Ethical Aspects of Relationships Between Humans and Research Animals

Harold Herzog

Abstract

People who work in biomedical and behavioral research settings sometimes form strong relationships with individual laboratory animals. Ethnographic studies indicate that it is common for these individuals to transform some animals from "experimental subject" to "pet." Although theories of ethics that emphasize impartiality and justice have little to say about the moral implications of human-research animal bonds, caring-based ethical systems acknowledge the moral consequences and resulting psychological burdens of these relationships. Typically, albeit not always, animal care staff are more likely than researchers to experience moral ambivalence associated with human-laboratory animal bonds. These bonds can result in conflict between technicians and investigators. Ways that research institutions can help individuals cope with the ethical consequences of relationships with research animals include the following: supporting the development of human-animal relationships in laboratories, giving animal care personnel an ethical voice through involvement in the institutional animal care and use committee decision process, publicly acknowledging the emotional and moral costs of human-laboratory animal relationships, and educating animal care staff about the purpose and possible benefits of research projects.

Key Words: animals; ethics; ethics of caring; human-animal bond; research animals

It is common for individuals who work in research settings to become attached to the animals they study or for whom they care. The experience of my friend and colleague Ron Neibor illustrates the ethical consequences of these relationships. Neibor and I were students in a psychobiology graduate program. I studied animals I liked, snakes; and he studied animals he liked, cats. Neibor's doctoral research focused on the mammalian visual cortex. His experimental protocol called for the collection of baseline data on the performance of cats in a visual learning task followed by lesions to an area of the occipital lobe. It was then necessary to reassess the animals' learning capacities after recovery from surgery. The experiments took nearly a year to complete, and Neibor became very attached to his cats. A "cat person" by temperament, he had arrived at the university with a couple of pet cats in tow. Not surprisingly, his natural affection for them extended to his research subjects. He gave them names and played with them. Nearly every day, he would take them individually from their cages and let them roam around the animal colony.

The moral crunch came at the end of the study. Every brain is a little different. In lesion studies, researchers must confirm that the part of the brain they intended to damage really was destroyed. The technical terms—perfusion, microtome, histology—are dry, and they obscure the reality of the procedure: It is necessary to kill each animal, sever the head from the body, and extract the brain from the skull; then to harden the neural tissue chemically, slice it, and carefully examine it. Perfusion, although not for the squeamish, is common and painless and normally entails no greater moral problem, and perhaps less, than the slaughter of a cow or pig. However, to hold in your hand the disconnected head of a cat you have petted every morning for a year is, to say the least, unsettling. The other graduate students in Neibor's laboratory knew how he felt about his cats, and two of them offered to do the "dirty work"; however, Neibor refused. The dozen or so perfusions took place over several weeks, during which time, he became reclusive and depressed and shaky. It was clear that his need to confront the moral consequences of his studies involved considerable personal costs.

Neibor's case is not atypical. Indeed, Darwin discussed the moral stress that can result from the relationship between scientist and subject in the first edition of *The Descent of Man and Selection in Relation to Sex:* "Every one has heard of the dog suffering under vivisection, who licked the hand of the operator: This man, unless he had a heart of stone, must have felt remorse to the last hour of his life" (Darwin 1871, p. 40). (It is noteworthy that in his second edition (1874), he added the caveat, " . . . unless the operation was fully justified by an increase of our knowledge" [p. 70].)

In this article, I examine some ethical questions posed by human-research animal relationships. What do conventional theories of ethics have to say about the moral implications of human-research animal bonds? Are our moral obligations toward an animal changed by the relationship we have with it? How can research institutions help animal caretakers and scientists deal with the ethical and psychological stresses of their jobs?

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I will make several assumptions. First, researchers and animal care personnel frequently become attached to their nonhuman subjects. The most extensive study of these relationships was conducted by the sociologist Arnold Arluke, who investigated the culture of animal care in several dozen biomedical research facilities (Arluke 1988, 1990). He found that it was common for an animal to be singled out by laboratory personnel and adopted as a sort of laboratory pet. The animal would be set aside and not used in experiments or scheduled for euthanasia. In some cases, the elevation in status from research animal to pet would be complete, and a staff member would take the animal home. In a series of recent conversations I had with a group of laboratory technicians, all of the experienced technicians as well as the head veterinarian had adopted animals that had been intended for research. Although some individuals had taken home dogs or cats, others had adopted more unusual animals—rats, snakes, rabbits, hamsters, and, in one case, a horse.

Second, the more closely individuals work with animals, the more likely they are to form bonds with them. Thus, it is more likely that animal care staff will become attached to laboratory animals than, for example, senior scientists, who may rarely enter their institution's animal facility. As a result, the moral consequences of attachment typically fall most heavily on animal care personnel.

Third, when it comes to ethics and animals, it is difficult to disentangle philosophy from psychology. In this context, it is useful to distinguish between normative and descriptive ethics (Tannenbaum 1995). Normative ethics is the branch of philosophy that informs us of what we should do based on the rigorous application of logic to sets of fundamental principles. Although normative ethics help frame moral issues in a rational and intelligent fashion, it is largely the province of philosophers trained in scholarly inquiry and formal logic. In contrast, descriptive ethics involve the study of what people actually perceive to be right or wrong. Reason is a component of our personal ethical sensitivities, but so are nonlogical factors such as emotion, language, cultural values, and moral intuition.

Ethics, Reason, and Caring

How do philosophers taking a traditional normative ethics perspective approach the human-research animal bond? Generally, philosophers like theories that are consistent, coherent, and logically derived. Ethicists believe that moral principles should be impartial and not based on personal preference, sentiment, prejudice, or self-interest (DeGrazia 1996). Furthermore, the moral status of an individual should rest on *morally relevant* factors, rather than arbitrary or morally irrelevant criteria. Philosophers argue among themselves as to which factors should be considered morally relevant (e.g., the capacity to suffer as opposed to the ability to reason). However, by and large, they concur that characteristics such as gender, human skin color, or how cute an animal is should not count.

Two schools of thought have dominated contemporary philosophical discussion over the moral status of an animal. Both schools have taken the "pure reason" approach to ethics (see Russow 1999 for an excellent review of these and other approaches to the debate over the moral status of nonhuman animals). Peter Singer, author of the enormously influential book *Animal Liberation,* bases his view of animal protection on utilitaritanism, a view that emphasizes the consequences of moral action. Singer argues that nonhuman animals should not be eaten, kept in zoos, or, under most conditions, used in research. His argument for animal protection is based on his belief that animals are capable of experiencing pain and pleasure (sentience) and thus have an equal interest in their own lives. His logic is rigorous; his advocacy of animals is not based on the fact that puppies have big eyes and dolphins have endearing smiles. Indeed, in the preface to his book, Singer (1990) expresses irritation with those who mistake him for an "animal lover." Rather, his call for a radical reassessment of how we should think about other species is based wholly on his interpretation of logical consequences of fundamental utilitarian principles.

In contrast, Tom Regan (1988), author of *The Case for Animal Rights,* takes a deontological approach to the welfare of animals. Deontologists base their ethics on conformity to rationally derived rules rather than on the consequences of an action. Regan believes that nonhuman animals that have certain capacities (beliefs, perceptions, memory, sense of the future, sentience, emotions, and psychological identity) are the "subjects of a life." These creatures (which according to Regan include at least all mammals more than 1 yr old) have inherent value in equal measure, which gives them certain rights including the right not to be harmed. Although Singer and Regan disagree over the philosophical basis of animal protection, the arguments of both philosophers are rooted in logic rather than sentiment. Nowhere do they argue or imply that we should treat some animals differently simply because we have special relationships with them.

In short, traditional ethical perspectives on the treatment of animals shed little light on the moral consequences of personal human-animal bonds, including those in laboratories. Keith Burgess-Jackson (1998) believes that this neglect stems from the fact that both Singer and Regan are "impartialists" who fear that acknowledging special duties to personal companion animals undercuts their position that all sentient species should be admitted to the circle of moral concern. The impartialist view is perhaps best reflected in the comments of the philosopher Hugh Lehman, who wrote in the concluding chapter of an edited volume on scientist-research animal interactions, "In general, it appears that bonding is a relatively minor factor to be taken into account in determining our moral obligations to animals" (Lehman 1992, p. 395).

Not everyone agrees. Burgess-Jackson (1998) and Rollin (1992) also accept the notion that some species possess intrinsic properties, which gives them moral standing.

However, they also make a convincing argument that we have additional obligations to some animals based on the fact that we have personal relationships with them.

Nell Noddings (1984) takes a similar tact. She believes that fairness and impartiality should not be the critical components of ethical decision making. Rather, she holds that morality ultimately stems from the emotion of caring. In this context, Noddings shares the views of Carol Gilligan (1982), a psychologist who is more interested in the moral principles we carry in our heads than in the abstract principles of normative ethics. Gilligan believes that men and women approach moral problems differently. She postulates that although men think of morality primarily in terms of justice, the moral thinking of women is couched in terms of caring. Gilligan's thesis has received the considerable attention of both scholars and the public. However, recent studies of sex differences have cast doubt on her thesis, and it appears that both sexes can and do incorporate both caring and justice orientations when making ethical judgments (Turiel 1998). Galvin and Herzog (1992), for example, found no sex differences in the factors that college students used when evaluating a series of hypothetical animal research protocols.

Noddings (1984) incorporates the caring model into a general ethical theory and asserts that moral sensitivities are rooted in interpersonal relationships. Because Noddings is concerned with the ethical responsibilities incumbent on caregivers, her ideas are particularly relevant to the ethical implications of human-animal bonds. Noddings believes that we do have moral obligations toward some animals—the ones with whom we have personal relationships. Thus, her cat Puffy has moral standing *because* she and Noddings have a relationship. Puffy's elevated moral status, according to Noddings, does not extend to her neighbor's cat. Predictably, Noddings does not think she has a general moral duty directed toward other species; for example, she feels absolutely no obligation to rats. She writes, "I have not established, nor am I likely to ever establish, a relation with a rat . . . . I am not prepared to care for it. I feel no relation to it. I would not torture it, and I hesitate to use poisons on it for that reason, but I would shoot it cleanly if the opportunity arose" (p. 156).

An obvious problem with this view is that it is open to the bugaboo of most ethicists—inconsistency. An ethical system in which a creature is afforded enhanced moral status simply because someone happens to form a bond with it violates the principle of impartiality. It is true that Noddings' ethical theory has shortcomings in the realm of consistency. It seems to me, however, that her relationship-based model provides more insight into the complex moral world of laboratory animal workers than the "pure reason" models of the deontologists and utilitarians.

Consider the case of Helen, a supervisor in the animal facility at a large veterinary school. As is common in veterinary training facilities, students practice surgical techniques on healthy dogs. In the past, animals were the subjects of repeated student surgeries (current practice in most schools is to euthanize a laboratory animal after a single operation). The veterinary school where Helen works houses several dozen dogs at a time for the practice surgeries. The dogs are sometimes kept in the facility for several months, ample time for the technicians to form relationships with them. It is her job to select the animals for terminal surgery. She finds this task wrenching. It is particularly difficult because the dogs enjoy social contacts with the technicians. When Helen walks by their cages making her gruesome choice, they seem to think she is going to take them for a walk; they bark and wag their tails as if to say to her, "take me, take me."

On what grounds should Helen select the dogs to be killed on a particular morning? It is difficult to derive philosophically coherent criteria that she should use in picking one dog over another. Drawing them by random number would seem the fairest method. Factors such as whether a dog barks a lot or is sloppy with its food or is cute do not seem to fit the criteria of morally relevant. However, in reality, these factors are exactly what Helen takes into account. After consulting with the other technicians, she makes her pick. The nuisance animals go first, and the dogs with whom the caregivers have bonded go last.

Moral Conflicts in Laboratories

More often than not, moral dilemmas are the result of good people trying to do the right thing when the right thing is unclear. Small animal veterinarians are examples. Many of their professional ethical issues stem from the fact that what is in the best interest of the client (the owner) may not be what is best for the patient (the animal) (Tannenbaum 1995). Animal care technicians are caught in a similar dilemma. On the one hand, the technician's allegiance lies with the people for whom he or she works—the senior scientists, postdoctoral fellows, and graduate students who need the animals for their research. On the other hand, the technician's mandate is also to care for the animals, to ensure their health and, increasingly, their psychological well-being. Technicians know what their job is, and they know who pays their salary. They understand that the vast majority of laboratory animals will be euthanized after the experiments end and the data are compiled.

The ethical calculus, however, changes when a bond develops between the technician and the animal. When we take on a pet, it becomes a de facto family member (Serpell 1996). Even philosophers who believe that ethical principles should be applied impartially acknowledge the moral significance of family (e.g., Singer 1981). No one would seriously doubt that I have a different sort of obligation to my own children than I do to my neighbor's kids. This difference also applies to the preferential manner in which I treat my dog over my neighbor's dog. As Petrinovich (1999) wrote, "When animals are accepted as pets, a special set of contractual responsibilities is assumed toward them by their

owners or companions, and that accords them special moral status" (p. 180).

Philosophers such as Noddings (1984), DeGrazia (1996), Burgess-Jackson (1998), and Varner (2002) agree that when one takes on a pet, one incurs a set of special ethical duties. However, these obligations are not always clear in the case of human-research animal relationships. For example, DeGrazia contends that there is a moral imperative for pet owners to ensure that their nonhuman companions have a lifestyle that is as comparably good as the animal would experience if it were not a pet. This principle makes sense when talking about the suburban owner of a Labrador retriever, but it is problematic when applied to an animal care technician who becomes attached to a chimpanzee in a primate laboratory.

The ethical consequences of the implicit contract between caregiver and pet can fall heavily on laboratory personnel. One laboratory animal veterinarian recently told me about an incident that illustrates the nagging moral doubts that Arluke (1990) referred to as "microethics." The problem arose when she, in her words, "fell instantly in love" with a beagle puppy that was scheduled to be part of a terminal experiment. As a result of her attachment to this dog, she asked one of the technicians to make a swap, and the technician euthanized another dog in its place. From a purely philosophical perspective, this exchange is problematic; the fact that a person with authority finds a dog adorable does not seem to be a morally relevant reason for allowing it to live while another dies. Indeed, the veterinarian herself subsequently had serious misgivings about the ethics of her behavior and felt considerable guilt about giving the second dog what amounted to a death sentence.

Conflicts Between Animal Care Staff and Scientists

As illustrated by Neibor and his cats, scientists as well as technicians can form intense bonds with the animals with whom they work. (One prominent researcher recently told me that he felt depressed for months after the death of a snake that had lived in his laboratory for more than 15 yr.) It is probably safe to say, however, that the development of strong bonds between research animals and senior scientists are the exception rather than rule. Indeed, the different levels of involvement that animal care staff and researchers have in the lives of laboratory animals can pit technicians against researchers. I have spoken with some animal care staff who have complained about investigators who rarely set foot in their institution's animal colony and who appear to regard research animals as organ repositories. In addition, some researchers show little understanding of the ethical problems faced by technicians. One technician, for example, became visibly angry when he told me of an incident in which a researcher "invited" him to participate in a terminal surgery on a dog with whom the technician had formed a bond. The researcher apparently thought that the technician would be interested in the procedure. In reality, the technician was deeply offended at the apparent insensitivity of the scientist.

Some researchers, however, show great sensitivity for the moral dilemmas of animal care personnel. Two technicians told me of a situation in which a large group of 8-wk-old kittens and puppies was brought into their facility. The animals were cute and playful, and the two technicians quickly formed bonds with them. After several months in the laboratory, the technicians were told by the principal investigator to euthanize all of them—75 puppies and 45 kittens, all healthy. The technicians refused and told the investigator, "there is no way in hell we were going to kill these animals." To his credit, the principal investigator understood the moral consequences of their feelings for the dogs and cats; over several weekends, he went to the facility and personally euthanized every animal. This type of ethical concern is not common.

Recommendations

Change does not come about easily in laboratory settings; the stakeholders may have different perspectives and the issues are complex (Arluke 1991). Nevertheless, there are steps that institutions can take to help individuals deal with ethical concerns stemming from their relationships with laboratory animals. Some suggestions are listed below.

1. Researchers and laboratory managers should support the formation of bonds between animal care staff and research animals. This attitude was reflected in the words of a head laboratory veterinarian who told me, "I ask the techs to treat all the animals as if they were their own." Similarly, Wolfe (1985) wrote, "A thoughtful tech will have the same caring attitude toward laboratory animals as he or she has toward a pet at home." In many cases, animals benefit from the bonds laboratory personnel form with them. Many (but not all) species enjoy social interactions with their caretakers; even rats will work for a chance for contact with humans (Davis and Perusse 1988).

   More importantly, there is every reason to believe that individuals who care about their wards on a personal level actually treat the animals better. Arluke studied the institutional animal care culture of two primate laboratories. In one, institutional administrators expected the technicians to treat the animals merely as objects; in the other, administrators encouraged the animal care staff to develop strong relationships with the animals. He found that both the physical health and psychological well-being of the apes and monkeys were far superior in the latter facility (Arluke and Sanders 1996).
2. Animal care personnel should have an ethical voice. This provision can be accomplished by allotting a position on the institution's institutional animal care and

use committee (IACUC[1]) to an animal care technician. Federal regulations mandate that IACUCs include a veterinarian, a scientist, a nonscientist, and a member not affiliated with the institution. However, there is no stipulation that they include an animal care technician. Although some IACUCs do include an animal care technician, this practice does not appear to be common; a recent survey revealed that only 27% of the 476 responding IACUCs included a technician (SCAW 1997).

This policy has two obvious advantages. First, because they work closely with the research animals, technicians have particularly good insights into some aspects of experiments relevant to the evaluation of protocols. Second, representation on the IACUC gives animal care staff the message that the institution as a whole takes their ethical concerns seriously.

3. Institutions should acknowledge the delicate ethical and psychological stresses that researchers and technicians can experience when they form bonds with laboratory animals. Administrators can convey their acknowledgment in a number of ways. Several writers have advocated the formation of professionally led discussion groups to help laboratory personnel deal with feelings stemming from their relationships with research animals (Arluke 1990; Wolfle 1985). The Animal Care Facility of the University of California at San Francisco formed a task force on euthanasia whose members recommended that staff members not be made to euthanize animals to whom they have become bonded (Carmack and Becker 1988).

   Some institutions conduct annual memorial services for the laboratory animals that were killed during the previous year. These ceremonies both publicly acknowledge human debt to the laboratory animals whose lives are lost each year and legitimize the feelings of grief and sadness animal care staff feel (Iliff 2002; Taylor and Davis 1993).

4. Institutions should afford technicians the opportunity to see the "Big Picture." Animal care staff who understand the ultimate purpose of their work will be better prepared to deal with the ethical conflicts associated with their profession. Although one hopes that the rationale behind experiments is clear to the researchers, the animal care technicians may not have that information. Several technicians have told me that having a broader perspective on the research for which their animals are used would help them cope with the moral stresses they confront. One individual, for example, spoke in glowing terms of a study in which "her dogs" were involved, which resulted in the development of a new treatment for cardiovascular disease in both humans and dogs. Although she was saddened by the deaths of the animals, knowing that the experiments had saved lives helped ameliorate her sense of guilt.

This goal can be accomplished in several ways. The easiest and most effective way would be for researchers to sit down occasionally with animal care staff to explain the potential benefits of their experiments and how the experiments fit into the overall research program of the investigator. In addition, periodic conversations between researchers and animal care staff would go a long way toward bridging the gulf that many technicians perceive between themselves and the scientists for whom they work. Simply posting reprints of recent publications on laboratory or animal facility bulletin boards can help technicians put experiments into perspective.

Summary

Inevitably, individuals who work with animals in the context of biomedical and behavioral research will sometimes form bonds with the animals with whom they interact. When an animal is transformed from "object" to "pet," its moral status is changed. Although human-research animal relationships may enhance the well-being of laboratory animals, they involve a moral cost to the human caretakers. Institutions should acknowledge the existence of these bonds and provide support mechanisms to help laboratory personnel deal with the moral challenges of their profession.

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[1]Abbreviation used in this article: IACUC, institutional animal care and use committee.

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