mechanisms for selective attention” — all features related to sentience in mammals.

These anatomical findings, along with the behavioral evidence Woodruff reports, make a compelling case that teleosts — and probably other fish — are sentient. While so arguing, Woodruff — and other researchers — inject Nagel into the debate. Nagel (1974), in trying to explain consciousness, famously claims that there is something that *it is like* to be a bat. Woodruff is careful in claiming that he thinks the evidence shows that there is something that it *feels like* to be a fish. He thereby seems to differentiate his view from Nagel’s. However, in also claiming that “feeling like” should be understood as a form of “subjective experience,” it is unclear just how his view differs from Nagel’s.

Adding the adjective “subjective” seems peculiar. In some minimal sense of “subjective” — where it simply identifies the locus of the experience — I have no objection. I also think that in that sense, the adjective “subjective” is superfluous, as in the phrase “window woman.” I assume that Woodruff’s use of the adjective is more significant. In calling an experience “subjective,” I infer that he is meaning something like “the experience *of a subject*.” My concern is that the notion of something’s being a subject usually is — or comes infinitesimally close to — the idea of self-consciousness. I also think that if Nagel’s claim that there is something it is like

to be a bat is not trivial, then it means something more than that bats hang upside down, often live in caves, and navigate largely by echolocation. We can describe these behaviors in ways that say nothing about whether there is something *that it is like* to be a bat. Consider: wasps fly and they sting predators and prey. However, I suspect there is nothing *that it is like to be* a wasp. Whether it is like something to be an X seems to require not simply awareness (that is, the ability to feel pain or to respond to one's surroundings), but self-consciousness. I do not think that bare sentience is the same as, or is a sufficient condition for, self-consciousness. I suspect something like this insight underlies Regan's (1983) distinction between "moral agents" and "moral patients" (151–56).

In the end, however, if one wants to draw a moral lesson from Woodruff's work, one need not conclude that "there is something that it is like to be a fish" — although perhaps that it is also true. Bare sentience — even if it is shy of subjective experience — is sufficient to grant them moral status: to consider their interests when reasoning morally.

Of course, that does not yet tell us *how* morally important they are — only that we should not fail to consider their interests. Woodruff does not do that in this paper. That is not his purpose.

In a different target article for this journal, Birch (2017) has argued that the Precautionary Principle gives us reason to treat fish *as if* they were sentient as long as we have *some* plausible reason to think that they are sentient.

I am sympathetic to Birch's conclusion. However, I would not characterize this as an instance of the "precautionary principle." That principle has historically been used in cost-benefit analysis, most prominently in discussions about environmental policy. For instance, in deciding whether to rely on nuclear power, critics have claimed that a full meltdown would be so horrible that even though the chances of its occurring are slight, the negative consequences would be so profound that prudent people should eschew its use. Birch's point is arguably analogous to this, and I infer that the concept has been used in this context before. However, I think the point can be made much simpler without invoking this principle: since it is wrong to harm a sentient creature, if we have some evidence that a creature is sentient, then we have reason not to harm it, even if the evidence of its sentience is less than overwhelming.

In sum, Woodruff's conclusion is morally profound. If fishes are capable of experiencing pain — and it seems they are — then we must minimally find painless ways of killing them if we are going to continue eating them for food. If it is also true that there is something that it is like to be a fish — if they are self-conscious — then we have a reason to not kill them, even if we could do so painlessly.

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ANIMAL CONSCIOUSNESS

On **November 17-18, 2017**, the NYU Center for Mind, Brain and Consciousness, the [NYU Center for Bioethics](#), and NYU Animal Studies will host a conference on [Animal Consciousness](#).

This conference will bring together philosophers and scientists to discuss questions such as: *Are invertebrates conscious? Do fish feel pain? Are non-human mammals self-conscious? How did consciousness evolve? How does research on animal consciousness affect the ethical treatment of animals? What is the impact of issues about animal consciousness on theories of consciousness and vice versa? What are the best methods for assessing consciousness in non-human animals?*

Speakers and panelists include:

[Colin Allen](#) (University of Pittsburgh, Department of History & Philosophy of Science), [Andrew Barron](#) (Macquarie, Cognitive Neuroethology), [Victoria Braithwaite](#) (Penn State, Biology), [Peter Carruthers](#) (Maryland, Philosophy), [Marian Dawkins](#) (Oxford, Zoology), [Dan Dennett](#) (Tufts, Philosophy), [David Edelman](#) (San Diego, Neuroscience), [Todd Feinberg](#) (Mt. Sinai, Neurology), [Peter Godfrey-Smith](#) (Sydney, Philosophy), [Lori Gruen](#) (Wesleyan, Philosophy), [Brian Hare](#) (Duke, Evolutionary Anthropology), [Stevan Harnad](#) (Montreal, Cognitive Science), [Eva Jablonka](#) (Tel Aviv, Cohn Institute), [Björn Merker](#) (Neuroscience), [Diana Reiss](#) (Hunter, Psychology), [Peter Singer](#) (Princeton, Philosophy), [Michael Tye](#) (Texas, Philosophy)

Organizers: Ned Block, David Chalmers, Dale Jamieson, S. Matthew Liao.

The conference will run from 9am on Friday November 17 to 6pm on Saturday November 18 at the NYU Cantor Film Center (36 E 8th St).

Friday sessions will include “Invertebrates and the evolution of consciousness”, “Do fish feel pain?”, and “Animal consciousness and ethics”.

Saturday sessions will include “Animal self-consciousness”, “Animal consciousness and theories of consciousness”, and a panel discussion.

A detailed schedule will be circulated closer to the conference date.

Registration is free but required.

Register [here](#).

See also [the conference website](#).

