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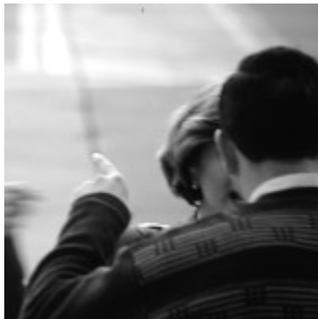
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Courting Controversy: Animal Rights (and Wrongs)

Sarah Webb
United States
11 July 2008

P. Michael Conn, associate director of the Oregon National Primate Research Center (ONPRC) at Oregon Health and Science University and co-author of *The Animal Research War*, knows what it's like to be the object of other people's ire. In 2001, when he was a candidate in a search for vice president for research at the University of South Florida, Tampa, animal-rights activists were present wherever he went during a campus visit. "I received threatening calls at the hotel and knocks on the door in the middle of the night," he said later. Handbills with information he calls misleading were posted all over campus. An armed police officer was assigned to protect him, and he received a police escort to the airport for his return flight. Activists surrounded and threatened him in the airport terminal. At the gate, an agent called airport police so that he could board his flight early, for safety. A few days later, protesters shouted at him from the street near his home and he found his garbage ransacked.

Conn is affiliated with a research institution that houses 3500 primates, but these days he rarely uses animals. He says he

and his co-author, James V. Parker, a former public information officer at ONPRC, wrote their book as a response to misinformation, presenting animal research from the perspective of scientists in the laboratory. In the book, they express concern that some institutions aren't doing enough to support responsible research and protect researchers from harassment and illegal attacks.

When it comes to working with animals, Conn's conscience is clear. As long as the regulatory guidelines for responsible research are followed, he believes, the use of animals in research is justified. Some scientists are more ambivalent.

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REGULATING LAB-ANIMAL WELFARE

The legislation governing the treatment of lab animals, which includes the U.S. Public Health Service Act and the Animal Welfare Act, requires researchers receiving federal funding to submit their protocols to an institutional animal care and use committee (IACUC) for review. This committee of at least three members--including an unaffiliated layperson and a veterinarian--weigh the ethical considerations of research projects involving animals. IACUC approves the experiment, asks for revisions, or rejects the proposal.

The review policies' core tenets are the 3 R's: replacement, reduction, and refinement. The use of animals should be avoided wherever possible and the numbers of animals used should be kept to a minimum, as should the amount of pain and distress the animals experience. Facilities using warm-blooded animals other than mice, rats, and birds are inspected at least yearly by the U.S. Department of Agriculture. Institutions receiving federal funds for the use of animals, including rodents and birds, are inspected by Public Health Service officials. Many institutions seek further oversight through organizations such as the Association for Assessment and Accreditation of Laboratory Animal Care.

Despite the safeguards, animals still experience discomfort and pain, and many die. "I would call it morally ambiguous," says "Joseph Johnson"--not his real name--a former neuroscience researcher who spoke on the condition of anonymity. His Ph.D. research with monkeys looked at the correlation of eye movements with neuronal firing. Johnson trained his monkeys to perform certain tasks, then opened up their skulls to examine neuronal activity. Some of the work involved euthanizing animals to examine their brain tissue after the experiments.

Because training an animal for these experiments can take 2 years, Johnson was involved in the animals' care and maintenance for a long time. Although it's clear that they aren't pets, he says, he formed attachments. Furthermore, "you have this relationship forming which is an unequal relationship in which you bear a great amount of responsibility."

There is compelling justification for using animals in laboratory research: Science using animals cures diseases and mitigates the suffering of human beings, among other animals.

New techniques are coming online all the time that allow scientists to accomplish without animals things that would have required animals a few years ago. Yet in many crucial areas, there's still no substitute for animal models. Toxicology research, as well as research into diseases such as AIDS and cancer, is dependent on animal studies.

Johnson feels that IACUC and other regulatory structures work, helping researchers navigate the ethics of animal research. With Conn, he believes that much animal research--including his past work--is for the greater good. Yet, he insists, there still is ambiguity. Researchers who stay in the field "make their peace with it," he says. "A lot of people who are deeply motivated by the work and the questions being posed and the possibilities can make that work."

Johnson never made his peace with animal research. He left science after finishing his Ph.D. He had other reasons for leaving, but his work with animals was one. "I didn't want to be pushed right up against that question," he says.

At the University of Guelph in Canada, Georgia Mason looks for objective ways to assess animal welfare. She has examined whether different cage-cleaning procedures affect mouse and rat stress levels. She also studies the reduction in abnormal behavior in mice in enriched laboratory environments. But even as she works on a project aimed at improving animal welfare, she is conflicted: She's keeping some animals in conditions that she suspects are not good in order to quantify their effects relative to other conditions. "I find that a bit difficult," she says.

Special feature this week: Courting Controversy

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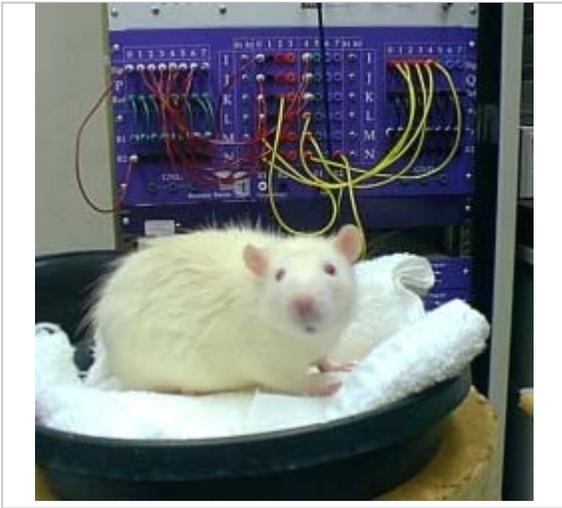
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Mason, who serves on a National Academy of Sciences panel working on guidelines for assessment and alleviation of animal pain, doesn't support all animal research. "I feel that where research on animals is the only way of addressing questions that we all agree are important, yes, do it," she says. But not all science is good or worthwhile, she insists. "Only good research done in a humane way is supportable."

OFFENSE AND DEFENSE



Researchers and research organizations are concerned by increasing reports of harassment, threats, and other illegal activity. According to the Foundation for Biomedical Research, an organization in Washington, D.C., that promotes public understanding and support for research using animals, 454 illegal animal-rights-related incidents were reported worldwide from 2003 to 2007, compared with 138 from 1998 to 2002. (These numbers include activity against the fur and farming industries, not just against researchers.) Activities against researchers included vandalism of homes and property, threatening calls and e-mails, threats against family members, noisy protests outside

homes, and firebombs.

Although any increase is reason for concern, illegal activity is still rare. At the University of California, Los Angeles (UCLA), where researchers have been targets of attacks in recent years, approximately 2000 university personnel are authorized to work with laboratory animals, including 450 principal investigators. About 10 people--all principal investigators or administrators who have defended their work--have been targeted by animal extremists, according to a statement by Roberto Peccei, UCLA's vice chancellor for research. UCLA neurobiologist Dario Ringach chose to discontinue animal experiments in 2006 out of concern for his family. UCLA has taken steps to protect researchers who have been attacked, a university official says, including hiring private security guards, and officials say that the effect on the university's research activities has been very small.

The Animal Enterprise Terrorism Act, which became federal law in 2006, strengthens penalties for illegal activity against animal enterprises, including research. The University of California system is also sponsoring state legislation that would strengthen law enforcement's ability to investigate and prosecute these activities on the state level. "We are not trying to inhibit free speech," says neuroscientist Jeffrey Kordower of Rush University in Chicago, Illinois, chair of the Society for Neuroscience's Committee on Animals in Research. "It is this terrorist activity that we're fighting against."

A BALANCING ACT

As a way to address the conflict she perceives between the benefits of research and her concern over the sacrifices of laboratory animals, Amber Alliger, a graduate student at Hunter College in New York City, has worked to adopt out her rats as pets after she finishes her experiments. But few researchers, seemingly, manage to inhabit this middle ground over the long term. Animal-rights activity, Johnson says, is one of the reasons many researchers see the issue in such black-and-white terms: "There's something in that antagonism which is polarizing, unfortunately."

Ultimately, animal researchers must walk a tough line, balancing the needs of science and society, the welfare of their animal subjects, their personal ethics, and--occasionally--threats to their personal safety and the safety of loved ones. As Johnson notes, many careers have moral ambiguity surrounding them. "It's just easy to see this particular moral ambiguity."

Sarah Webb writes from Brooklyn, New York.	Comments, suggestions? Please send your feedback to our editor .
Photos. Top: Guido Alvarez . Middle: NSF/David S. Touretzky, Center for Neural Basis of Cognition, Carnegie Mellon University	DOI: 10.1126/science.caredit.a0800104

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