

COMMENTS

We welcome comments by our readers reflecting agreement or disagreement with the material published in this section and, at the discretion of the Editor-in-Chief, will publish such comments. We would like to emphasize that material published anywhere in the PSEBM, including this section, does not necessarily reflect the opinions of the Society, Editor-in-Chief or the Publisher.

Use of Animals in Research (43801A)

TAKASHI ASAI

Department of Anesthesiology, Kansai Medical University, Moriguchi City, Osaka 570, Japan

As one involved in animal research, I am concerned about the current disputes on animal rights. Professor Nicoll and Dr. Russell (1) show the unnatural nature of the animal rights/liberation philosophy and negate the activists' claim. I feel that some of their statements, however, could be misleading.

Although "it is not possible for us to know what animals perceive" when they are exposed to "conditions or stimuli that would cause pain or discomfort to humans" and "we cannot know how nonhuman mammals . . . may perceive pain," it is very likely that the animals can perceive pain. We have obtained knowledge on the mechanisms of nociception through research using nonhuman mammals. There is no doubt that nonhuman mammals have very similar nociceptive pathways to those found in humans, and the pathways can transmit the nociceptive stimuli to the brain. The effects of analgesics ("pain"-killers) have been studied widely using animals, because researchers believe that the animals perceive pain. Thus, we do know that in the nonhuman mammals there are nociceptive pathways leading to the brain and that it is very likely that they perceive pain, although we *cannot know* whether or not they perceive pain.

Anaesthetists give anaesthesia and analgesics to neonates during and after surgery because they believe that neonates also feel pain despite the fact that anaesthetists cannot know whether or not neonates feel pain. Veterinary surgeons have no doubts about providing anaesthesia and analgesia for animals. Institutions, scientific and medical associations, and editors of journals require researchers to minimize "pain", suffering and discomfort to animals, and thus nobody is allowed to do research without such efforts. Therefore, the statement that "using pain or the presumed ability to suffer as the yardstick for moral standing is not rational" cannot be supported, although neither is the claim that "humans and animals should be re-

garded as morally equal because of a shared ability to feel pain" justified on the basis of the concept that animals do perceive pain.

The authors' statement regarding perception of pain by animals may give an impression to the public that researchers do not take any effort to reduce pain—but we do. Humane treatment of animals is the researchers' obligation. It not only protects the moral rights, if any, of the animals, but it maintains human decency. I believe that only researchers who care about the welfare of animals can contribute benefits to both humans and animals. We have to stress the fact that the majority of researchers, as sensitive human beings, treat animals humanely.

Our primary task is not to denounce the extreme antivivisectionists' philosophy, but to show nonextreme animal protectionists and the public how much we have achieved in minimizing pain, suffering, and distress to animals, and to show that we indeed have improved the welfare of both humans and animals through animal research. We no longer use animals "because the suffering of the pig counts less than the suffering of the human being" (2). We even try the painful stimuli, which are applied to the conscious animals, on ourselves (3).

We will miss the point if we neglect to inform and discuss the issue honestly with nonextremists and the public, and do not try to dispel their sentimental fears and distrust of science. We also have to realize that the activists are not merely emotional, ignorant, and brainwashed (2), and should try to debate fairly with them. Nothing can be gained from acrimonious disputes between the extremists of both sides; these attitudes are undoubtedly "immoral and inhumane, and threaten our existence as a species."

The greatest danger to animal research is not the activity of its opponents, but the inactivity of its defenders (4). We should defend our position not only by refuting the philosophy of animal activists, but also by

improving our practice further. We should inform the public of the fact that we do still need animal research in accepting our responsibility to protect both humans and animals from disease.

-
1. Nicoll CS, Russell SM. The unnatural nature of the animal rights/liberation philosophy. *Proc Soc Exp Biol Med* **205**:269–273, 1994.
 2. Vance RP. An introduction to the philosophical presuppositions of the animal liberation/rights movement. *JAMA* **268**:1715–1719, 1992.
 3. Zimmermann M. Ethical guidelines for investigations of experimental pain in conscious animals. *Pain* **16**:109–110, 1983.
 4. Smith SJ, Hende WR. Animals in research. *JAMA* **259**:2007–2008, 1988.

Drs. Nicoll and Russell respond

Dr. Asai has misinterpreted or misunderstood the point in our essay about the perception of pain. We neither stated nor intended to imply that there is uncertainty about whether nonhuman animals feel or sense pain. On the contrary, we are certain that all vertebrates and very likely the complex invertebrates feel pain, which is a physiologically important warning signal. However, we have no way of knowing how potentially painful stimuli are *perceived* by other species. “Perception” implies an understanding of the meaning of a sensation (e.g., we sense light but we perceive a face or other meaningful structures in our visual world). Individual humans vary in their perceptions of pain, depending upon the circumstances, as we pointed out. For this and other reasons, “sentience”—the ability to feel pain—is not a logical basis for establishing a universally applicable moral code, as the ALARMists would have it.

We agree that the exclusion of animals from the moral community does *not* mean that humans have the right to inflict pain on animals for any reason. Because we are moral agents, we have a duty to protect animals as well as ourselves from unnecessary suffering, whether or not we can understand how pain is perceived by animals. Certainly animal researchers are

concerned, and rightly so, about the welfare of their animals and avoiding inflicting unnecessary pain or discomfort on them. We did not feel that it was necessary to state this point explicitly in our essay (which was not about how animal research is conducted), but perhaps we were remiss in failing to do so. We agree with Dr. Asai that it is important to stress that researchers do treat animals humanely.

We also agree that animal researchers need to become more active in educating the public about the importance of continued research with animals, the benefits that have accrued already from that enterprise, and the facts that the practice is highly regulated and is conducted as humanely as possible. We have published papers that include discussion of these topics (1, 2).

We further agree that dialogue between the supporters of animal research and the moderate animal protectionists (or welfarists) has been and continues to be productive. However, we and others have attempted to establish a dialogue with some hard-core ALARMists to no avail. They will not move from support of the slogan: “It’s not bigger or better cages that we want, but empty cages.” There are no grounds for compromise with such people, who constitute one extreme pole in the debate. The other extreme would be people who feel that they should be allowed to do anything they please with animals, without regulation or moral consideration. The biomedical research community, to which we belong, represents a moderate position in the dispute, believing that it is morally acceptable to use animals in various ways that are beneficial to humans, as long as the animals are treated humanely.

-
1. Nicoll CS, Russell SM. Mozart, Alexander the Great, and the animal rights/liberation philosophy. *FASEB J* **5**:2888–2892, 1991.
 2. Nicoll CS, Russell SM. Animal rights, animal research, and human obligations. *Mol Cell Neurosci* **3**:271–277, 1992.