Experimenting on Vulnerable Selves
The Ethics of Animal Experimentation

(McGill University, April 2015)

Christiane Bailey
PhD Candidate
Department of philosophy
Université de Montréal
What is Animal Ethics?

Animal ethics is a discipline that studies our moral obligations towards other animals considered as sentient individuals (vulnerable selves) – and not simply as representatives of a species or in relation to their ecological functions (like environmental ethics).

Though a healthy adolescent, Marius was killed by the Copenhagen Zoo because his genetic material was already well represented in the zoo's genetic bank.
What is Animal Experimentation?

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What does « using animals » imply?

Lab research on other (sentient) animals is:

**Harmful**: Violates their bodily integrity and freedom of movement

**Deprivational**: Frustrates their normal behaviors, such as their drive to explore or needs for social interaction

**Non-therapeutic**: Not done in their interests, but to benefit others

**Non-consensual**: Conducted against their wills
The (Scientific) Case Against Animal Experimentation
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Let's take into account all new drugs passing animal testing.

92% of them later fail human trials.

The Costs and Benefits of Animal Experiments
Andrew Knight
The (Scientific) Case Against Animal Experimentation
The (Ethical) Case Against Animal Experimentation

Which criteria for equal moral consideration?
(i.e. to have basic rights not to be tortured, imprisoned and killed)
The (Ethical) Case Against Animal Experimentation

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Species-membership
Belonging to a particular biological or taxonomic group?

Research subject P-R87-2013 represents one of the 87 recently weaned rats used for schizophrenia experiments at Queen's. The rats were either put in solitary confinement for two months or given psychotic drugs to induce schizophrenia-like symptoms (emotional withdrawal, depression, cognitive impairment). They were then put on a restricted feeding schedule for 21 days to demonstrate that increased water intake is a common "schizophrenia-like behavioral effect of post-weaning social isolation."
The (Ethical) Case Against Animal Experimentation

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Having higher cognitive capacities?

Research Subject #P-R87-2013
Psychiatry (2013)

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Being an individual self with a psychological or subjective life (able to experience affective states and emotions)
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What happens to these individuals matters because it matters to them.
Common Objections to Animal Rights

A human life has more value than the life of another animal
Common Objections to Animal Rights

A human life has more value than the life of another animal

→ Judgements concerning the value of a life have nothing to do with rights:
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→ Judgements concerning the value of a life have nothing to do with rights:

“The reason that individuals have basic rights [...] is because their lives are precious to them, not to external observers.

We have a right to life because we are conscious subjects, and our lives mean everything to us, regardless of the assessment of others.

It’s not important how much I value your life. It’s important that you value your life, and that I am able to respect that.”
Recognizing Animal Minds

Many animals are *selves too.*

They are living beings endowed with *psychological lives* which have the same basic features as ours:

- they feel, **see,** **hear,** taste, **remember,** anticipate
- recognize others and **learn to fear or trust them**
- can **make friends** and develop strong **affective bounds**

They have complex **emotional,** **cognitive** and **social lives** that we are just beginning to understand through ethological and psychological studies.

A sentient animal is a « *who* », and not a « *what* » (Tom Regan)
(The 3 R) Reduction, Refinement, Replacement

Regular claims that the number of animals used in research is reduced are misleading because the Animal Welfare Act excludes the most widely used mammals, rats and mice, from his protection and do not even count them.
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Animal Experimentation Is Skyrocketing, Despite Industry Claims

For years, researchers have claimed that the use of animals in lab tests has been decreasing. The American Association for Laboratory Animal Science says on its website:

The number of animals used in research has actually decreased in the past 20-25 years. Best estimates for the reduction in the overall use of animals in research range from 20-50 percent.
(The 3 R) Reduction, Refinement, Replacement

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In Canada, we don't even have the equivalent of the Animal Welfare Act.
Animal « Care » Councils (ACC)

Myths and realities
A number of myths or misconceptions have arisen in the discussion about the involvement of animals in scientific research. It is important to know the facts.

Myth: Dogs, cats and monkeys are the most widely used animals in research.
Fact: Fish and rodents, usually mice or rats, account for more than 83% per cent of the animals used in research and are bred specifically for research purposes. Stolen pets or SPCA animals (other myths) are not used in research. Dogs and cats are purchased from reputable suppliers.
Re-minding animals
The mental and social lives of rats

- Rats have lived experiences (affective states, emotions) and perceptual awareness (they can feel, see, hear, taste, etc.)
- They can remember, learn, anticipate
- Highly social individuals with complex communication
- They communicate information and their emotional states through ultrasounds vocalization
- They show strong inhibition about hurting others
- Highly curious individuals (strong drive to explore)
Re-minding animals
The mental and social lives of rats

Rats Feel Each Other's Pain
Rodents can feel empathy
Mice can feel each other's pain, say Canadian researchers who have been injecting the rodents with acid to make them writhe while their cagemates look on.

A mouse's sensitivity to a pain test depends on its exposure to others that have been through the test. The pattern suggested that mice "might be talking to each other" about their pain in ways that changed their response to it, Mogil said.

In this study, the scientists injected acetic acid into one or both of each pair of same-sex adult mice they were studying, causing them to writhe in pain, and allowed them to observe each other.

An injected mouse writhed more if its partner was also writhing, but only if the mouse had previously shared a cage with its partner for more than 14 days.
The act of helping others out of empathy has long been associated strictly with humans and other primates, but new research shows that rats exhibit this prosocial behavior as well.

In the new study, laboratory rats repeatedly freed their cage-mates from containers, even though there was no clear reward for doing so. The rodents didn't bother opening empty containers or those holding stuffed rats.

To the researchers' surprise, when presented with both a rat-holding container and a one containing chocolate — the rats' favorite snack — the rodents not only chose to open both containers, but also to share the treats they liberated.
Human cognitive abilities enable us to suffer in ways no other animals find possible.

The Moral Relevance of Intelligence?
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Rats Capable Of Reflecting On Mental Processes

Date: March 9, 2007
Source: University of Georgia

Summary: A new study by researchers from the University of Georgia, just published in the journal Current Biology, shows that laboratory rats possess the ability to think about what they know or don't know. It's the first demonstration that any non-primate knows when it doesn't know something, and it could open the way to more in-depth studies about how animals, and humans, think.

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The Moral Relevance of Intelligence?

Can rats reminisce?
Researchers are investigating whether animals have personal memories. So far, scrub jays and rodents are showing up apes.

By Sadie F. Dingfelder
Monitor Staff
June 2007, Vol 38, No. 6

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« A test for episodic memory in rats could result in a flood of new research-research that could lead to treatments for memory loss due to aging, Alzheimer's disease or even brain damage. (....). »
Re-minding animals
The mental and social lives of rats

Jeffrey Mogil was more open to ethical issues:

“\textbf{The more we do experiments like this, the more we wonder if we should do experiments like this.}"

But if we want to study pain and pain treatments, “there is no alternative. (....). We must do animal experiments, as we will never get ethical approval to do these tests on humans.”
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But why not? If is true that most research cause only minor pain and no distress...
Myth: Research animals live in near-constant pain and suffering.
Fact: The vast majority of biomedical research does not result in significant discomfort or distress for research animals. The 2008 report of the Canadian Council on Animal Care shows that the overwhelming majority of procedures involving animals are described as experiments that cause little or no discomfort or stress or experiments that cause minor stress or pain of short duration such as an injection or minor surgery similar to pets undergoing spay or neutering.
Racial Bias in Perceptions of Others’ Pain

Sophie Trawalter, Kelly M. Hoffman, Adam Waytz

Published: November 14, 2012  •  DOI: 10.1371/journal.pone.0048546

Abstract

The present work provides evidence that people assume a priori that Blacks feel less pain than do Whites. It also demonstrates that this bias is rooted in perceptions of status and the privilege (or hardship) status confers, not race per se. Archival data from the National Football League injury reports reveal that, relative to injured White players, injured Black players are deemed more likely to play in a subsequent game, possibly because people assume they feel less pain. Experiments 1–4 show that White and Black Americans—including registered nurses and nursing students—assume that Black people feel less pain than do White people. Finally, Experiments 5 and 6 provide evidence that this bias is rooted in perceptions of status, not race per se. Taken together, these data have important implications for understanding race-related biases and healthcare disparities.

Figures

S. Trawalter et al. (2012) Racial Bias in Perceptions of Others’ Pain
Racial Bias in Pain Perception and Response: Experimental Examination of Automatic and Deliberate Processes

Vani A. Mathur*, Jennifer A. Richeson*, Judith A. Paice‡, Michael Muzyka*, Joan Y. Chiao

Abstract

Racial disparities in pain treatment pose a significant public health and scientific problem. Prior studies have demonstrated that clinicians and nonclinicians are less perceptive of, and suggest less treatment for, the pain of African Americans relative to European Americans. Here we investigate the effects of explicit/implicit patient race presentation, patient race, and perceiver race on pain perception and response. African American and European American participants rated pain perception, empathy, helping motivation, and treatment suggestion in response to vignettes about patients’ pain. Vignettes were accompanied by a rapid
Racial Bias in Pain Perception and Response: Experimental Examination of Automatic and Deliberate Processes

Vani A. Mathur*, Jennifer A. Richeson*, Judith A. Paice†, Michael Muzyka*, Joan Y. Chiao*

(implicit) or static (explicit) presentation of an African or European American patient’s face. Participants perceived and responded more to European American patients in the implicit prime condition, when the effect of patient race was below the level of conscious regulation. This effect was reversed when patient race was presented explicitly. Additionally, female participants perceived and responded more to the pain of all patients, relative to male participants, and in the implicit prime condition, African American participants were more perceptive and responsive than European Americans to the pain of all patients. Taken together, these results suggest that known disparities in pain treatment may be largely due to automatic (below the level of conscious regulation) rather than deliberate (subject to conscious regulation) biases. These biases were not associated with traditional implicit measures of racial attitudes, suggesting that biases in pain perception and response may be independent of general prejudice.

Perspective

Results suggest that racial biases in pain perception and treatment are at least partially due to automatic processes. When the relevance of patient race is made explicit, however, biases are attenuated and even reversed. We also find preliminary evidence that African Americans may be more sensitive to the pain of others than are European Americans.
The Rhetorics of Animal « Care » Councils (ACC)

Hiding Harms Under a Rhetoric of Care

Compassion
Researchers and everyone involved in research with animals – including veterinarians and animal-care technicians – are sincerely concerned about the welfare of animals that are part of the research process. But researchers are also concerned about the sick and disabled among us who are desperate for ways to deal with pain or the prognosis of fatal illness or who seek better ways to ease their suffering from a chronic medical condition.

Thousands, perhaps millions, of lives can be improved by a successful research project that leads to better care and treatment – for the grandfather taken by Alzheimer’s disease, the mother stricken with breast cancer, the child learning to live with diabetes, the whole segment of a community trying to cope with excessive levels of cholesterol or heart disease. Those are the people the researchers are trying to help.
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Animals are « part of the research » because we force them to. ACC's brochure doesn't mention they are coerced, forced and held captives, but simply that « they are part of the research. »

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Not an impartial cost/benefit analysis
Becoming an Animal Researcher

« People have to make adjustments with doing things to animals that in other contexts would be considered barbaric and cruel »

(Birke 2010, 5)
Becoming an Animal Researcher

« People have to make adjustments with doing things to animals that in other contexts would be considered barbaric and cruel »

(Birke 2010, 5)

« Science students regularly express unease and discomfort at first, even anxiety. And many quit. Those who stay are the ones who were able to get used to it. »

(Arluke 1999; Birke et al 2007)
The Language of Animal Research

- Use of the passive voice occludes human agency, therefore, responsibility (« animals were injected »)

- Animals are « models », « tools », « figthers », « saviors », and so on.

- Use of euphemisms (« put down », « euthanasia »)
About a decade ago, a laboratory technician approached Daniel Weary with concerns about the way she was asked to put down animals. As was—and is—widely practiced across North America and around the globe, the lab tech would place rodents in a chamber and pipe in carbon dioxide (CO2) at increasing concentrations until the animals passed out and then died. (…).

Although some rodents stop moving upon exposure to CO2, others seem to become stressed. They might rear up, paw the sides of the box, or emit ultrasonic vocalizations. It seemed to the tech that the animals were suffering before losing consciousness. Her worries about the animals’ welfare have led Weary down a decade-long path to explore if rats and mice do indeed suffer from CO2 exposure. His results and those of others suggest that CO2 alone may not be as humane a killer as many once thought, and that giving the animals an anesthetic in advance of CO2 might ease their distress.

“There is compelling evidence that carbon dioxide is not good for the welfare of these animals that are killed with it,” said Huw Golledge, the senior scientific program manager for both the Universities Federation for Animal Welfare and the Humane Slaughter Association in the U.K.

“I think we need to look for the perfect way to kill rodents because we haven’t found that yet,” Golledge told The Scientist.
The illusion of consent

When animal agency is suggested it is not as resisting, trying to escape, biting, scratching, but as consenting and self-sacrificing victims:

- Helpers of science
- Fighters against diseases
- Life-savers
- Warriors
- Co-workers
- Collaborators
The humble mouse has played a key role in the development of stem cell medicine.
Animals as Vulnerable Subjects of Research
Recognizing Oppression and Injustice
Animals as Vulnerable Subjects of Research
Recognizing Oppression and Injustice

Coercing vulnerable individuals because we can and benefit from it is not a morally responsible practice.

It is the very definition of injustice.

Even if it is done to benefit ourselves or other members of our biological group.
A « necessary evil »?

A white doctor in Montgomery, Alabama, in the 1840s, Dr. James Marion Sim (sometimes called the ‘father of gynecology’) experimented on black slave women.
A « necessary evil »?

What do we mean by « necessary »?

- The fact that an action X is necessary in order to achieve a goal (even a morally worthy goal) doesn't make it morally justified.

Experiments on non-consenting individuals may be a useful evil, but not a necessary evil.
« We must do anything we can to save the lives of our children. »

If this is true, then, we must accept to kill human adults and even other children.

Or, at least, we have to outlaw cars and pools (which are the major cause of children deaths).

I think we must do anything we reasonably and morally can to help save the lives of our children, but this doesn't include harming others.

Duties to help do not override duties not to harm.
The Relative Values of Lives?

« We must do anything we can to save children's lives. »

Are very tendencious and dangerous. Of course, you will save the cute little blond girl. But you can put many humans on the rat's side and still get the same response.

Just pick anyone you don't like much, or a member of a marginalized or stigmatized social group (a cognitively disabled person, a homeless guy, a prisoner or a stranger from another country...)

Who would you rather see live?

research saves.org
Opponents to harmful and invasive research on other animals are represented as...

- Ignorant
Opponents to harmful and invasive research on other animals are represented as...

- Ignorant

The debate is often presented as a fight between scientists and non-scientists.

Obviously, scientists trained into using and killing animals are less likely to oppose to a practice they have been acculturated into.

But many still do. And they are building a strong scientific case against animal experimentation.
Opponents to harmful and invasive research on other animals are represented as...

- Ignorant
- Violent

By picturing defenders of animals as violent people (even as terrorist), researchers turn the attention away from their own violence.

They present themselves as victims of irrational and dangerous animal rights activists.

Despite the fact that no researcher was ever killed by animal activists who are opposed to violence against sentient beings, including humans.
Opponents to harmful and invasive research on other animals are represented as...

- Ignorant
- Violent
- Anti-progress
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Opponents to research on other animals do not oppose progress, they believe that scientific knowledge must progress within certain ethical boundaries.

We have accepted that in the human case.

We could develop medicine much faster without our strong regulations on human trials.
Opponents to harmful and invasive research on other animals are represented as...

- Ignorant
- Violent
- Anti-progress
- Anti-science
Opponents to harmful and invasive research on other animals are represented as...

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- Violent
- Anti-progress
- Anti-science

On the contrary, opposition to animal research is based on the best available research on animal consciousness which strongly indicates that there is no metaphysical gulf between humans and other animals.
The Cambridge Declaration on Consciousness

“Convergent evidence indicates that non-human animals have the neuroanatomical, neurochemical, and neurophysiological substrates of conscious states along with the capacity to exhibit intentional behaviors. Consequently, the weight of evidence indicates that humans are not unique in possessing the neurological substrates that generate consciousness. »

The Cumulative Argument for Animal Consciousness:

- evolutionnary continuity
- analogies in behaviors
- analogies in neurological substrates

There is no scientifically respectable way to deny consciousness to, at least, mammals, birds and reptiles.
Arguments in favor of animal rights are not based on religion or bad science. But ethical justifications for animal research rely on very old theological assumptions; such as human exceptionalism and human supremacy. How can we still believe today that there is a metaphysical gulf between humans and animals and that they exist for our ends, as human supremacists believe?
Focusing exclusively on the capacity to feel pain:

→ (1) makes it harder to understand what is wrong with captivity and killing

→ (2) blinds us to the subjectivity and the agency of animals (that each lives in a meaningful world of his own)

→ (3) prevent us to see these highly social individuals as members of communities of their own.
The Ethical Way Forward

Research involving animal subjects should:

- follow the same **general guidelines** and **oversight requirements** as research involving vulnerable human subjects (children).
- be for **therapeutic purposes only** (i.e. to help the individual himself, not his to her species).
- be more **transparent**, available and understandable by the general public to make open, honest and democratic debate possible.

Developing **alternatives** should be a **priority**.

Public should be informed when **charities** are involved in financing harmful and deprivational research on other vulnerable selves.

In the meantime, we must **create sanctuaries** for animals who outlive their lab usefulness.
Developing Alternatives
Finding other ways to advance knowledge


Edited by Andrew Knight BSc., BVMS

Humane Education

Animals and Alternatives in Laboratory Classes. Aspects, Attitudes, and Implications

Helena Pedersen