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Feature

# The use of nonhuman animals in research

By Nedim C. Buyukmihci, V.M.D.

For most of my professional career, I harmed or killed nonhuman animals in biomedical research, sincerely believing that the importance of this type of work outweighed the animals' suffering.

Eventually, I realized that all arguments in favor of harming and killing nonhuman animals in research are fundamentally flawed and morally untenable. The major defense—that humans, or other animals, derive benefits from the research (i.e., the ends justify the means)—does not apply to our interaction with each other, and I see no compelling reason for applying it to our interaction with other animals.

The fundamental issue is, unquestionably, one of morality. If it is not, then we would be compelled, on a purely scientific basis, to use humans for all research aimed at understanding human diseases or basic biological processes, even if it meant harming or killing them. I am not advocating this position even though experimentation on humans is the only way to provide results that can be applied accurately to the human condition.

Granted, certain things cannot be done to humans because that would be unethical, but what makes it ethical in the case of other animals? Where is it written that nonhuman animals don't deserve serious moral concern? Harming another human being is wrong not because he or she is a human being per se but because the person is an individual who has a life that fares better or worse depending on what happens to her or him. A person's value does not depend upon her or his utility to another. The person has interests whose pursuit is important to her or him. In part, these are the bases for the rights we give each other. Likewise, nonhuman animals have lives that fare better or worse depending on what happens to them. They have interests that are important to them even though they are different from ours. Examining the issue without prejudice yields no morally relevant differences between humans and other animals that justify denying nonhuman animals similar rights based upon these interests. Essentially all characteristics said to be important and uniquely human are actually shared to some degree with many nonhuman animals and do not even exist in some humans. The phrase, "A rat is a pig is a dog is a boy," meant to emphasize the biological and moral similarities between all mammalian species, in no way demeans human beings. Those who justify experiments on nonhuman animals by arguing that rats are "models" of "boys" must, at the very least, concede the physical aspect of this analogy.

We do to other animals what we do, not out of some moral imperative or because it is right but because we have the power to dominate them. We tacitly act on the morally repugnant principle that might makes right. It isn't a question of potential benefits or possible alternatives to nonhuman animal research. It's a question of whether or not this is an appropriate way for such a highly developed and intelligent species such as ours to behave.

Take, for example, the review committees and laws ostensibly designed to "protect" research animals. If the same standards were applied to human beings, we would be outraged. What rational person would condone performing unnecessary surgery or inducing neoplasia or other diseases, regardless of how many benefits were to be derived by other members of the human species?

*When a committee reviewing nonhuman animal subjects determines that a particular project is "reasonable," the obvious question is, reasonable to whom?*

No animal, human or otherwise, would willingly submit to an experiment knowing that death was the endpoint. Informed consent, a basic ethical tenet of research involving humans, is not granted other animals even when they indicate in their own way that they are unwilling subjects (Silverman, 1978). Nor is there legal "protection" in the common sense definition of the term. The Animal Welfare Act, which primarily dictates where animals can be obtained, how they are to be cared for during shipment and housing, and what size cage can be used, has exceptions to every rule. Even these minimal regulations do not apply to the vast majority of nonhuman animals used in research. Invertebrate animals and poikilotherms such as fish, reptiles and amphibians are excluded, as are birds, horses, sheep, pigs, cattle, goats, rats and mice. Moreover, basic needs are denied animals subjected to food or water deprivation as part of an experiment or "training process" within an experiment. Ironically, even though the Animal Welfare Act fails to protect nonhuman animals in research, the biomedical community consistently and vigorously fought it and all amendments to it—including provisions for nonhuman primate well-being and exercise for dogs—spending millions of dollars in the process.

Although they sometimes admit that nonhuman animals used in research suffer, proponents attempt to



Photo by Geoffrey Fricker, MD

justify the suffering by pointing out that humans are suffering, too. They employ emotional appeals displaying sick children, implying that it is either "us or them." Why do we believe that because we suffer, others must pay a price? In that context, it appears that harming and killing nonhuman animals in the name of science is merely an expression of unconscionable selfishness on our part, something that goes against all the best qualities of human nature.

It is particularly reprehensible to subject other animals to purely human, and largely preventable, illnesses linked to tobacco or alcohol use and other drug addictions. Moreover, we cannot ignore the morally questionable action of spending millions of dollars every year doing psychological research or drug addiction studies on nonhuman animals while cutting funds for tax-supported mental health or drug addiction programs.

While a great deal of money is being spent to find cures or treatments for various ailments, comparatively little is spent to prevent them even when this is possible. The so-called war on cancer, for example, has drawn criticism for its lack of focus on prevention and poor results to date (Bailar and Smith, 1986; Cairns, 1985), as well as for the scientifically unsound use of nonhuman animals to test for carcinogens (Salsburg, 1983).

There are other questions as to the scientific validity of some experimental work such as the induction of diseases in healthy subjects. Artificially inducing a disease, particularly by overwhelming the subject's immune system, cannot mimic the situation where the disease is contracted spontaneously. It ignores the differences that allow a particular disease to be contracted by one person and not by another, which is what we should be investigating. The only scientifically credible manner of investigation would be through studying the two populations themselves. When the disease is not even a natural one for the nonhuman animal, this problem is further compounded and confounded.

Researchers who normally have high standards and insist upon solid evidence before accepting something as fact appear to lose all perspective when it comes to the issue of using nonhuman animals in research, making sweeping and unsubstantiated statements with respect to its importance. They often claim that virtually every medical discovery has depended on the use of nonhuman animals, ignoring the record of those discoveries based purely on clinical observations of human and veterinary patients, or those resulting from studies on researchers themselves (Altman, 1987).

It does not logically follow

that, because the use of nonhuman animals has been associated with our understanding of certain phenomena, this use was necessary or that it must continue; there is no proof that the advances associated with the use of nonhuman animals could not have come about without them. We simply do not know. How can anyone know that discontinuing the use of nonhuman animals in research would, as they insist, bring all scientific inquiry to a halt and end all hope of finding a cure for AIDS, cancer or heart disease?

Such a blatant attempt to arouse the public appears to be rooted more in a concern for continued financial support than in the welfare of human beings.

Incidentally, most advances, in terms of increasing the longevity and quality of our lives, have not come about directly through the use of nonhuman animals. The greatest benefits have come from adequate nourishment and proper sanitation, not from nonhuman animal research.

Those who support research using nonhuman animals often attempt to characterize the whole animal rights movement by the actions of a few terrorists, displaying the kind of logic that would brand all parents as child abusers.

Despite the fact that many highly qualified scientists and scholars oppose research on nonhuman animals, we who speak out against it often are referred to as "anti-intellectual" or "anti-science." Purposefully causing another creature to suffer and die is not an intellectual issue; it's a question of compassion.

Biological data can be sought and obtained without harming or killing nonhuman animals. For instance, the study of myopia can be done without inducing it artificially in monkeys by depriving them of vision after birth (as it is currently done). Since different species have different reactions to the same experimental condition, one cannot infer that any of them mimic the

human condition (Raviola and Wiesel). Would it not make more sense to study people with naturally occurring afflictions that fit the design of the experiment, e.g., people born with cataracts or whose eyelids were kept closed after birth (Hoyt, Stone, Fromer and Billson, 1981)?

There are also dangers to people when we rely on nonhuman animal data, especially in the area of toxicology. For example, the herbicide paraquat was believed to have low toxicity because the lethal dose for 50 percent of a test population of rats was about 120 mg/kg body weight (Van Heijst, 1991). Within 12 years of releasing this chemical, however, there were over 400 human fatalities. Based upon the tragic deaths of these people, the lethal dose in humans was estimated to be as little as 4 mg/kg.

People who argue for equal consideration of the interests of nonhuman animals are not misanthropic. We care about all animals,

including humans, and simply want the interests of all to be weighed when decisions are made that involve them. Human beings are not the only ones deserving of freedom and the pursuit of their interests. Harming or killing nonhuman animals in the name of science does not make it noble or right.

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