Experimenting on Vulnerable Selves

The Ethics of Animal Experimentation

McGill University, Feb 7, 2017

Scott Olson/Getty

Christiane Bailey
PhD Candidate
Department of philosophy
Université de Montréal
christianebailey.com

CRE
CENTRE DE RECHERCHE EN ETHIQUE

Fonds de recherche sur la société et la culture
Québec

Social Sciences and Humanities Research Council of Canada
Conseil de recherches en sciences humaines du Canada
Canada

What is Animal Ethics ?

The study of our moral obligations towards other **animals considered as individuals** and not simply as representatives of a species or in terms of their ecological functions (like environmental ethics).

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

What is Animal Experimentation?

Advocates and opponents perceive and describe the situation very differently.

What is Animal Experimentation?

Advocates and opponents perceive and describe the situation very differently.

"The <u>use of animals</u> in biomedical sciences, basic research, products testing, genetic experiments, military experiments, education and training."

What is Animal Experimentation?

Advocates and opponents perceive and describe the situation very differently.

“The <u>use of animals</u> in biomedical sciences, basic research, products testing, genetic experiments, military experiments, education and training.”

What does « <u>using animals</u> » imply?

What is Animal Experimentation?

Advocates and opponents perceive and describe the situation very differently.

"The <u>use of animals</u> in biomedical sciences, basic research, products testing, genetic experiments, military experiments, education and training."

What does « <u>using animals</u> » imply?

Lab research on other (sentient) animals is:

What is Animal Experimentation?

Advocates and opponents perceive and describe the situation very differently.

"The <u>use of animals</u> in biomedical sciences, basic research, products testing, genetic experiments, military experiments, education and training."

What does « <u>using animals</u> » imply?

Lab research on other (sentient) animals is:

Harmful: Involves many kinds of harms (violation of bodily integrity, infliction of physical diseases (cancer, etc.) and psychological troubles (depression, etc.).

What is Animal Experimentation?

Advocates and opponents perceive and describe the situation very differently.

"The <u>use of animals</u> in biomedical sciences, basic research, products testing, genetic experiments, military experiments, education and training."

What does « <u>using animals</u> » imply?

Lab research on other (sentient) animals is:

Harmful: Involves many kinds of harms (violation of bodily integrity, infliction of physical diseases (cancer, etc.) and psychological troubles (depression, etc.).

Deprivational: Frustrates their normal behaviors (such as their drive to move freely, to explore and their needs for social interaction).

What is Animal Experimentation?

Advocates and opponents perceive and describe the situation very differently.

"The <u>use of animals</u> in biomedical sciences, basic research, products testing, genetic experiments, military experiments, education and training."

What does « <u>using animals</u> » imply?

Lab research on other (sentient) animals is:

Harmful: Involves many kinds of harms (violation of bodily integrity, infliction of physical diseases (cancer, etc.) and psychological troubles (depression, etc.).

Deprivational: Frustrates their normal behaviors (such as their drive to move freely, to explore and their needs for social interaction).

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

What is Animal Experimentation?

Advocates and opponents perceive and describe the situation very differently.

"The <u>use of animals</u> in biomedical sciences, basic research, products testing, genetic experiments, military experiments, education and training."

What does « <u>using animals</u> » imply?

Lab research on other (sentient) animals is:

Harmful: Involves many kinds of harms (violation of bodily integrity, infliction of physical diseases (cancer, etc.) and psychological troubles (depression, etc.).

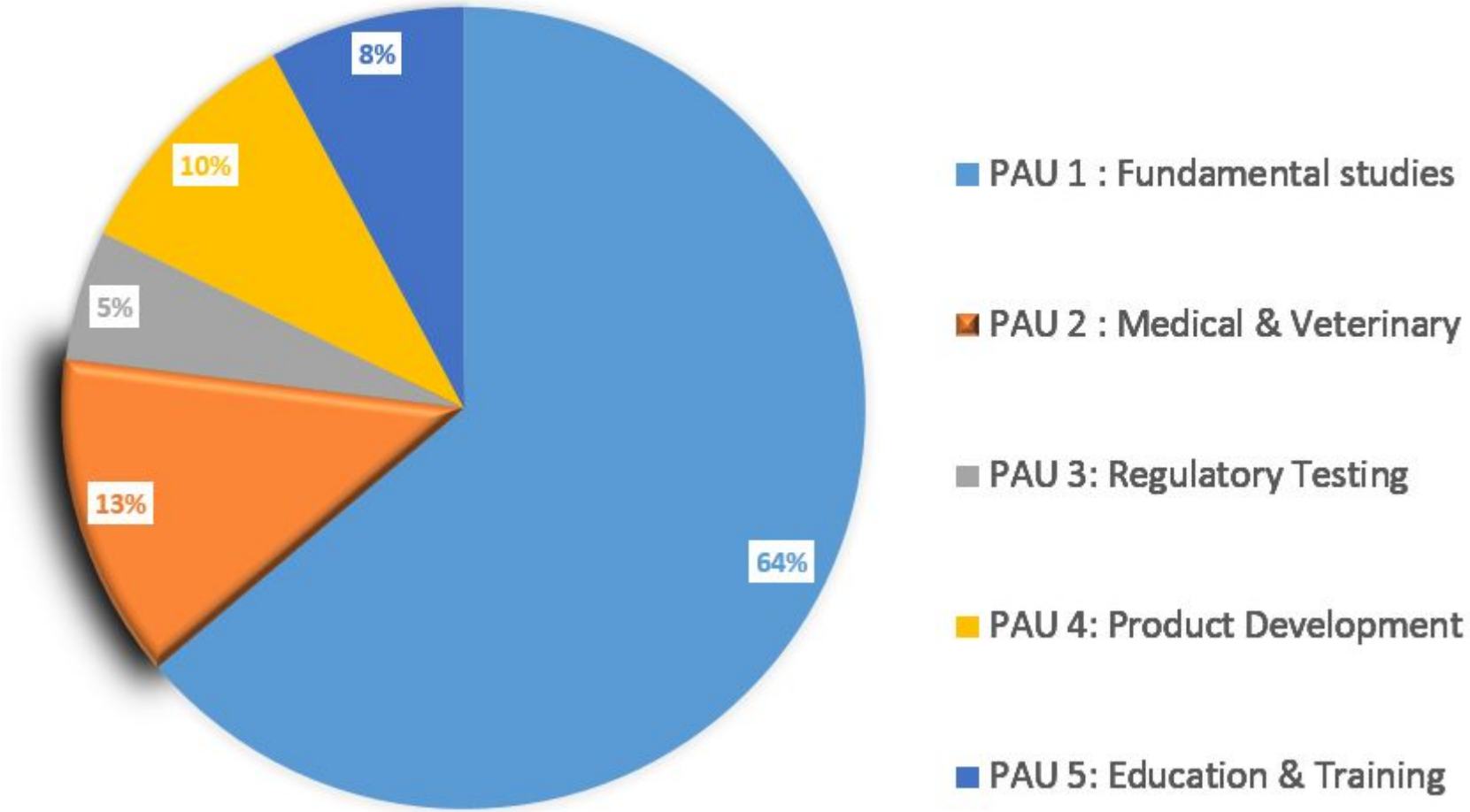
Deprivational: Frustrates their normal behaviors (such as their drive to move freely, to explore and their needs for social interaction).

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

Non-consensual: Conducted against their will.

Canadian Council on Animal Care
Conseil canadien de protection des animaux

PURPOSE OF ANIMAL "USE" (PAU) – 2014



The (Scientific) Case Against Animal Experimentation

The (Scientific) Case Against Animal Experimentation

Education And Debate

Where is the evidence that animal research benefits humans?

BJM
British Journal of Midwifery

BMJ 2004 ; 328 doi: https://doi.org/10.1136/bmj.328.7438.514 (Published 26 February 2004)

Pandora Pound, research fellow [1], Shah Ebrahim, professor [1], Peter Sandercock, professor [2], Michael B Bracken, professor [3], Ian Roberts, professor (Ian.Roberts@lshtm.ac.uk) [4]

The (Scientific) Case Against Animal Experimentation

Education And Debate

Where is the evidence that animal research benefits humans?

BJM
British Journal of Midwifery

BMJ 2004 ; 328 doi: https://doi.org/10.1136/bmj.328.7438.514 (Published 26 February 2004)

Pandora Pound, research fellow [1], Shah Ebrahim, professor [1], Peter Sandercock, professor [2], Michael B Bracken, professor [3], Ian Roberts, professor (Ian.Roberts@lshtm.ac.uk) [4]

"Clinicians and the public often consider it axiomatic that animal research has contributed to the treatment of human disease, yet little evidence is available to support this view."

The (Scientific) Case Against Animal Experimentation

Education And Debate

Where is the evidence that animal research benefits humans?

BJM
British Journal of Midwifery

BMJ 2004 ; 328 doi: https://doi.org/10.1136/bmj.328.7438.514 (Published 26 February 2004)

Pandora Pound, research fellow [1], Shah Ebrahim, professor [1], Peter Sandercock, professor [2], Michael B Bracken, professor [3], Ian Roberts, professor (Ian.Roberts@lshtm.ac.uk) [4]

"Clinicians and the public often consider it axiomatic that animal research has contributed to the treatment of human disease, yet little evidence is available to support this view."

The claim that animal research is necessary to advance medicine must be **based on evidence**. Most defense of animal research is based on **anecdotes** or **single success stories**, not on **systematic reviews**.

The (Scientific) Case Against Animal Experimentation

Education And Debate

Where is the evidence that animal research benefits humans?

BJM British Journal of Midwifery

BMJ 2004 ; 328 doi: https://doi.org/10.1136/bmj.328.7438.514 (Published 26 February 2004)

Pandora Pound, research fellow [1], Shah Ebrahim, professor [1], Peter Sandercock, professor [2], Michael B Bracken, professor [3], Ian Roberts, professor (Ian.Roberts@lshtm.ac.uk) [4]

- The few existing systematic indicate that most animal research is of poor quality and did not inform clinical research.

They call for more systematic reviews of animal research: “the contribution of animal studies to clinical medicine requires urgent formal evaluation”.

The (Scientific) Case Against Animal Experimentation

JAMA The Journal of the American Medical Associatio

Translation of Research Evidence From Animals to Humans

"Even the most promising findings from animal research often fail in human trials and are rarely adopted into clinical practice."

Hackam DG, Redelmeier DA (2006) Translation of research evidence from animals to humans. *J Am Med Assoc* (JAMA) 296: 1731–1732.

The (Scientific) Case Against Animal Experimentation

JAMA The Journal of the American Medical Associatio

Translation of Research Evidence From Animals to Humans

"**Even the most promising findings from animal research often fail in human trials and are rarely adopted into clinical practice.**"

Evaluation of animal studies with more than 500 citations published in the 7 leading scientific journals.

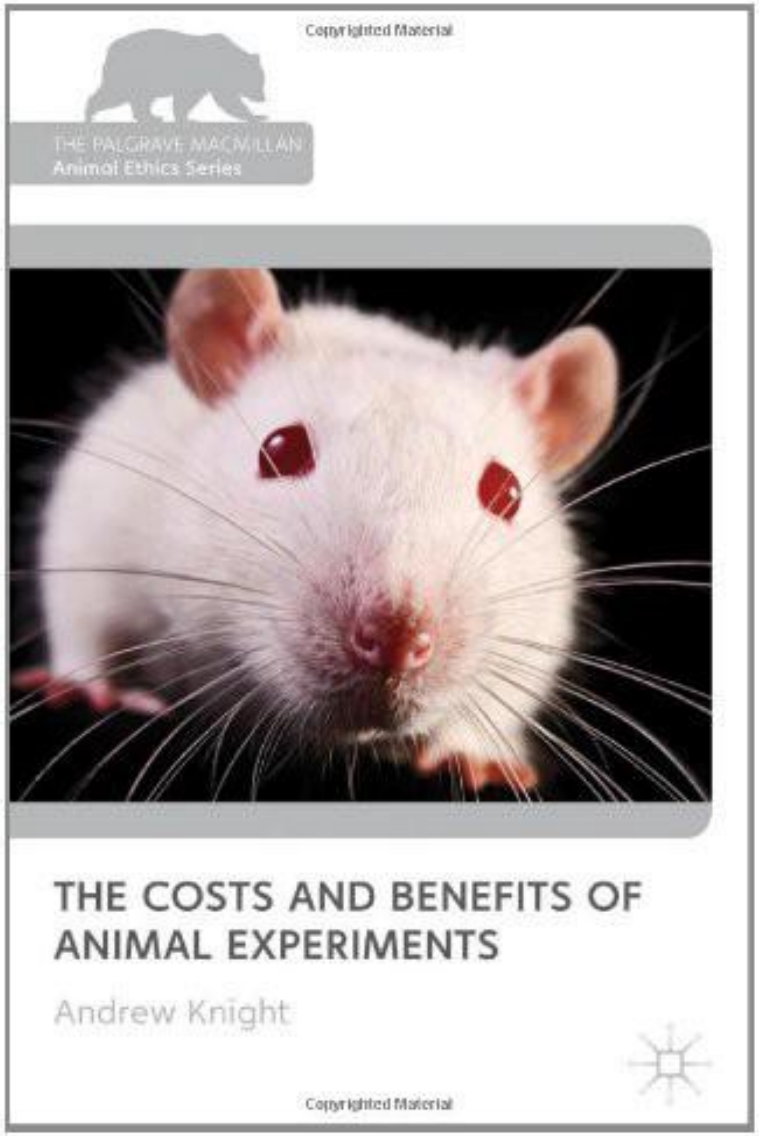
- About one-third of the studies translated at the level of human randomised trials and one-tenth of the interventions, were subsequently approved for use in patients.
- Only 48.7% (37/76) of these highly cited animal studies published in leading journals were of good methodological quality.

Hackam DG, Redelmeier DA (2006) Translation of research evidence from animals to humans. *J Am Med Assoc* (JAMA) 296: 1731–1732.

The (Scientific) Case Against Animal Experimentation

"Translation rates of most animal experiments are much lower. Most experiments are neither highly cited nor published in leading journals. Many experiments are not published at all."

Andrew Knight



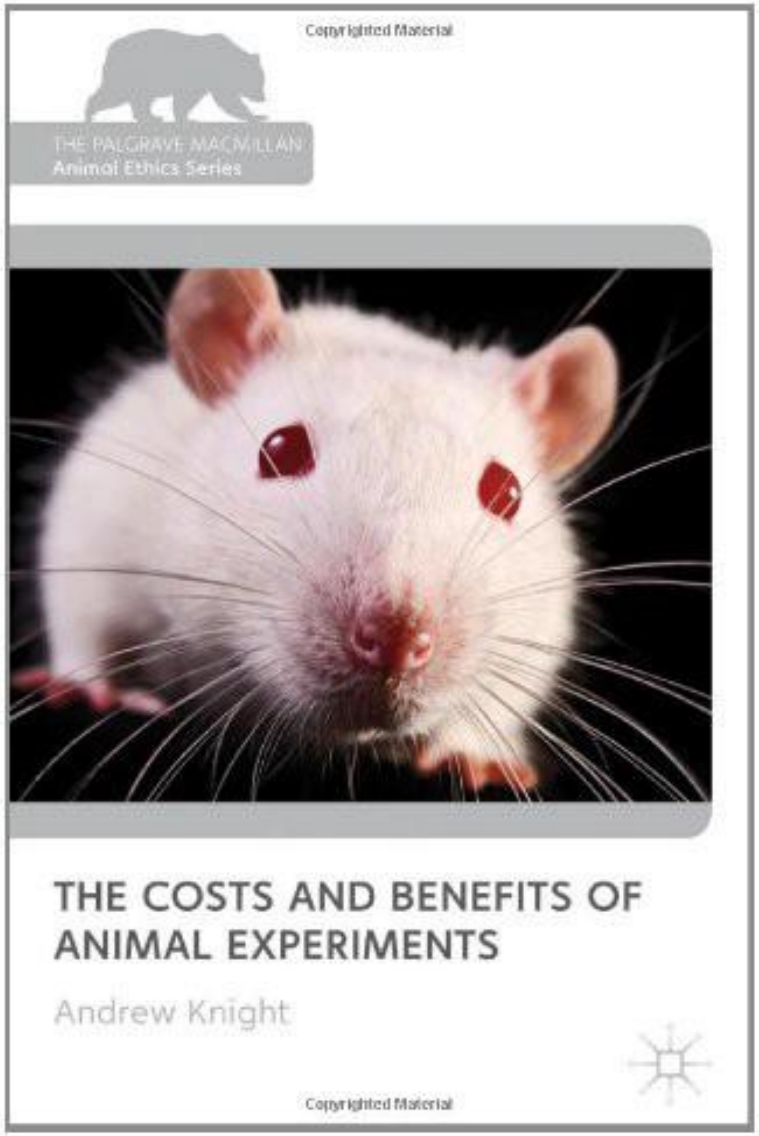
This is highly unethical given the harms done to animals. Results of all animal research (including positive and negative results) should be publicly available to avoid repetition.

The (Scientific) Case Against Animal Experimentation

The most promising and cited arnimal research has a success rate of around 10%.

"Even in these cases human benefit cannot be assumed, because adverse reactions to approved interventions are the 4th - 6th leading cause of death in US hospitals (Lazarou & Pomeranz. J Am Med Assoc, 1998)."

Andrew Knight



The (Scientific) Case Against Animal Experimentation

A 2004 study from the FDA found that 92% of drugs entering clinical trials following animal testing fail to be approved. Of those approved, **half** are withdrawn due to **severe or lethal adverse effects** not detected during animal tests.

The (Scientific) Case Against Animal Experimentation

Animal tests may also mislead researchers into ignoring potential cures and treatments (false positives). Drugs and procedures that could be effective in humans may never be developed because they fail in animal studies.

The (Scientific) Case Against Animal Experimentation

OPEN ACCESS Freely available online

PLoS MEDICINE

Research in Translation

Can Animal Models of Disease Reliably Inform Human Studies?

H. Bart van der Worp[1*], David W. Howells[2], Emily S. Sena[2,3], Michelle J. Porritt[2], Sarah Rewell[2], Victoria O'Collins[2], Malcolm R. Macleod[3]

The (Scientific) Case Against Animal Experimentation

OPEN ACCESS Freely available online PLoS MEDICINE

Research in Translation

Can Animal Models of Disease Reliably Inform Human Studies?

H. Bart van der Worp[1*], David W. Howells[2], Emily S. Sena[2,3], Michelle J. Porritt[2], Sarah Rewell[2], Victoria O'Collins[2], Malcolm R. Macleod[3]

Explaining the Failure of Animal Research

1. Failures of "animal models":

Human physiology and disease are not adequately captured by animal models.

2. Methodological flaws in animal studies:

Poor overall quality of animal research leading to **systematic bias**. Empirical studies suggest that animal research often suffers from poor study design, many studies are not randomized nor blinded.

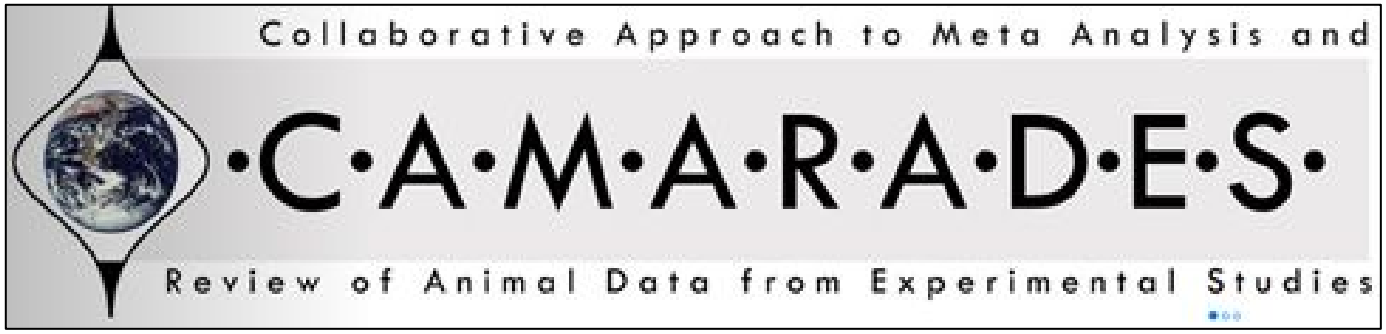
The (Scientific) Case Against Animal Experimentation

Collaborative Approach to Meta Analysis and

•C•A•M•A•R•A•D•E•S•

Review of Animal Data from Experimental Studies

The (Scientific) Case Against Animal Experimentation



"It is nearly impossible to rely on most animal data to predict whether or not an intervention will have a favourable clinical benefit-risk ratio in human subjects."

John Ioannidis, professor of health research and policy at Stanford

The (Scientific) Case Against Animal Experimentation

Analysis

Is animal research sufficiently evidence based to be a cornerstone of biomedical research?

BMJ 2014 ; 348 doi: https://doi.org/10.1136/bmj.g3387 (Published 30 May 2014)
Cite this as: *BMJ* 2014;348:g3387

"The number of systematic reviews of animal studies has increased substantially, but this has served only to highlight **the poor quality of much preclinical animal research** (lack of randomisation, blinding, and allocation concealment; selective analysis; and reporting and publication bias)."

Pandora et al. (2014)

The (Scientific) Case Against Animal Experimentation

Analysis

Is animal research sufficiently evidence based to be a cornerstone of biomedical research?

BMJ 2014 ; 348 doi: https://doi.org/10.1136/bmj.g3387 (Published 30 May 2014)
Cite this as: *BMJ* 2014;348:g3387

"**The current situation is unethical**. Poorly designed studies and lack of methodological rigour [...] needlessly expose humans to potentially harmful drugs or may result in other potentially beneficial therapies being withheld.

Moreover, if poorly conducted studies produce unreliable findings, any suffering endured by animals loses its moral justification because their use cannot possibly contribute towards clinical benefit."

Pandora et al. (2014)

The (Scientific) Case Against Animal Experimentation

Analysis

Is animal research sufficiently evidence based to be a cornerstone of biomedical research?

BMJ 2014 ; 348 doi: https://doi.org/10.1136/bmj.g3387 (Published 30 May 2014)
Cite this as: *BMJ* 2014;348:g3387

"Public acceptance of the use of animals in biomedical research is conditional on it producing benefits for humans. These benefits remain unproved."

"Proponents of animal research claim that the benefits to humans are self-evident. This claim is uncorroborated by systematic studies."

Pandora et al. (2014)

The (Ethical) Case Against Animal Experimentation

The (Ethical) Case Against Animal Experimentation

Q: Why would it be morally wrong to experiment on humans the way we do it on other animals?

The (Ethical) Case Against Animal Experimentation

Q: Why would it be morally wrong to experiment on humans the way we do it on other animals?

A: *Because it is wrong to conduct harmful experiments on individuals without their informed consent for the greater good of others.*

The (Ethical) Case Against Animal Experimentation

Q: Why would it be morally wrong to experiment on humans the way we do it on other animals?

A: *Because it is wrong to conduct harmful experiments on individuals without their informed consent for the greater good of others.*

But why would it be wrong *only* when these individuals belong to our biological or taxonomic group (our « species »)?

The (Ethical) Case Against Animal Experimentation

Which characteristic makes all human beings inappropriate subjects for invasive or deprivational research performed without their consent?

The (Ethical) Case Against Animal Experimentation

Which characteristic makes all human beings inappropriate subjects for invasive or deprivational research performed without their consent?

Is is because humans
are **rational beings** ?

The (Ethical) Case Against Animal Experimentation

Which characteristic makes all human beings inappropriate subjects for invasive or deprivational research performed without their consent?

Is is because humans are **rational beings** ?

The Telegraph

Home | Video | News | World | Sport | Finance | Comment | Culture | Travel | Life | Women

USA | Asia | China | Europe | Middle East | Australasia | Africa | South America | Central Asia

Afghanistan | Pakistan | India | North Korea | South Korea | Japan | Kazakhstan

HOME » NEWS » WORLD NEWS » ASIA » NORTH KOREA

North Korea's disappeared: regime 'performs experiments on disabled people before leaving them to die'

North Korean defector says disabled disappear and mentally ill left to die under Kim Jong-un's regime, amid claims dwarfs are castrated and chemical weapons tested on children

The (Ethical) Case Against Animal Experimentation

Which characteristic makes all human beings inappropriate subjects for invasive or deprivational research performed without their consent?

Is is because humans are **rational beings** ?

The Telegraph

Home | Video | News | World | Sport | Finance | Comment | Culture | Travel | Life | Women

USA | Asia | China | Europe | Middle East | Australasia | Africa | South America | Central Asia

Afghanistan | Pakistan | India | North Korea | South Korea | Japan | Kazakhstan

HOME » NEWS » WORLD NEWS » ASIA » NORTH KOREA

North Korea's disappeared: regime 'performs experiments on disabled people before leaving them to die'

North Korean defector says disabled disappear and mentally ill left to die under Kim Jong-un's regime, amid claims dwarfs are castrated and chemical weapons tested on children

Higher cognitive capacities are morally irrelevant when it comes to basic interests like not being held captive, killed and tortured.

The (Ethical) Case Against Animal Experimentation

Which criteria for basic moral consideration?

(i.e to have basic rights not to be tortured, emprisonned and killed)

The (Ethical) Case Against Animal Experimentation

Which criteria for basic moral consideration?

(i.e to have basic rights not to be tortured, emprisonned and killed)

1. Species-membership

Belonging to a particular biological or taxonomic group?

The (Ethical) Case Against Animal Experimentation

Which criteria for basic moral consideration?

(i.e to have basic rights not to be tortured, emprisonned and killed)

1. Species-membership

Belonging to a particular biological or taxonomic group?

2. Rationality and intelligence

Having higher cognitive capacities?

The (Ethical) Case Against Animal Experimentation

Which criteria for basic moral consideration?

(i.e to have basic rights not to be tortured, emprisonned and killed)

1. Species-membership

Belonging to a particular biological or taxonomic group?

2. Rationality and intelligence

Having higher cognitive capacities?

3. Selfhood (Consciousness/Sentience)

Being an individual self with a psychological or subjective life (able to experience affective states and emotions)

The (Ethical) Case Against Animal Experimentation

Which criteria for basic moral consideration?

(i.e to have basic rights not to be tortured, emprisonned and killed)

1. Species-membership

Belonging to a particular biological or taxonomic group?

2. Rationality and intelligence

Having higher cognitive capacities?

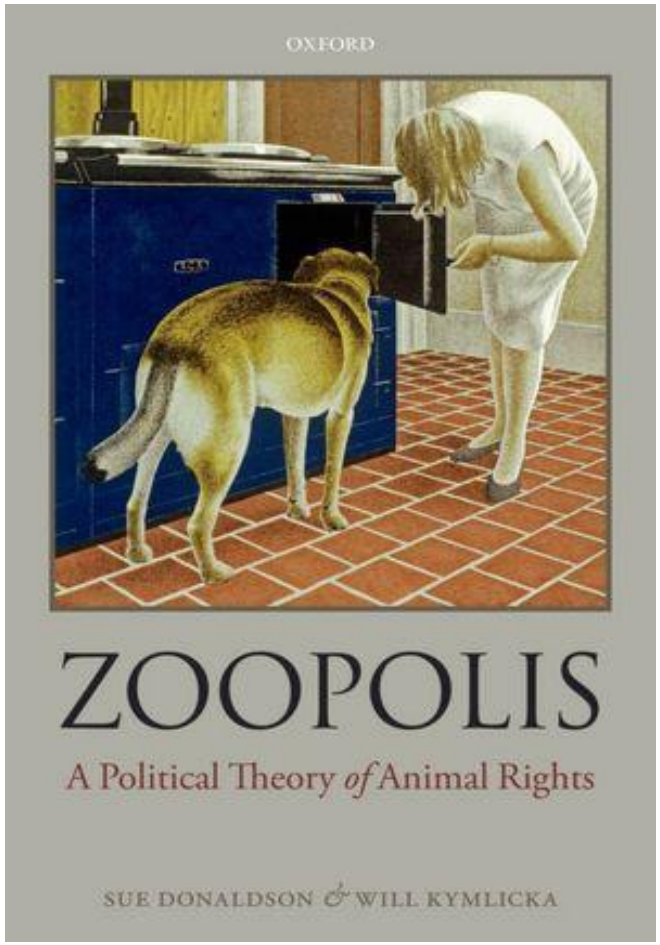
3. Selfhood (Consciousness/Sentience)

Being an individual self with a psychological or subjective life (able to experience affective states and emotions)

What happens to vulnerable selves matter because it matters *to them*.

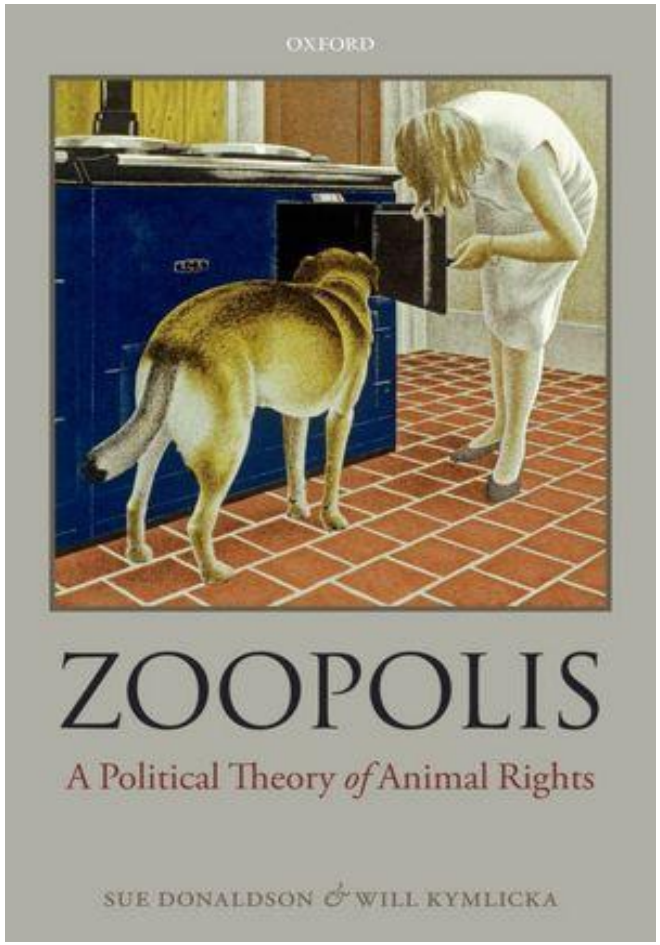
Common Objections to Animal Rights

Objection : **“A human life has more value than the life of another animal.”**



Common Objections to Animal Rights

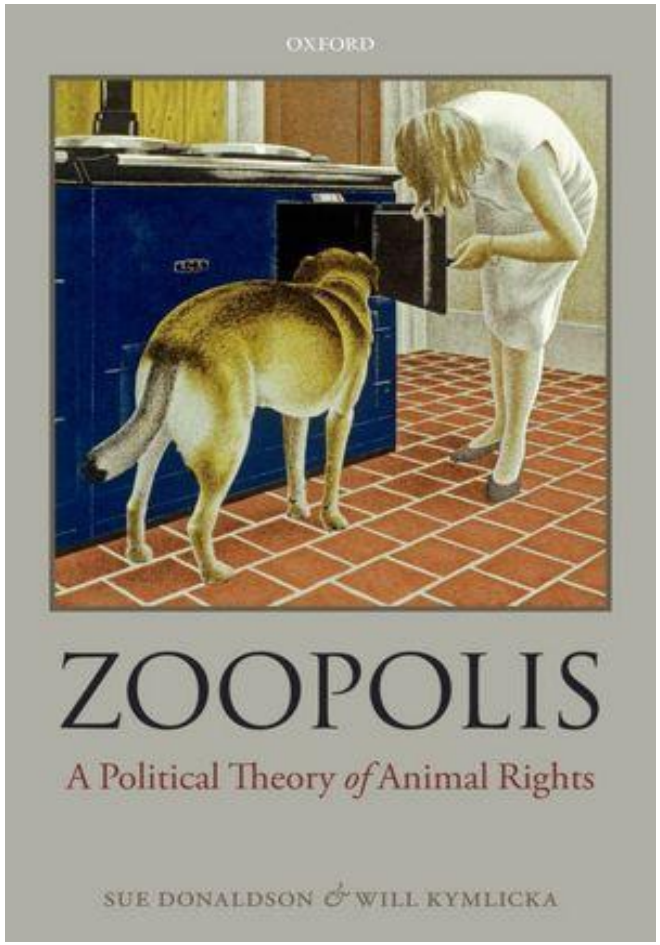
Objection : **“A human life has more value than the life of another animal.”**



→ *Judgements concerning the relative* ***value of lives*** *have nothing to do with basic rights.*

Common Objections to Animal Rights

Objection : **"A human life has more value than the life of another animal."**



→ Judgements concerning the relative ***value of lives*** *have nothing to do with basic 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."

Donaldson & Kymlicka

Recognizing Animal Minds

Many animals are **selves**, individuals with **psychological lives** of their own.

- They see, hear, taste, feel, etc.
- Remember and anticipate
- Recognize others and learn to fear or trust them
- Develop friendship and strong affective bonds.

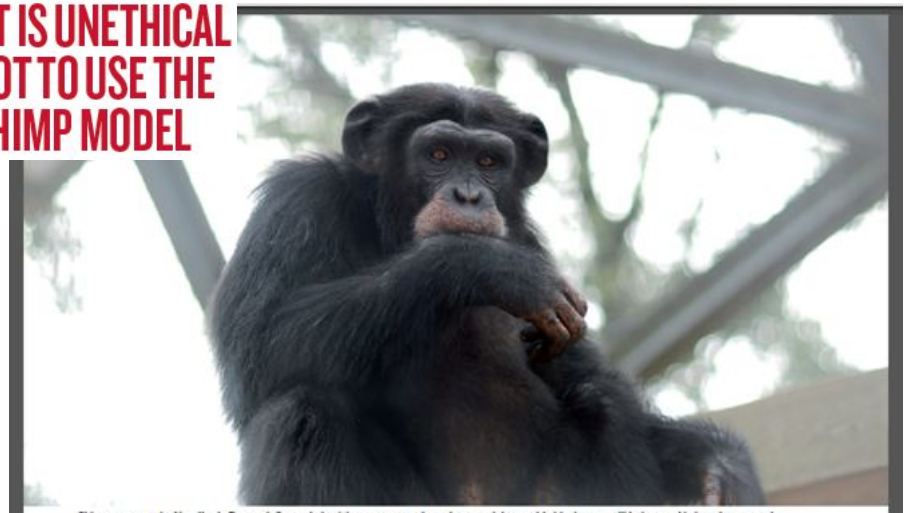
They have **emotional**, **cognitive** and **social lives**.

A sentient animal is a « who », and not a « what »
(Regan, *The Case for Animal Rights*)

Is Biomedical Research on Chimpanzee Necessary ?

Invasive research on chimpanzee is banned by most countries.

"IT IS UNETHICAL NOT TO USE THE CHIMP MODEL



Chimpanzees at the New Iberia Research Center in Louisiana are some of very few remaining worldwide that are still being used in invasive research.

CHIMPANZEE RESEARCH ON TRIAL

As pressure from activists builds, the United States is considering whether it should end invasive experiments in chimpanzees.

BY MEREDITH WADMAN

The unusual meeting was held in a conference room, but it might have been called a war room. Gathered inside a little-known research centre in southern Louisiana, the people who oversee chimpanzee research in the United States were preparing to battle for the survival of their enterprise.

Although no other country besides Gabon carries out invasive experiments with chimpanzees, the United States continues such work at three major research facilities. Louisiana's New Iberia Research Center (NIRC) is the largest, with a population of 360 chimps, used by investigators from pharmaceutical companies and federal agencies to test new drugs and study diseases such as hepatitis. During the meeting, Thomas Rowell, director of the NIRC, stood up, surveyed the audience, and launched into a presentation about possible strategies to build public support for their work.

"How do we get industry to be forthcoming about their use of chimpanzees?" a slide read.

"Could we get at least a few solid examples of how the use of chimpanzees has truncated the time to discovery?"

And "When we talk about time and lives saved by using chimpanzees, can we provide actual time span data or numbers?"

Another sli
(NIH) spends
it supports (cu
costs for the h
on chimpanz
170 million p
chimp model,
"Their lifespa
quality of life."

Rowell's pep
at the meeting
tion, the Natio
industry and,
IOM, the med
Sciences, was
government s
panzees — the
The NIH ca

"STOP USING THE EXCUSE THAT CHIMPS ARE ESSENTIAL TO THIS RESEARCH."

Is Biomedical Research on Chimpanzee Necessary ?

Invasive research on chimpanzee is banned by most countries.

"IT IS UNETHICAL NOT TO USE THE CHIMP MODEL

Chimpanzees at the New Iberia Research Center in Louisiana are some of very few remaining worldwide that are still being used in invasive research.

CHIMPANZEE RESEARCH ON TRIAL

As pressure from activists builds, the United States is considering whether it should end invasive experiments in chimpanzees.

BY MEREDITH WADMAN

The unusual meeting was held in a conference room, but it might have been called a war room. Gathered inside a little-known research centre in southern Louisiana, the people who oversee chimpanzee research in the United States were preparing to battle for the survival of their enterprise.

Although no other country besides Gabon carries out invasive experiments with chimpanzees, the United States continues such work at three major research facilities. Louisiana's New Iberia Research Center (NIRC) is the largest, with a population of 360 chimps, used by investigators from pharmaceutical companies and federal agencies to test new drugs and study diseases such as hepatitis. During the meeting, Thomas Rowell, director of the NIRC, stood up, surveyed the audience, and launched into a presentation about possible strategies to build public support for their work.

"How do we get industry to be forthcoming about their use of chimpanzees?" a slide read.

"Could we get at least a few solid examples of how the use of chimpanzees has truncated the time to discovery?"

And "When we talk about time and lives saved by using chimpanzees, can we provide actual time span data or numbers?"

"STOP USING THE EXCUSE THAT CHIMPS ARE ESSENTIAL TO THIS RESEARCH."

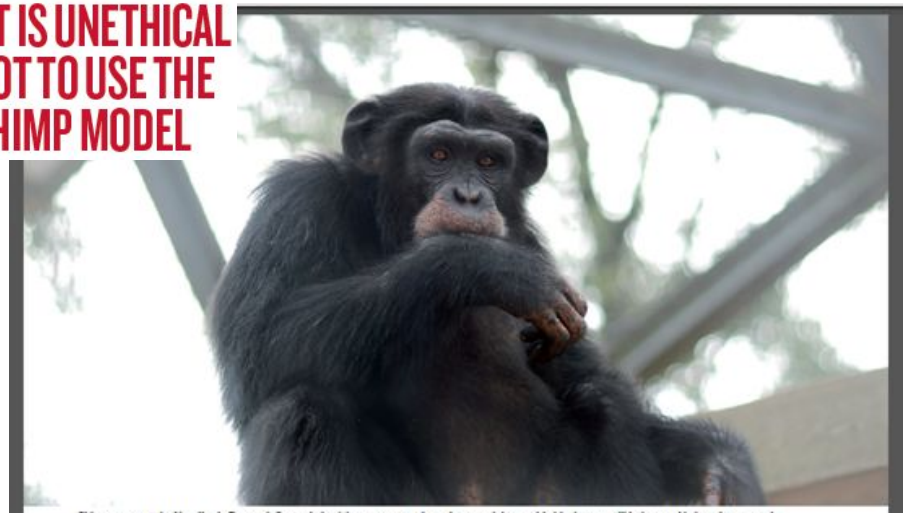
268 | NATURE | VOL 474 | 16 JUNE 2011

The U.S is the world's largest "user" of chimpanzees for biomedical research, with approximately 1,200 individual subjects in U.S. labs.

Is Biomedical Research on Chimpanzee Necessary ?

Invasive research on chimpanzee is banned by most countries.

"IT IS UNETHICAL NOT TO USE THE CHIMP MODEL



Chimpanzees at the New Iberia Research Center in Louisiana are some of very few remaining worldwide that are still being used in invasive research.

CHIMPANZEE RESEARCH ON TRIAL

As pressure from activists builds, the United States is considering whether it should end invasive experiments in chimpanzees.

BY MEREDITH WADMAN

The unusual meeting was held in a conference room, but it might have been called a war room. Gathered inside a little-known research centre in southern Louisiana, the people who oversee chimpanzee research in the United States were preparing to battle for the survival of their enterprise.

Although no other country besides Gabon carries out invasive experiments with chimpanzees, the United States continues such work at three major research facilities. Louisiana's New Iberia Research Center (NIRC) is the largest, with a population of 360 chimps, used by investigators from pharmaceutical companies and federal agencies to test new drugs and study diseases such as hepatitis. During the meeting, Thomas Rowell, director of the NIRC, stood up, surveyed the audience, and launched into a presentation about possible strategies to build public support for their work.

"How do we get industry to be forthcoming about their use of chimpanzees?" a slide read.

"Could we get at least a few solid examples of how the use of chimpanzees has truncated the time to discovery?"

And "When we talk about time and lives saved by using chimpanzees, can we provide actual time span data or numbers?"

Another sli
(NIH) spends
it supports (cu
costs for the h
on chimpanz
170 million p
chimp model,
"Their lifespa
quality of life."

Rowell's pep
at the meeting
tion, the Natio
industry and,
IOM, the med
Sciences, was
government s
panzees — the
The NIH ca

"STOP USING THE EXCUSE THAT CHIMPS ARE ESSENTIAL TO THIS RESEARCH."

The U.S is the world's largest "user" of chimpanzees for biomedical research, with approximately 1,200 individual subjects in U.S. labs.

"The federal government owns or supports 670 chimpanzees, many of which were bred between 1986 and 1995, when it was hoped — incorrectly, as it turned out — that they would be a useful model for HIV/AIDS."

Source: *Nature* 491, 18 (Nov 2012)

“Similar enough; Different enough”

The age-old contradiction of animal research:

- **Nonhuman animals are <u>similar enough</u> to make AE useful and informative.**
- **Nonhuman animals are <u>different enough</u> to make AE ethical and just.**

“Similar enough; Different enough”

The age-old contradiction of animal research:

- **Nonhuman animals are <u>similar enough</u> to make AE useful and informative.**
- **Nonhuman animals are <u>different enough</u> to make AE ethical and just.**

On the one hand, **animals are physiologically, mentally, and emotionally similar to humans**; the tests will result in meaningful results which can be extrapolated from one species to the next.

On the other hand, we are justified to inflict them diseases and illness (cancers, schizophrenia, depression, maternal deprivation) to see what happens and if it could be useful for us because they are **so different**.

The End of Biomedial Research on Chimpanzees

National Institutes of Health
Turning Discovery Into Health

NIH Will No Longer Support Biomedical Research on Chimpanzees

Cyril Ruoso/Minden Pictures/Getty

The End of Biomedial Research on Chimpanzees

NIH Will No Longer Support Biomedical Research on Chimpanzees


Cyril Ruoso/Minden Pictures/Getty

2011: The U.S. Institute of Medicine declared that "most current use of chimpanzees for biomedical research is scientifically unnecessary."

2012: The NIH announced that 110 chimpanzees owned by the government will be retired.

2013: NIH announced the phasing out of most previously active biomedical research and retains 50 chimpanzees for future biomedical research.

2015: The U.S. Fish and Wildlife Service announced that it has designated captive chimpanzees as endangered.

2016: NIH will retire all chimpanzees to sanctuaries by 2026.

(The 3 R) Reduction, Refinement, Replacement

Reduction : Are we « using » less animals?

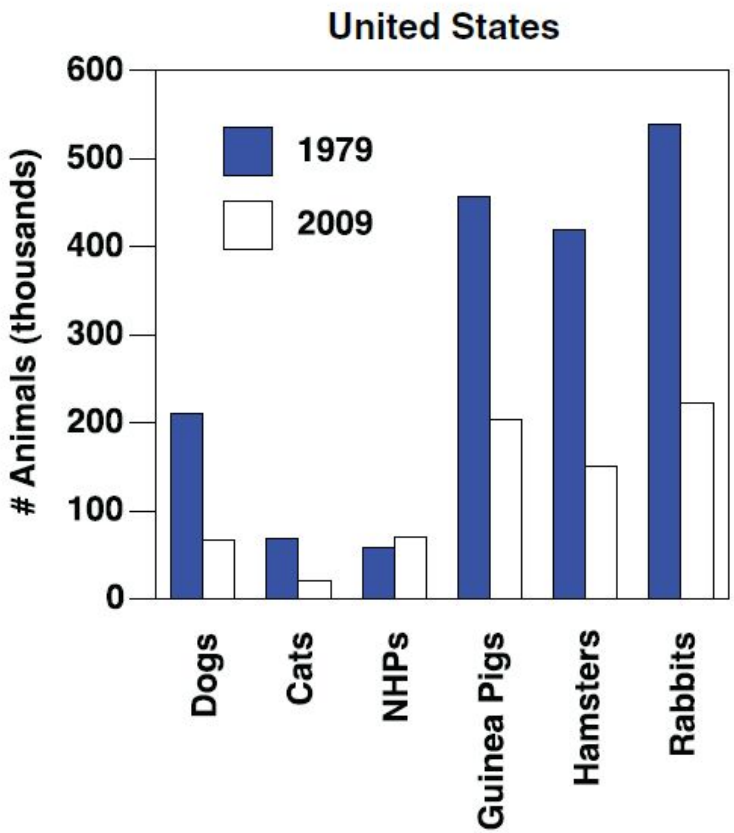


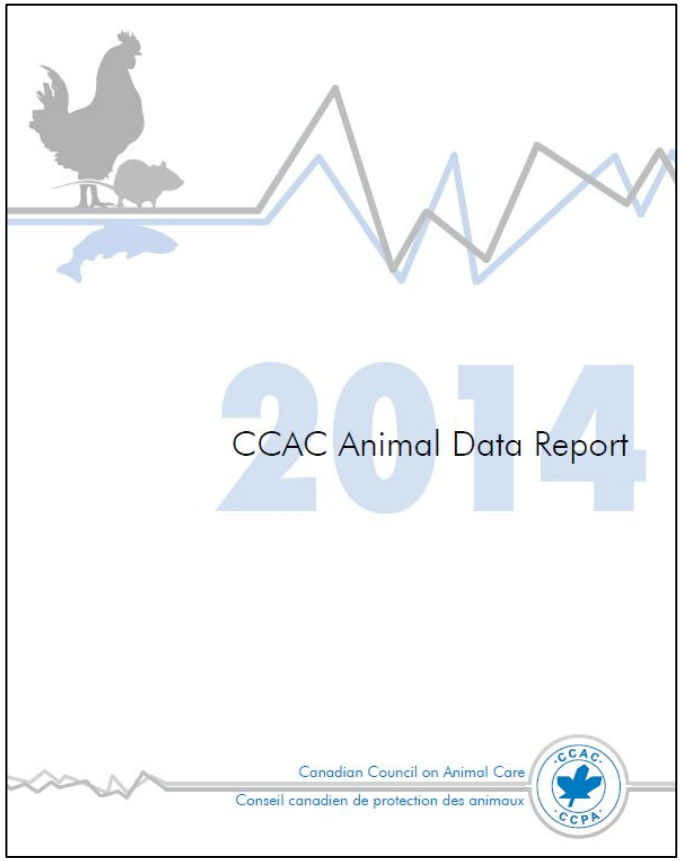
FIGURE 4-1 U.S. Department of Agriculture (USDA)-tracked animal use data for the United States, 1979 and 2009. (Data for rats, mice, birds, and cold-blooded vertebrates are not tracked.) NHP = non-human primate.
SOURCE: Yates presentation citing USDA Annual Reports.

The number of nonhuman primates being « used » in research is increasing.

Rhesus monkeys are the nonhuman primates most frequently used in research.
(Picture from UC Davis Primate Center)

(The 3 R) Reduction, Refinement, Replacement

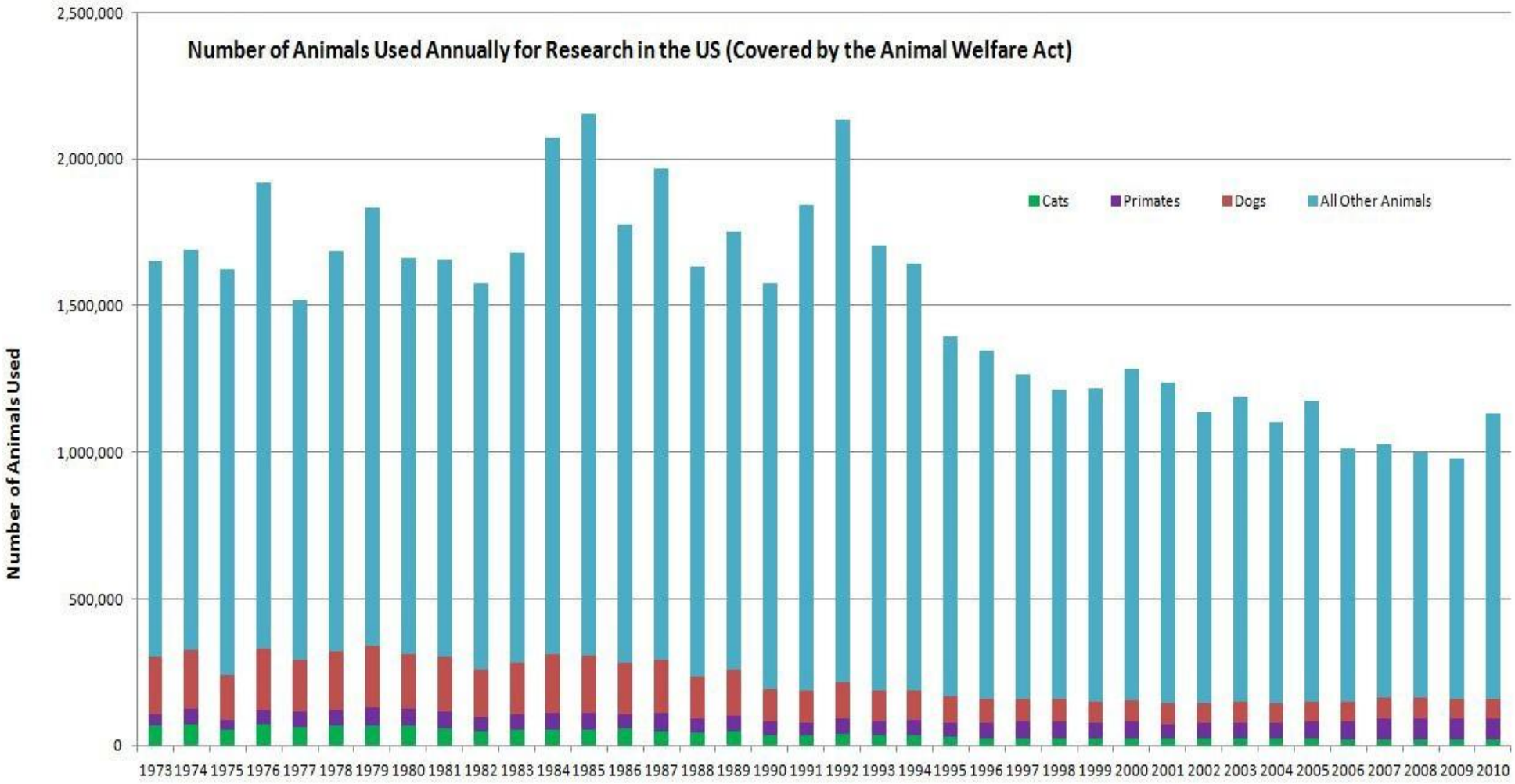
Reduction : Are we « using » less animals?



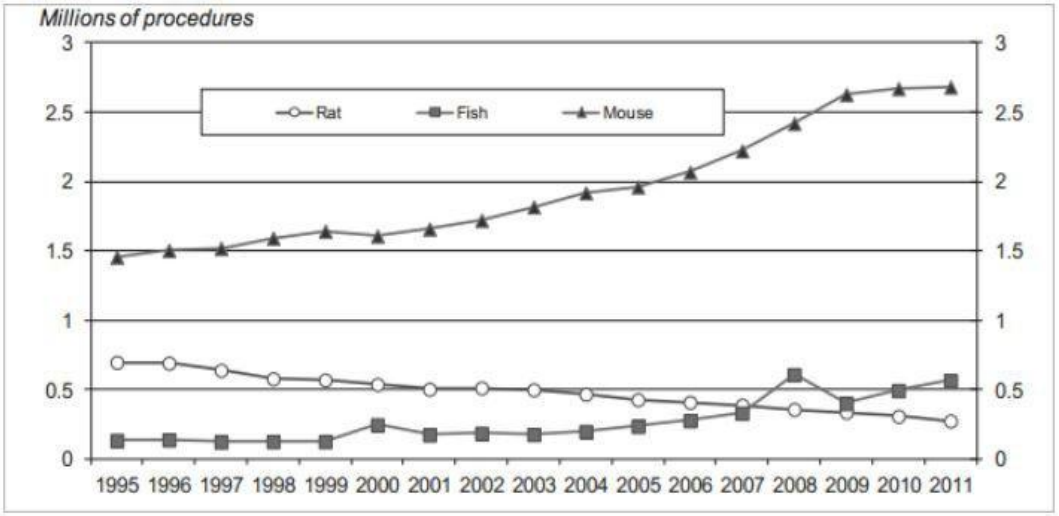
In Canada, 5,000 non-human primates were "used" in 2014, compared to 4,000 in 2013.

(The 3 R) Reduction, Refinement, Replacement

Common claims that the number of animals used in research is reducing are misleading because the Animal Welfare Act (AWA) exlcudes the most widely used mammals from its protection (rats and mice), as well as birds and fish.



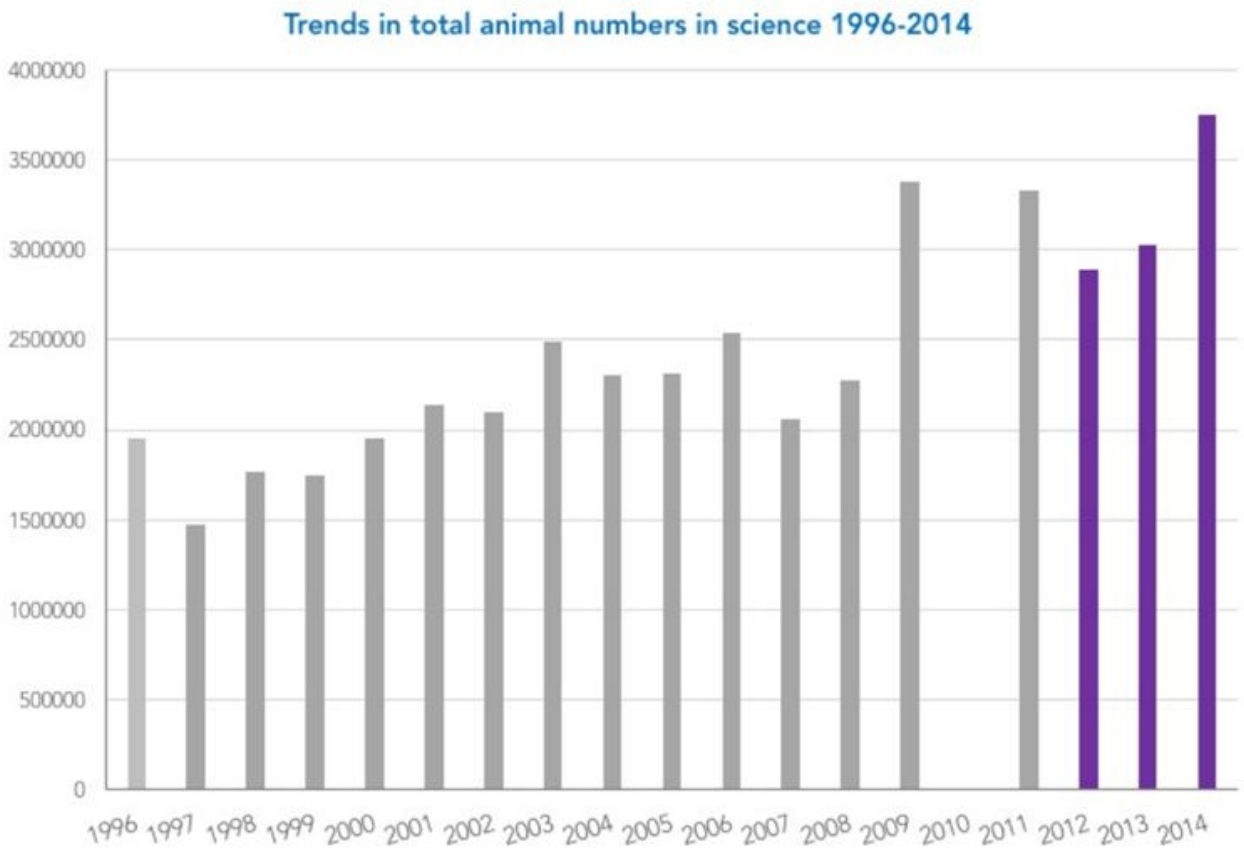
(The 3 R) Reduction, Refinement, Replacement



In Canada, we don't even have an Animal Welfare Act (AWA).

(The 3 R) Reduction, Refinement, Replacement

Canadian Council on Animal Care *in science*
Conseil canadien de protection des animaux *en science*



In 2014, roughly 3.75 million animals — primarily fish, mice, and birds — were used for education, medicinal, regulatory testing, or research purposes by certified institutions in Canada.

This is a 24% increase from 2013.

ANIMALS IN SCIENCE POLICY INSTITUTE

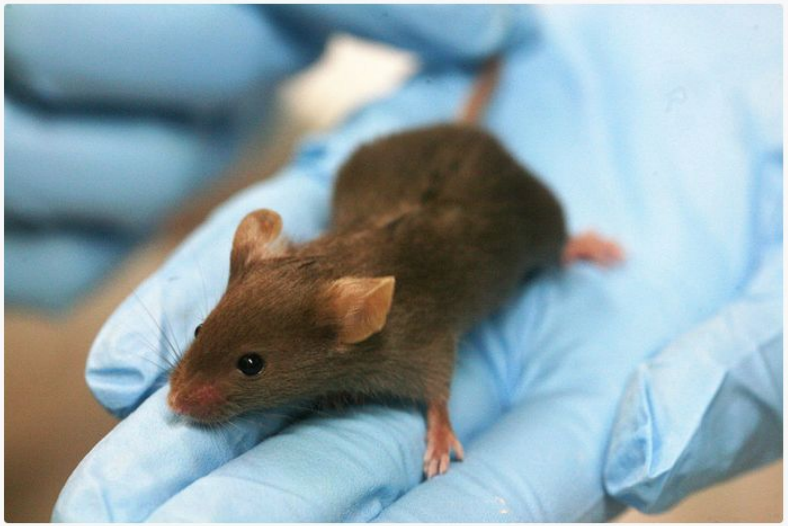
The 3 Rs: Are we “using” less animals?

“With the advent of a lot of new non-animal methods (like virtual reality dissecting, computer modelling, cell manipulation, 3D-printing, and in vitro work), we should at least be seeing a decrease.”

“This 24% increase really raises questions about how seriously the principle of replacement is taken in Canada.”

Dr. Elisabeth Ormandy, executive director of the Animals in Science Policy Instute (AISPI), Interview with the National Observer.

24% Increase in Numbers of Animals Used for Invasive Scientific Research in Canada



NATIONAL OBSERVER

ANIMALS IN SCIENCE POLICY INSTITUTE

The 3 Rs: Are we "using" less animals?

The numbers of fish, birds, nonhuman primates, cats, amphibians, reptiles, and mice have increased between 2013 and 2014.

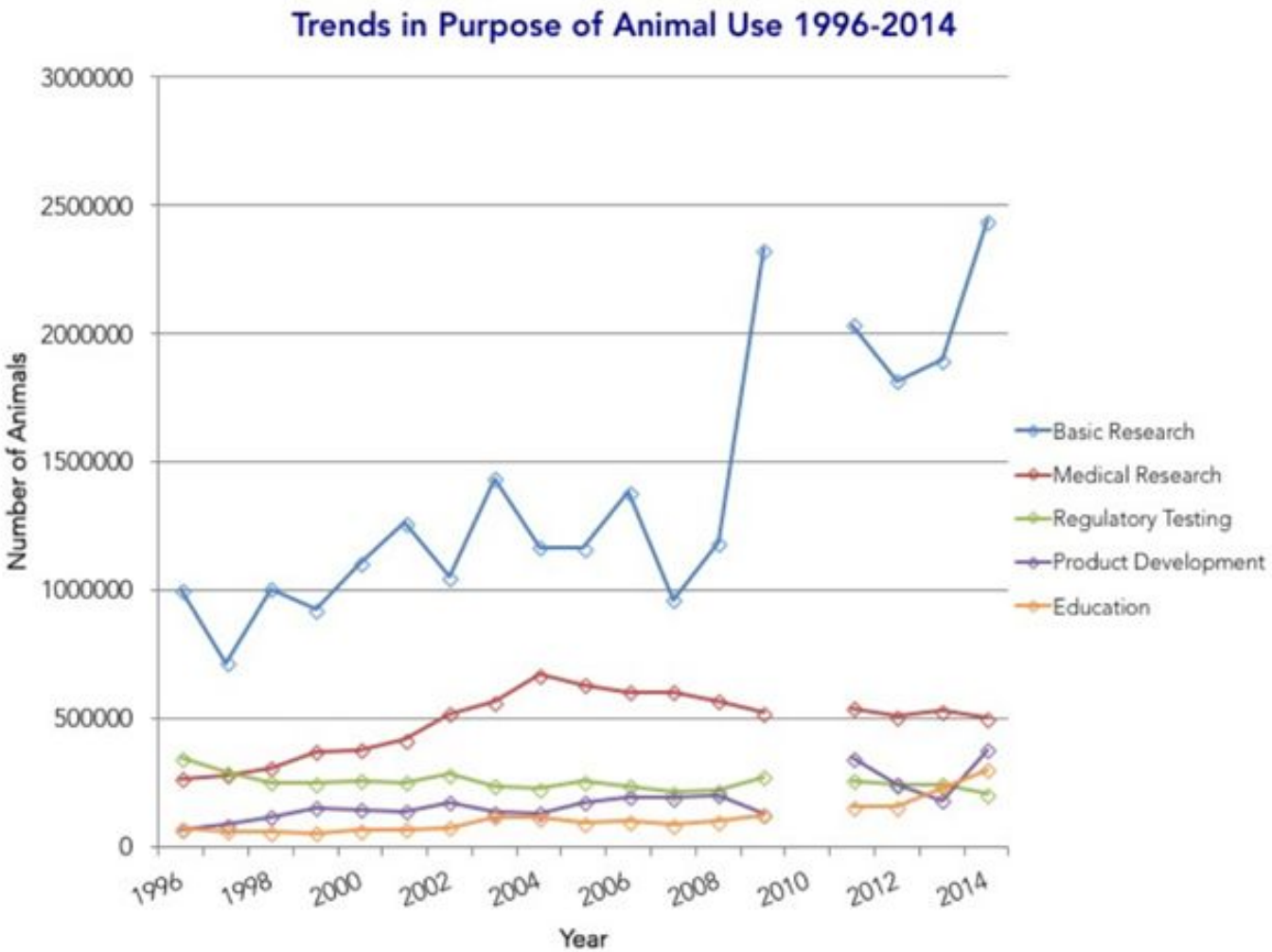
SPECIES	NUMBER OF ANIMALS REPORTED IN 2013	NUMBER OF ANIMALS REPORTED IN 2014
Fish	970969	1612100
Mice	1233196	1251405
Birds	192394	251152
Amphibians	82542	127111
Other rodents	10738	12893
Cats	6833	7188
Nonhuman primates	4069	5061

ANIMALS IN SCIENCE POLICY INSTITUTE

Source : The *Canadian Council on Animal Care* (CCAC) (Data) and the *Animals in Science Policy Institute* (Graph)

The 3 Rs: Are we "using" less animals?

The numbers of fish, birds, nonhuman primates, cats, amphibians, reptiles, and mice have increased between 2013 and 2014.



Source : The *Canadian Council on Animal Care* (CCAC) (Data) and the *Animals in Science Policy Institute* (Graph)

ANIMALS IN SCIENCE POLICY INSTITUTE

(The 3 R) Reduction, Refinement, Replacement

Reduction : Are we « using » less animals?

The number of animal is increasing as is the level of overall pain and distress the animals could be exposed to during the studies.

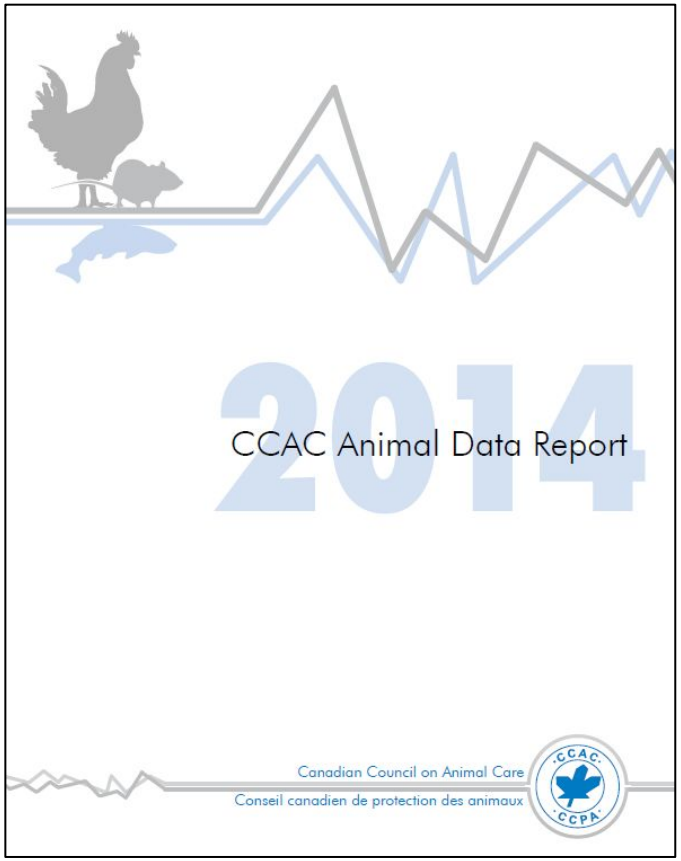


Table 3.2 Category of invasiveness (CI) of animal procedures in Canada

CI	Experiments cause
E	Severe pain near, at, or above the pain tolerance threshold of unanaesthetised conscious animals
D	Moderate to severe distress or discomfort
C	Minor stress or pain of short duration
B	Little or no discomfort or stress

Source: CCAC (2009).

More than 1,000 of non-human primates were ‘used” in the two highest category of invasiveness.

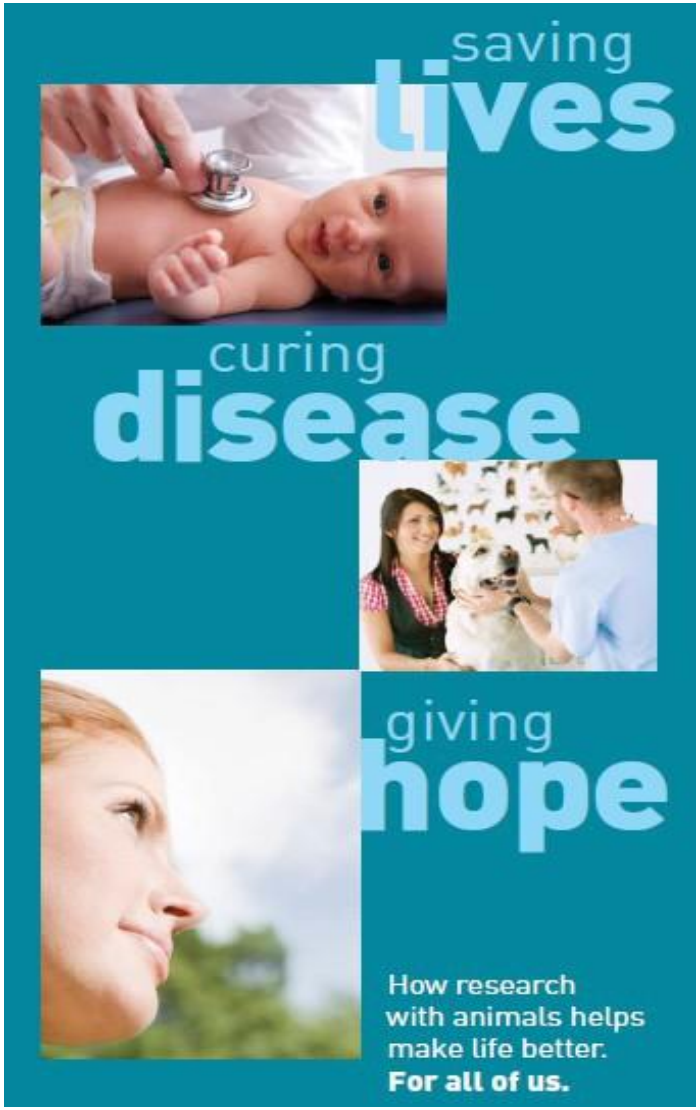
100 of them in experiments “causing severe pain near or above tolerance threshold of unanesthetized conscious animals” (category E).

Animal « Care » Councils (ACC)

Myths and realities

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.

McGill
McGill University and Affiliated Hospitals / University Animal Care Committee



Re-minding animals
The Mental and Social Lives of Rats

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.)

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

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

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

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

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

Science AAAS

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.

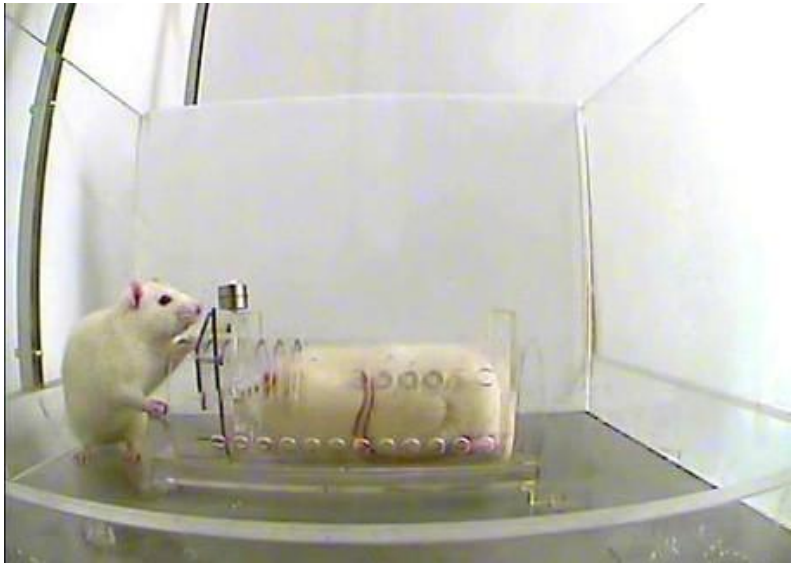
An injected mouse writhed more if its partner was also writhing, but only if the mouse had previously shared a cage with its partner for more than 14 days. »

Re-minding animals
The Mental and Social Lives of Rats

Science AAAS

Empathetic Rats Help Each Other Out

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.



"**Rats repeatedly freed their cage-mates from containers**, even though there was no reward for doing so.

To the researchers' surprise, when presented with both a rat-holding container and one containing chocolate — the rats' favorite snack — the rodents not only chose to open both containers, but also **to share the treats with the rats they liberated**."

The Moral Relevance of Intelligence?

Human cognitive abilities enable us to suffer in ways no other animals find possible.

The Moral Relevance of Intelligence?

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.

Binding of Episodic Memories in the Rat

Jonathon D. Crystal and Alexandra E. Smith

Department of Psychological and Brain Sciences, Indiana University, Bloomington

Current Biology, 24, Dec 15, 2014 (24):2957-61.

Summary

People remember an event as a coherent scene [1–4]. Memory of such an episode is thought to reflect binding of a fully integrated representation, rather than memory of unconnected features [4–7]. However, it is not known whether rodents form bound representations. Here we show that rats remember episodes as bound representations. Rats were presented with multiple features of unique episodes at memory encoding: *what* (food flavor), *where* (maze location), *source* (self-generated food seeking—running to the food site—or experimenter-generated food seeking—placement by the experimenter at the food site), and *context* (spatial cues in the room where the event occurred). After a delay, the trial continued with a memory assessment in which one flavor replenished at the self-generated—but not at experimenter-generated—locations. We presented rats with multiple overlapping features, in rapid succession, to ensure that successful memory retrieval required them to disambiguate multiple study episodes (using two rooms). We found that binding is resistant to interference from highly similar episodes and survives long retention intervals (~1 week). Our results suggest that multiple episodic memories are each structured as bound representations, which suggests that nonhumans represent episodic memories using a structure similar to that of people. This finding enhances the translational potential for utilizing animal models of episodic memory to explore the biological mechanisms of memory and validate therapeutic approaches for treating disorders of memory.

Episodic Memory in Rats

AMERICAN PSYCHOLOGICAL ASSOCIATION

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

« **Whether animals can remember their past is not just an academic question**, notes memory researcher Alex Easton. ».

Episodic Memory in Rats

AMERICAN PSYCHOLOGICAL ASSOCIATION

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

« **Whether animals can remember their past is not just an academic question**, notes memory researcher Alex Easton. ».

Great! He is he acknowledging that it raises signifiant ethical issues?

Episodic Memory in Rats

AMERICAN PSYCHOLOGICAL ASSOCIATION

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

« **Whether animals can remember their past is not just an academic question**, notes memory researcher Alex Easton. ».

Great! He is he acknowledging that it raises signifiant ethical issues?

No, it's pure instrumental thinking : how can we benefit from this?

Episodic Memory in Rats

Can rats reminisce?

AMERICAN PSYCHOLOGICAL ASSOCIATION

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

« **Whether animals can remember their past is not just an academic question**, notes memory researcher Alex Easton. ».

« 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... »

Great! He is he acknowledging that it raises signifiant ethical issues?

No, it's pure instrumental thinking : how can we benefit from this?

Re-minding animals

The mental and social lives of rats

'To study pain, we need to produce pain — there's simply no way around it,' says researcher Jeffrey Mogil. (CBC)

Jeffrey Mogil was more open to ethical issues:

« The more we do experiments like this, the more we wonder if we should do experiments like this. »

TORO_THE_BULL/ISTOCKPHOTO

Rats can read the pain in the faces of other rats.

Rats see the pain in other rats' faces

Re-minding animals

The mental and social lives of rats

'To study pain, we need to produce pain — there's simply no way around it,' says researcher Jeffrey Mogil. (CBC)

TORO_THE_BULL/ISTOCKPHOTO

Rats can read the pain in the faces of other rats.

Rats see the pain in other rats' faces

Jeffrey Mogil was more open to ethical issues:

« **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**. »

Re-minding animals

The mental and social lives of rats

'To study pain, we need to produce pain — there's simply no way around it,' says researcher Jeffrey Mogil. (CBC)

TORO_THE_BULL/ISTOCKPHOTO

Rats can read the pain in the faces of other rats.

Rats see the pain in other rats' faces

Jeffrey Mogil was more open to ethical issues:

« **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**. »

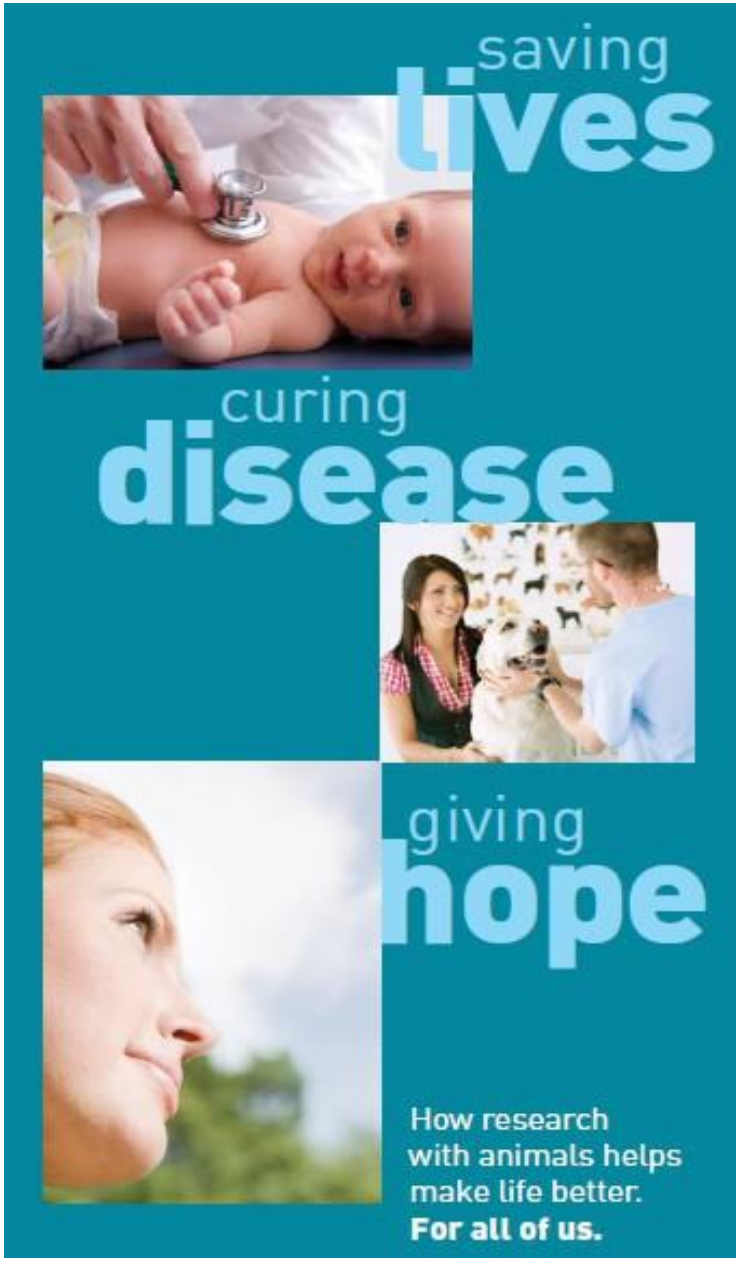
But why not? If is true (as Mogil claims) that most of his research cause only minor pain and no distress...

Animal « Care » Councils (ACC)

Myths and realities

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.

McGill
McGill University and Affiliated Hospitals / University Animal Care Committee



OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

25,179 VIEWS | 6 CITATIONS

Racial Bias in Perceptions of Others' Pain

Sophie Trawalter, Kelly M. Hoffman, Adam Waytz

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

Article | About the Authors | Metrics | Comments | Related Content

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

American Pain Society
RESEARCH
EDUCATION
TREATMENT
ADVOCACY
PUBLISHED BY ELSEVIER

The Journal of Pain, Vol 15, No 5 (May), 2014: pp 476-484
Available online at www.jpain.org and www.sciencedirect.com

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,* and Joan Y. Chiao*

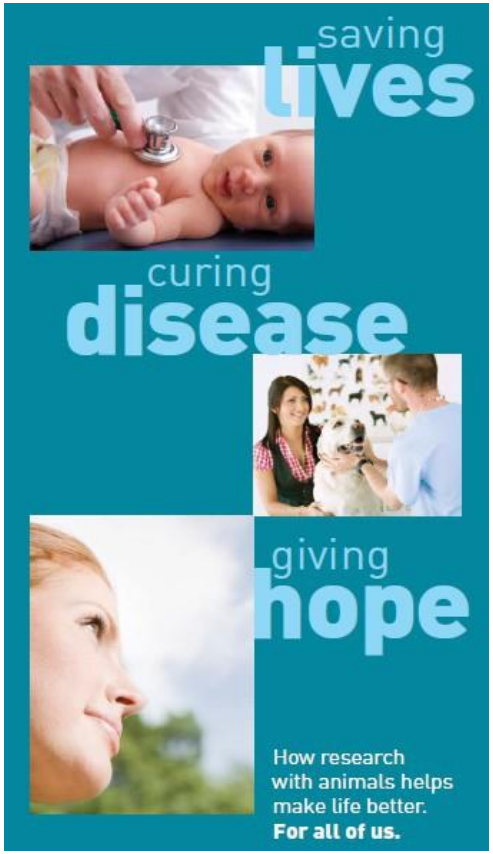
Department of Psychology and Institute for Policy Research,† Northwestern University, Evanston, Illinois.*
‡Feinberg School of Medicine, Northwestern University, Chicago, Illinois.

« 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. »

« Our study suggests that known racial 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. »

The Rhetorics of Animal « Care » Councils (ACC)

Hiding Harms Under a Rhetoric of Care



McGill

McGill University and Affiliated Hospitals / University Animal Care Committee

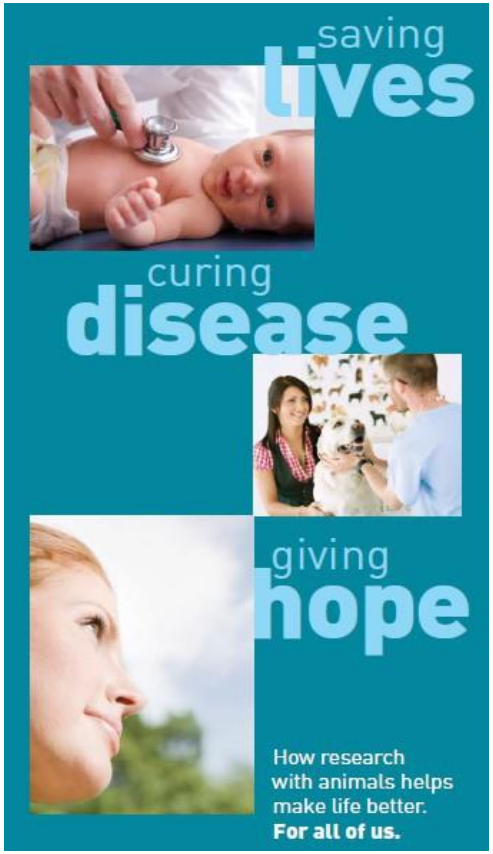
Compassion

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.

The Rhetorics of Animal « Care » Councils (ACC)

Hiding Harms Under a Rhetoric of Care



McGill
McGill University and Affiliated Hospitals / University Animal Care Committee

Compassion

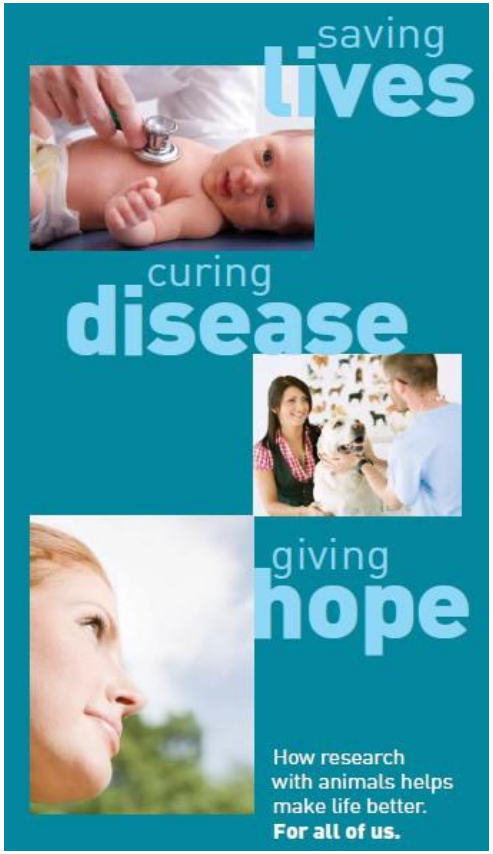
Researchers and everyone involved in research with animals – including veterinarians and animal-care technicians – are sincerely concerned about the welfare of animals that are part of the research process. But researchers are also concerned about the sick and disabled among us who are desperate for 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.

Animals are « part of the research » <u>because we force them to</u>.
(ACC's brochure doesn't mention they are coerced and held captives, but simply that « they are part of the research. »)

The Rhetorics of Animal « Care » Councils (ACC)

Hiding Harms Under a Rhetoric of Care



McGill
McGill University and Affiliated Hospitals / University Animal Care Committee

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.

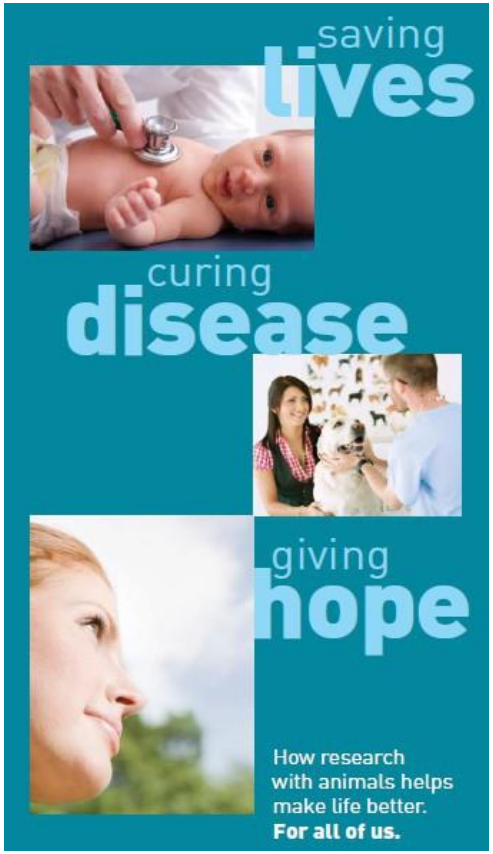
Thousands, perhaps millions, of lives can be improved by a successful research project that leads to better care and treatment – for the grandfather taken by Alzheimer's disease, the mother stricken with breast cancer, the child learning to live with diabetes, the whole segment of a community trying to cope with excessive levels of cholesterol or heart disease. Those are the people the researchers are trying to help.

Animals are « part of the research » <u>because we force them to</u>.
(ACC's brochure doesn't mention they are coerced and held captives, but simply that « they are part of the research. »)

Humans get represented as **members of communities** (grandfathers, mothers, children)

The Rhetorics of Animal « Care » Councils (ACC)

Hiding Harms Under a Rhetoric of Care



McGill
McGill University and Affiliated Hospitals / University Animal Care Committee

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.

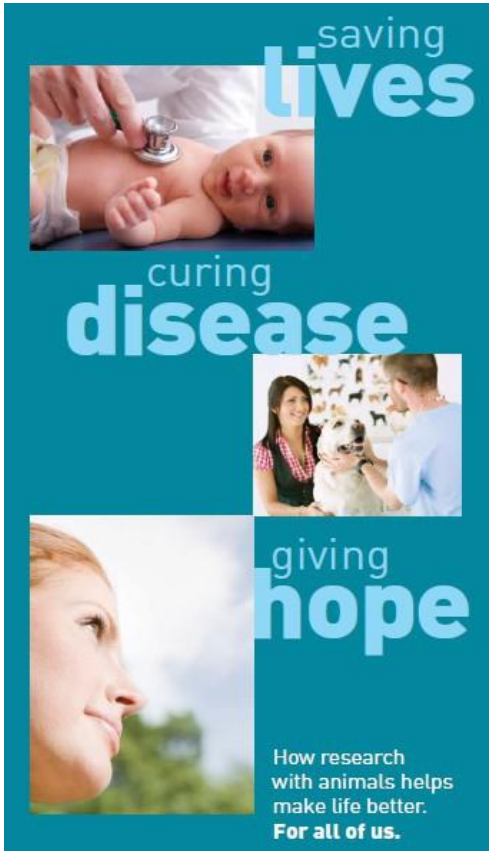
Underexposing actual harms to some vulnerable selves…

Animals are « part of the research » <u>because we force them to</u>.
(ACC's brochure doesn't mention they are coerced and held captives, but simply that « they are part of the research. »)

Humans get represented as **members of communities** (grandfathers, mothers, children)

The Rhetorics of Animal « Care » Councils (ACC)

Hiding Harms Under a Rhetoric of Care



McGill
McGill University and Affiliated Hospitals / University Animal Care Committee

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.

Underexposing actual harms to some vulnerable selves…

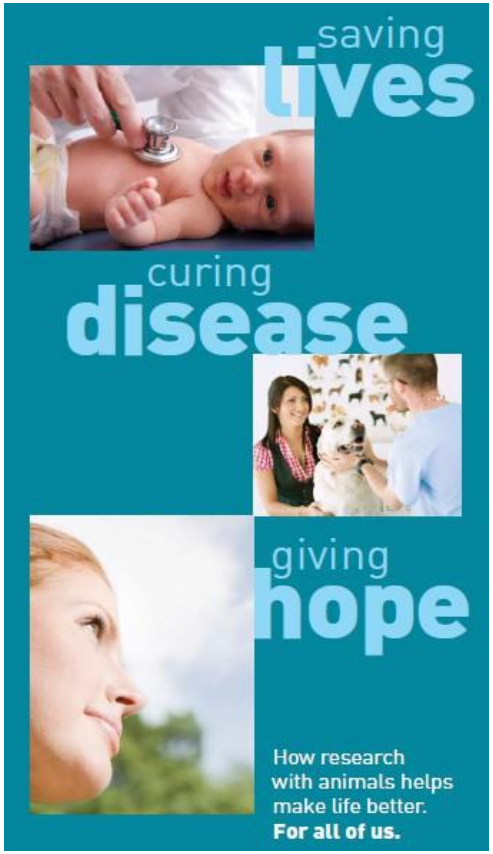
Animals are « part of the research » <u>because we force them to</u>.
(ACC's brochure doesn't mention they are coerced and held captives, but simply that « they are part of the research. »)

…overexposing the same harms to others and the potential benefits.

Humans get represented as **members of communities** (grandfathers, mothers, children)

The Rhetorics of Animal « Care » Councils (ACC)

Hiding Harms Under a Rhetoric of Care



McGill
McGill University and Affiliated Hospitals / University Animal Care Committee

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.

Underexposing actual harms to some vulnerable selves…

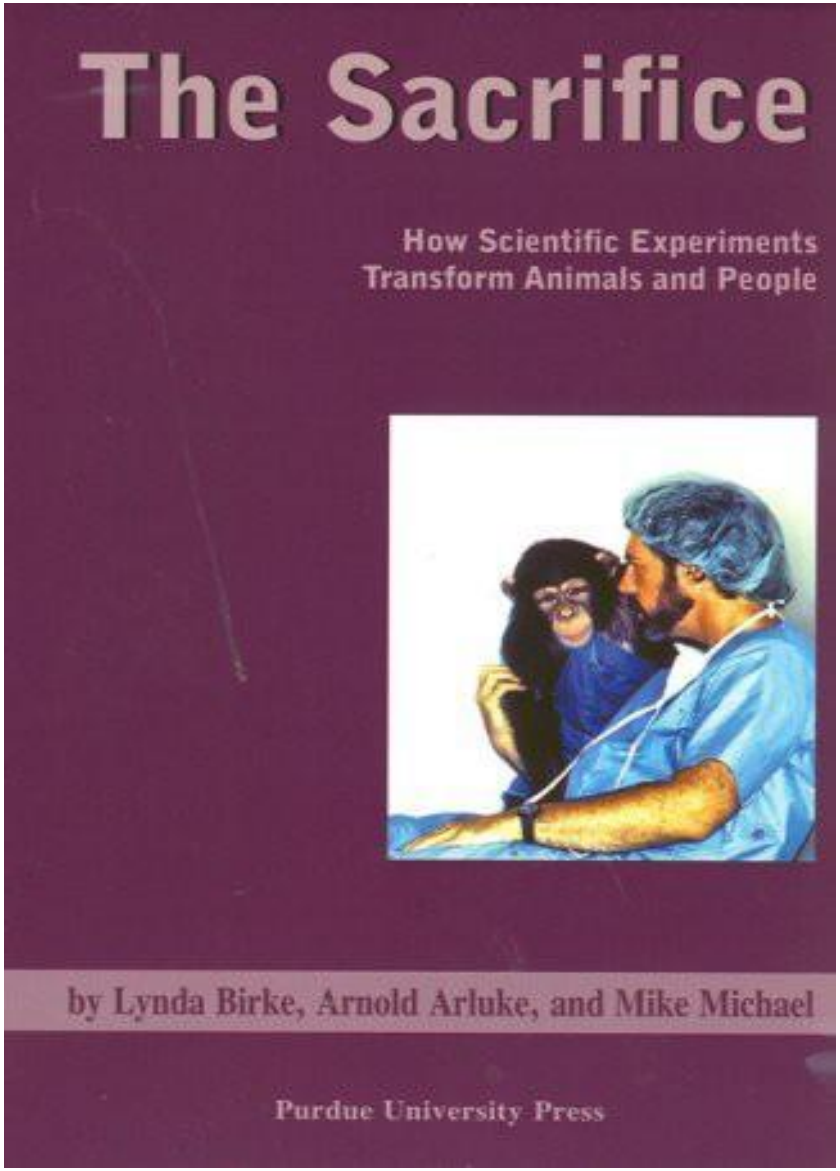
Animals are « part of the research » <u>because we force them to</u>.
(ACC's brochure doesn't mention they are coerced and held captives, but simply that « they are part of the research. »)

…overexposing the same harms to others and the potential benefits.

Humans get represented as **members of communities** (grandfathers, mothers, children)

This is not an impartial cost/benefit analysis

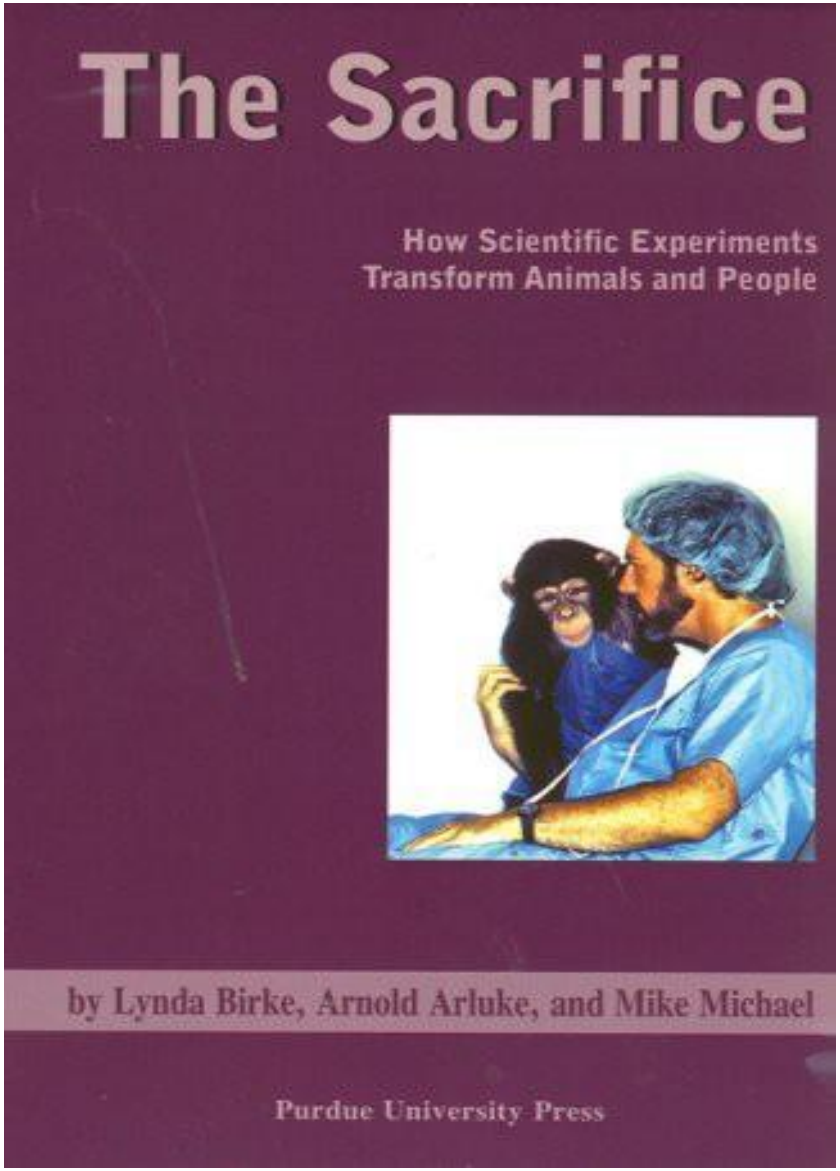
Becoming an Animal Researcher



Becoming an Animal Researcher

"People have to make adjustements with doing things to animals that in other contexts would be considered barbaric and cruel."

(Birke 2010, 5)



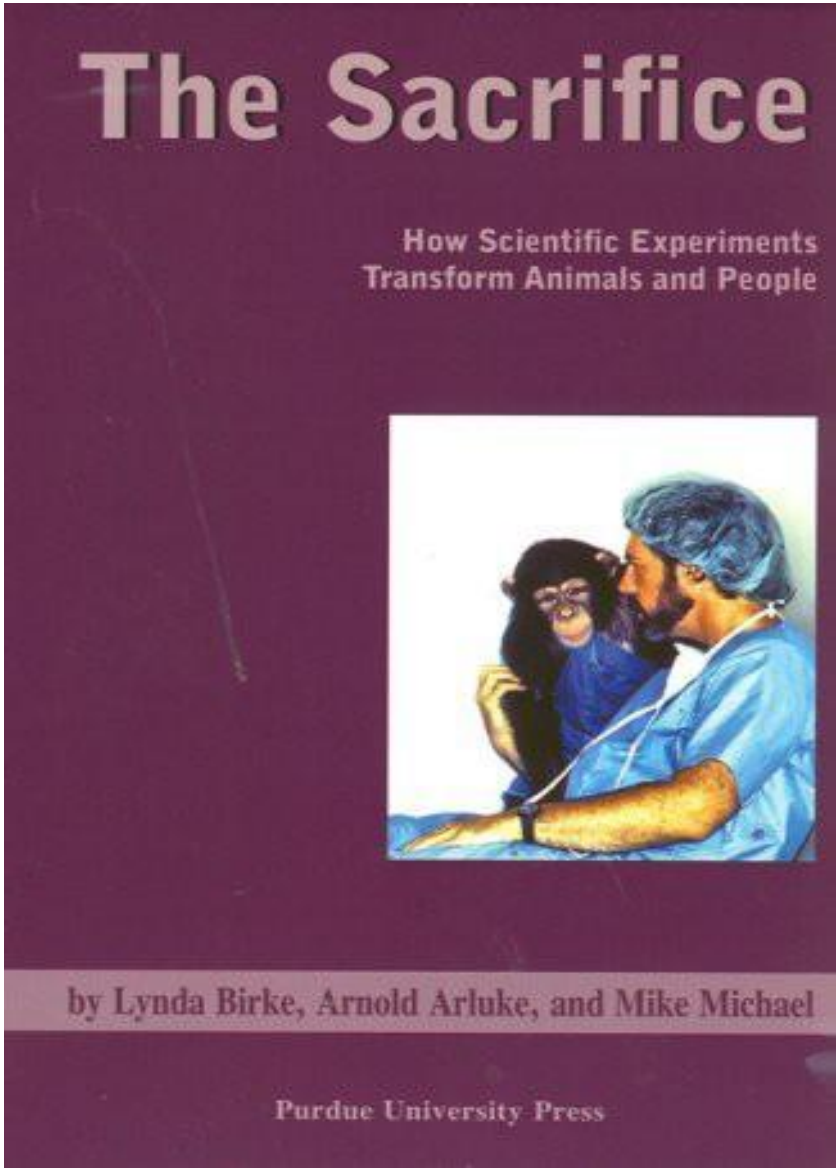
Becoming an Animal Researcher

"People have to make adjustements with doing things to animals that in other contexts would be considered barbaric and cruel."

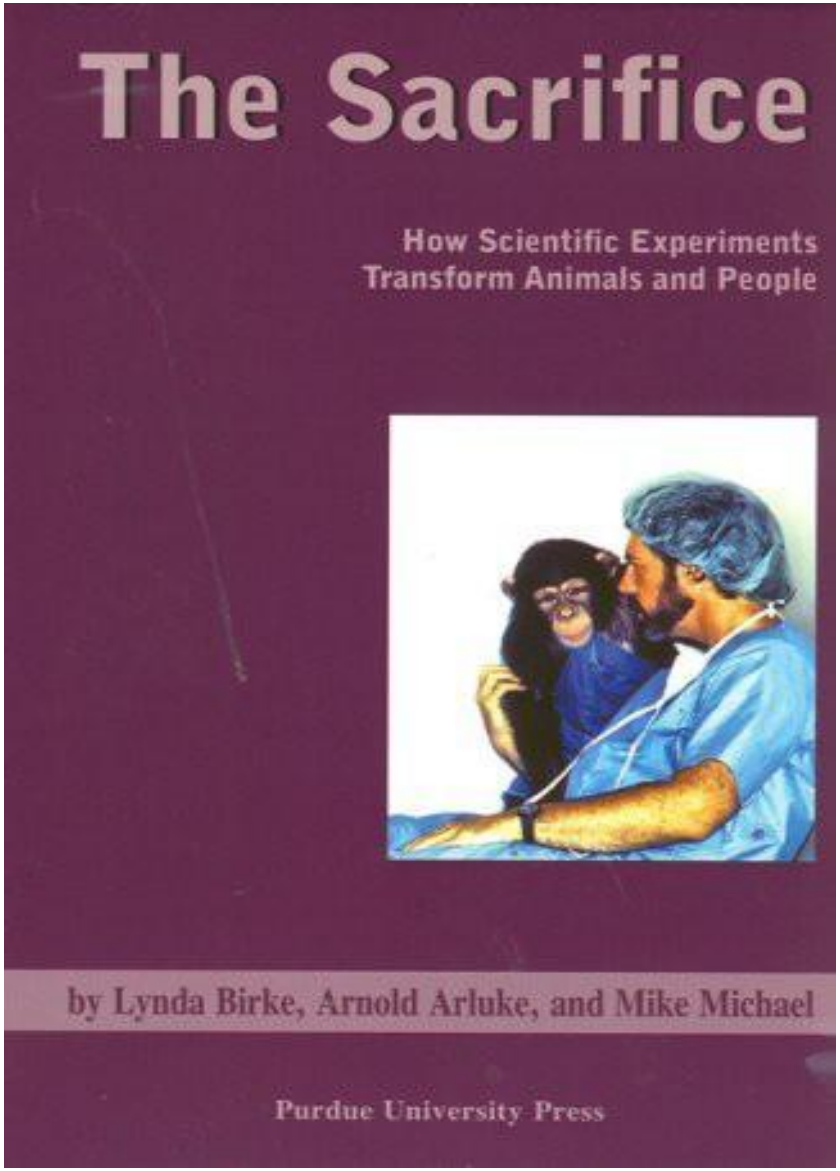
(Birke 2010, 5)

"Science students regulary 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)

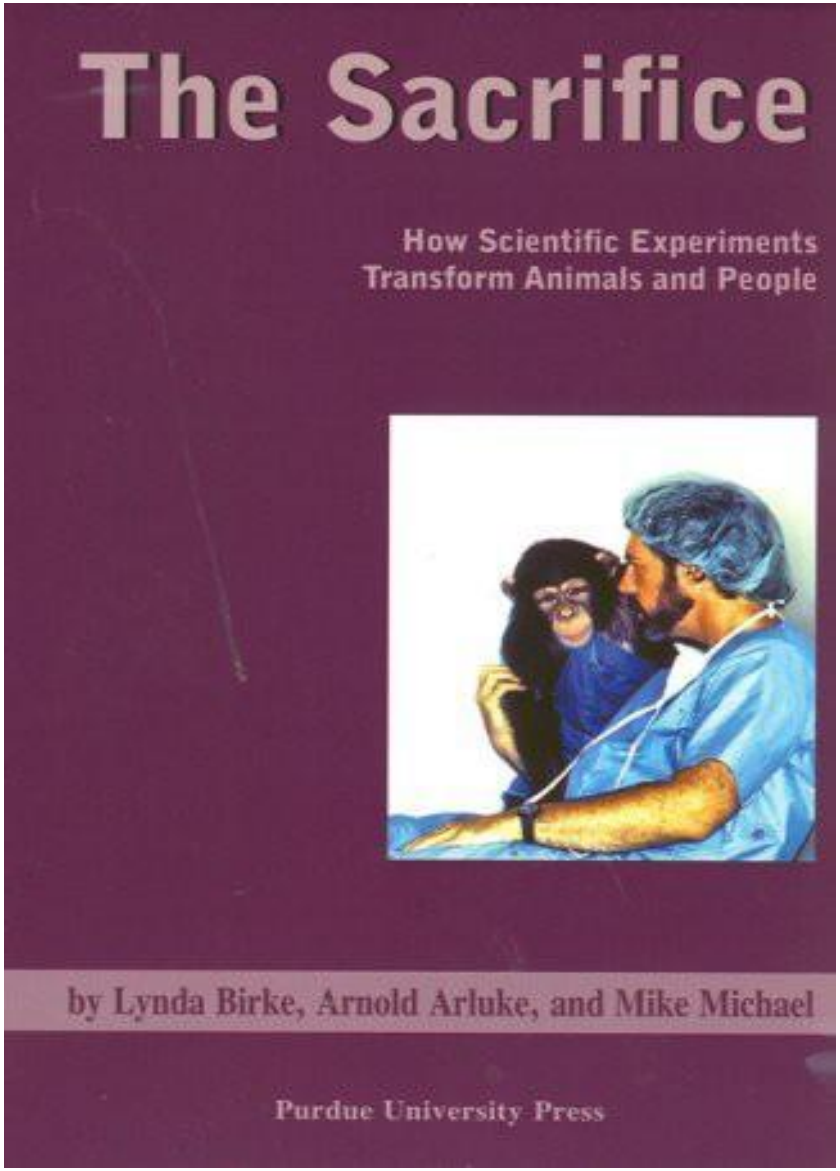


The Language and Rhetoric of Animal Research



The Language and Rhetoric of Animal Research

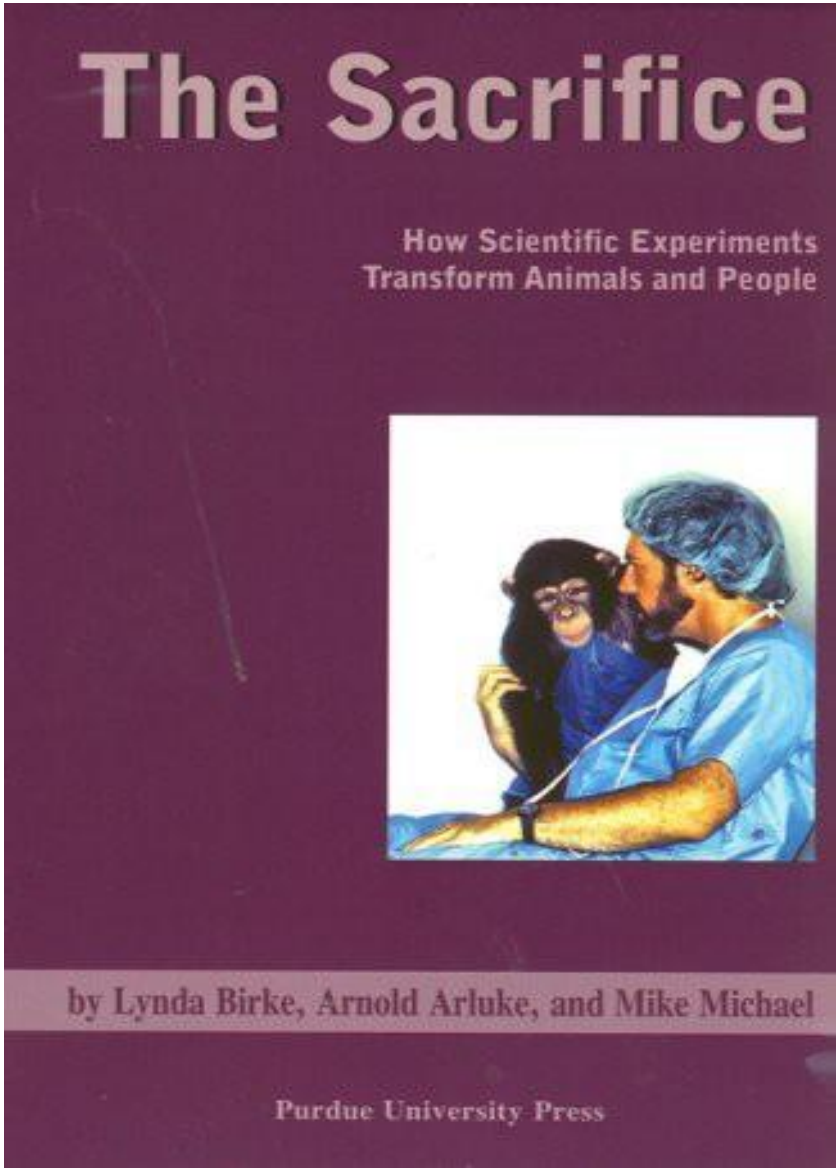
- The use of the passive voice occludes human agency and therefore human responsibility (eg. « *animals were injected* »).



The Language and Rhetoric of Animal Research

- The use of the passive voice occludes human agency and therefore human responsibility (eg. « *animals were injected* »).

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

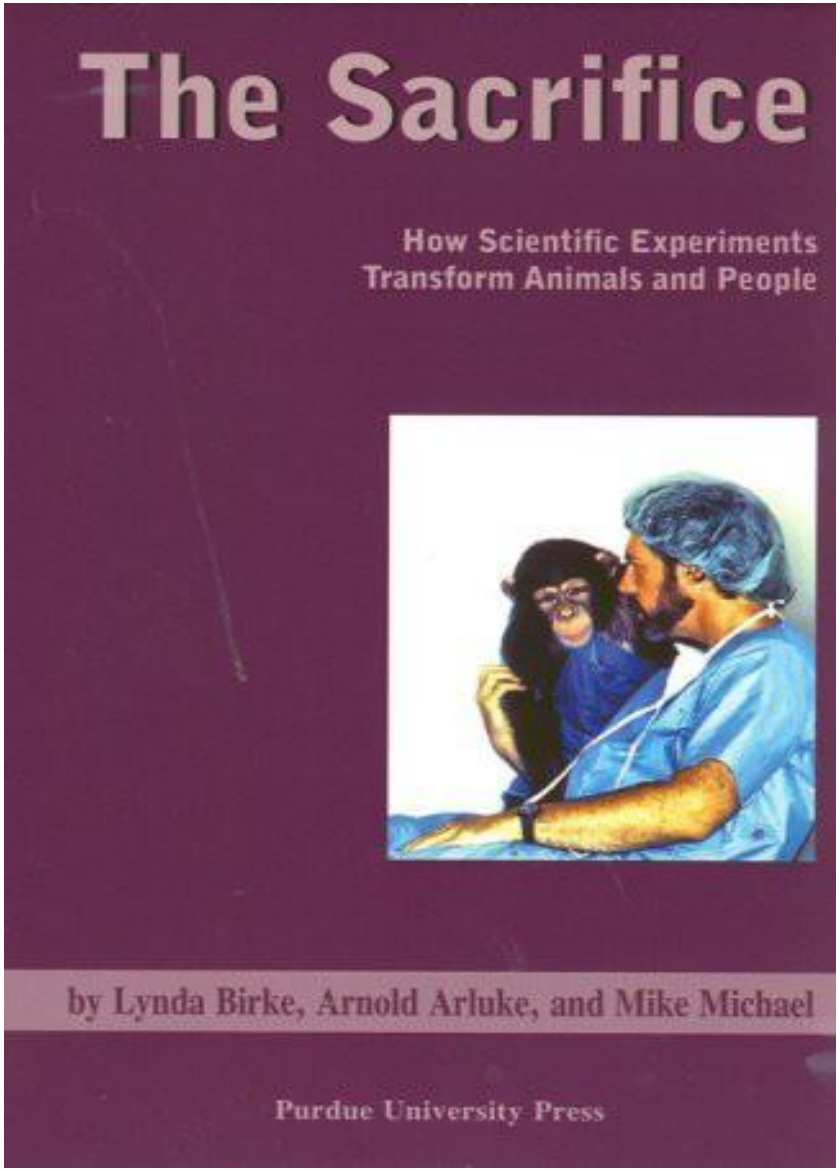


The Language and Rhetoric of Animal Research

- The use of the passive voice occludes human agency and therefore human responsibility (eg. « *animals were injected* »).

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

- Use of euphemisms (« put down », « euthanasia »)



Killing Animals in Gas Chambers is Painful and Distressful

REVIEW ARTICLE

Carbon dioxide for euthanasia: concerns regarding pain and distress, with special reference to mice and rats

K M Conlee[1], M L Stephens[1], A N Rowan[1] and L A King[2]

[1]The Humane Society of the United States, Animal Research Issues, 2100 L Street NW, Washington, DC 20037, USA; [2]Linacre College, Oxford University, St Cross Road, Oxford OX1 3PS, UK

Killing Animals in Gas Chambers is Painful and Distressful

REVIEW ARTICLE

Carbon dioxide for euthanasia: concerns regarding pain and distress, with special reference to mice and rats

K M Conlee[1], M L Stephens[1], A N Rowan[1] and L A King[2]

[1]The Humane Society of the United States, Animal Research Issues, 2100 L Street NW, Washington, DC 20037, USA; [2]Linacre College, Oxford University, St Cross Road, Oxford OX1 3PS, UK

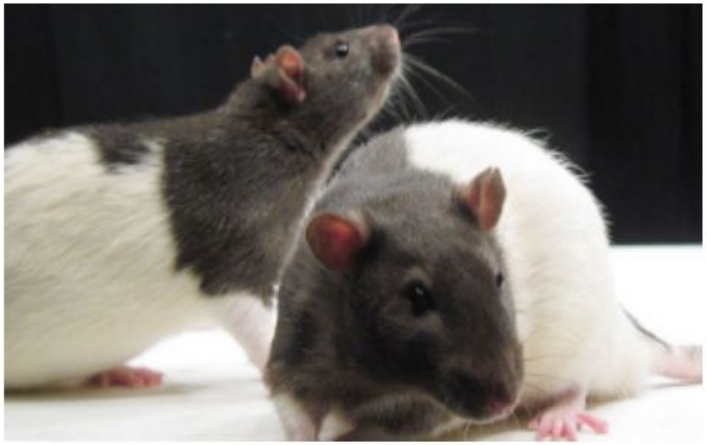
"Carbon dioxide (CO2) is the most commonly used agent for euthanasia of laboratory rodents, used on an estimated tens of millions of laboratory rodents per year worldwide, yet there is a growing body of evidence indicating that exposure to **CO2 causes more than momentary pain and distress**."

To Kill a Lab Rat

TheScientist
EXPLORING LIFE, INSPIRING INNOVATION

Some institutions are changing their protocols for rodent euthanasia, as research finds there may be more humane methods.

By Kerry Grens | November 4, 2014



WIKIMEDIA, JASON SNYDER

« Although some rodents stop moving upon exposure to CO2 in gas chambers, others become **stressed**. They might **rear up, paw the sides of the box, or emit ultrasonic vocalizations**. It seemed that the **animals were suffering** before losing consciousness."

"**CO2 alone may not be as humane a killer as many once thought**."

"There is compelling evidence that **carbon dioxide is <u>not good for the welfare</u> of these animals that are killed with it**"

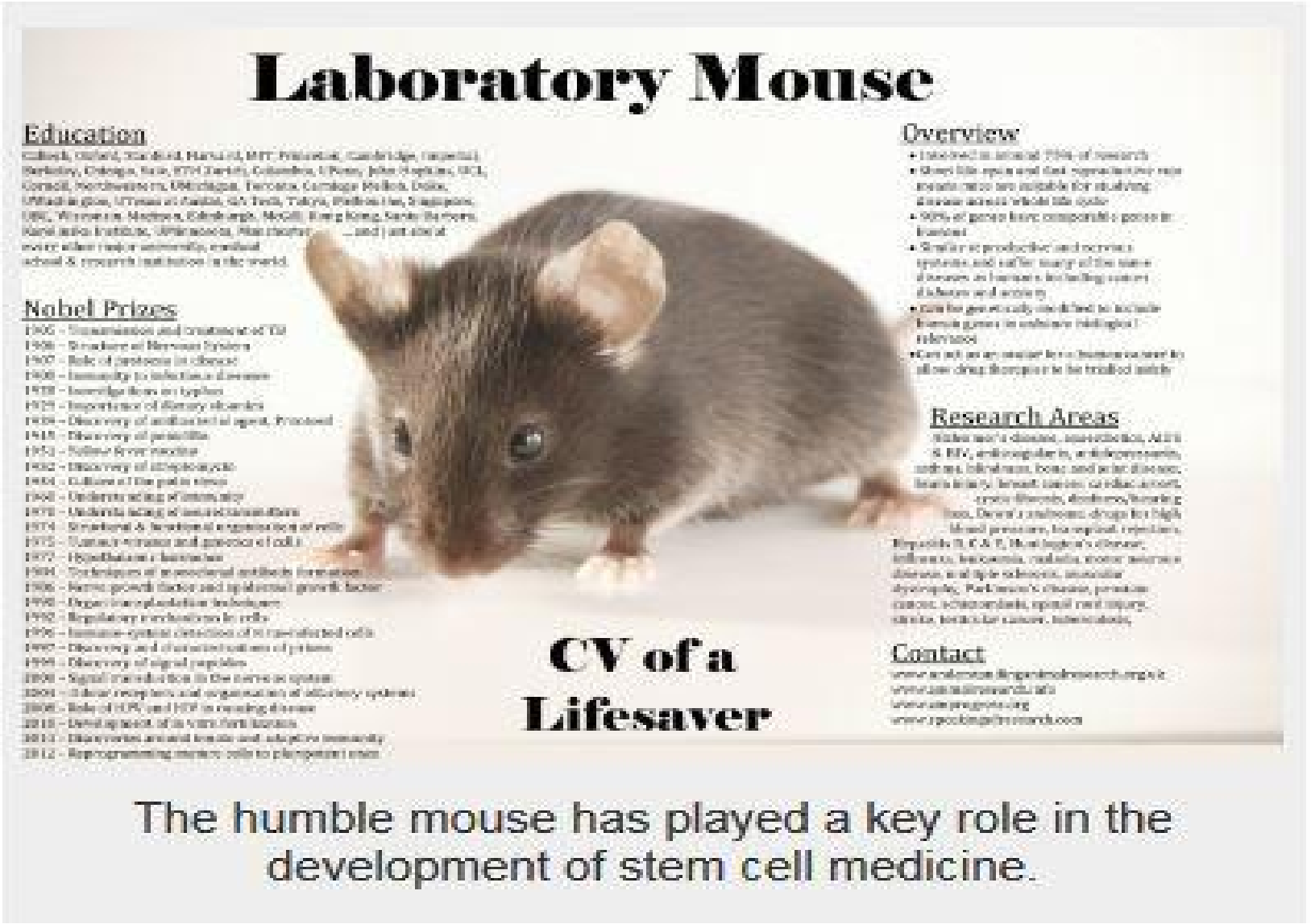
"We need to look for the perfect way to kill rodents because we haven't found that yet," Huw Golledge told *The Scientist*.

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

"I'm helping Science with Pride"...
Hey, I've never said that!



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

Coercing vulnerable individuals because we can and benefit from it cannot be considered 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 « Necessary Evil » ?

What do we mean by « necessary »?

Tuskegee Syphilis Study

A « Necessary Evil » ?

What do we mean by « necessary »?

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

Tuskegee Syphilis Study

A « Necessary Evil » ?

What do we mean by « necessary »?

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

If the only way to save your daughter's life is to kill another child to harvest her organs, this would not be morally justified even if it was « necessary » to achieve a worthy goal.

Tuskegee Syphilis Study

A « Necessary Evil » ?

What do we mean by « necessary »?

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

If the only way to save your daughter's life is to kill another child to harvest her organs, this would not be morally justified even if it was « necessary » to achieve a worthy goal.

Researchers often say that animal experimentation played a major rôle in developing cures, but so did research on non-consenting humans.

Tuskegee Syphilis Study

A « Necessary Evil » ?

What do we mean by « necessary »?

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

If the only way to save your daughter's life is to kill another child to harvest her organs, this would not be morally justified even if it was « necessary » to achieve a worthy goal.

Researchers often say that animal experimentation played a major rôle in developing cures, but so did research on non-consenting humans.

They may have been « necessary » to advance science, but they were still not morally justified.

Tuskegee Syphilis Study

« We must do *anything we can* to save the lives of our children. »

« 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 to save « our » children.

- **outlaw cars and pools** (which are the major cause of children deaths).

« 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 to save « our » children.

- **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.

« 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 to save « our » children.

- **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.

Experiments on non-consenting individuals is not a necessary evil,
but a useful evil.

“We must do *anything we can* to save the lives of our children.”

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 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

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

- Ignorant
- Violent

Far from being violent, animal advocates oppose the use of violence against sentient beings (including humans).

By picturing defenders of animals as violent people (even as terrorists), 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 resarcher has ever been killed** by those who seek to protect and defend animals.

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

- Ignorant
- Violent
- Anti-Progress

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

- Ignorant
- Violent
- Anti-Progress

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 medecine much faster without our strong regulations on human trials, but we consider this would be ill-gained knowledge.

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

- Ignorant
- Violent
- Anti-Progress
- Anti-Science

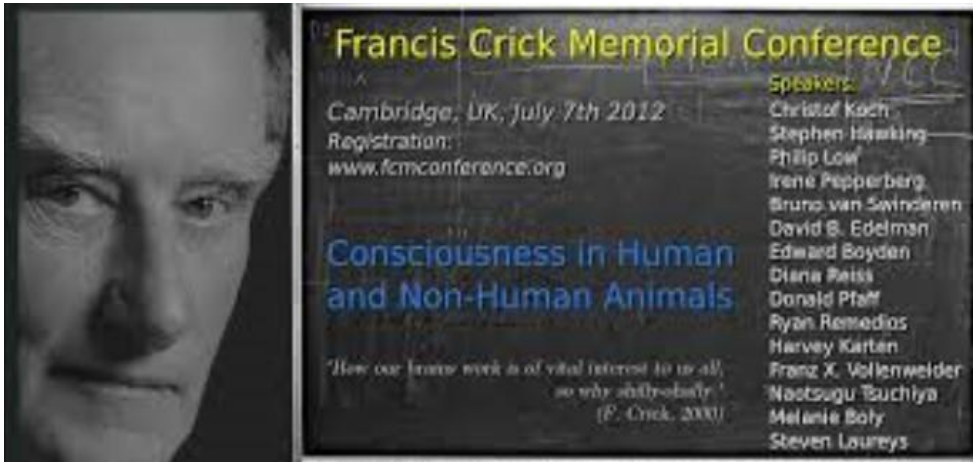
Opponents to harmful and invasive research on other animals are represented as...

- Ignorant
- Violent
- Anti-Progress
- Anti-Science

NOT TESTED ON ANIMALS

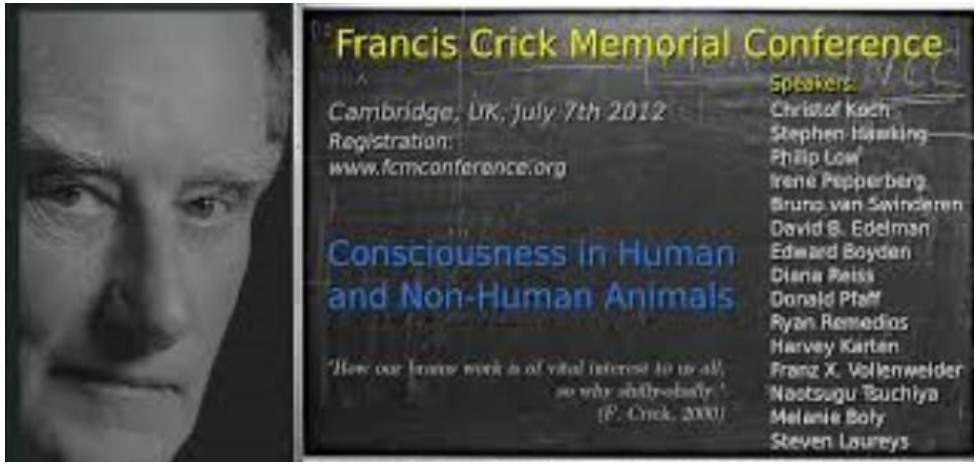
Far from being anti-science, opposition to animal research is based on the **best available research on animal consciousness** which strongly indicates that there is no metaphysical gulf between humans and other animals.

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**. »

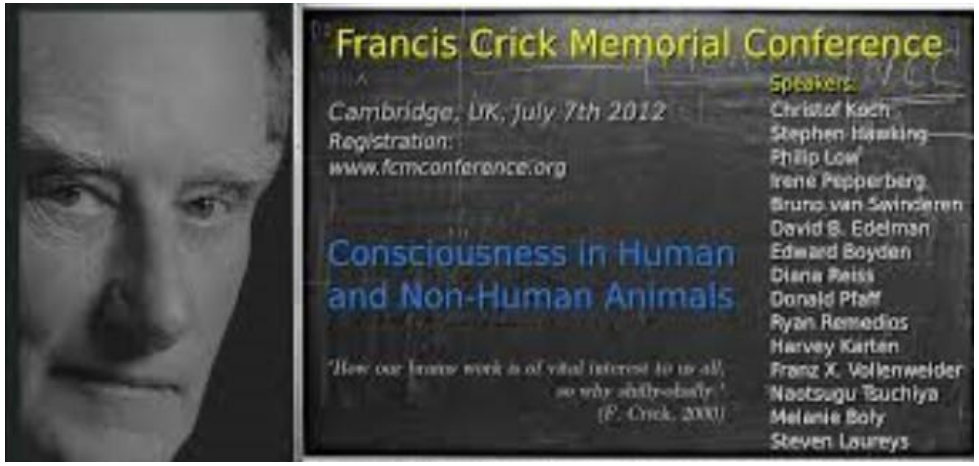
The Cambridge Declaration on Consciousness



« 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

The Cambridge Declaration on Consciousness



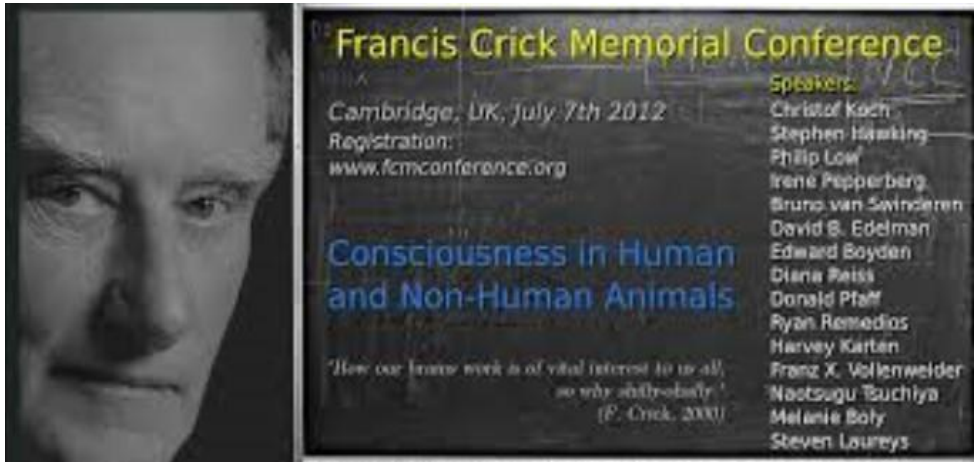
« Convergent evidence indicates that non-human animals have the neuroanatomical, neurochemical, and neurophysiological substrates of conscious states along with the capacity to exhibit intentional behaviors. Consequently, the weight of evidence indicates that **humans are not unique in possessing the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

The Cumulative Argument for Animal Consciousness

Given

1) **Evolutionary continuity**
2) **Behavioral analogies**
3) **Similarities in neurological substrates**

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**. »

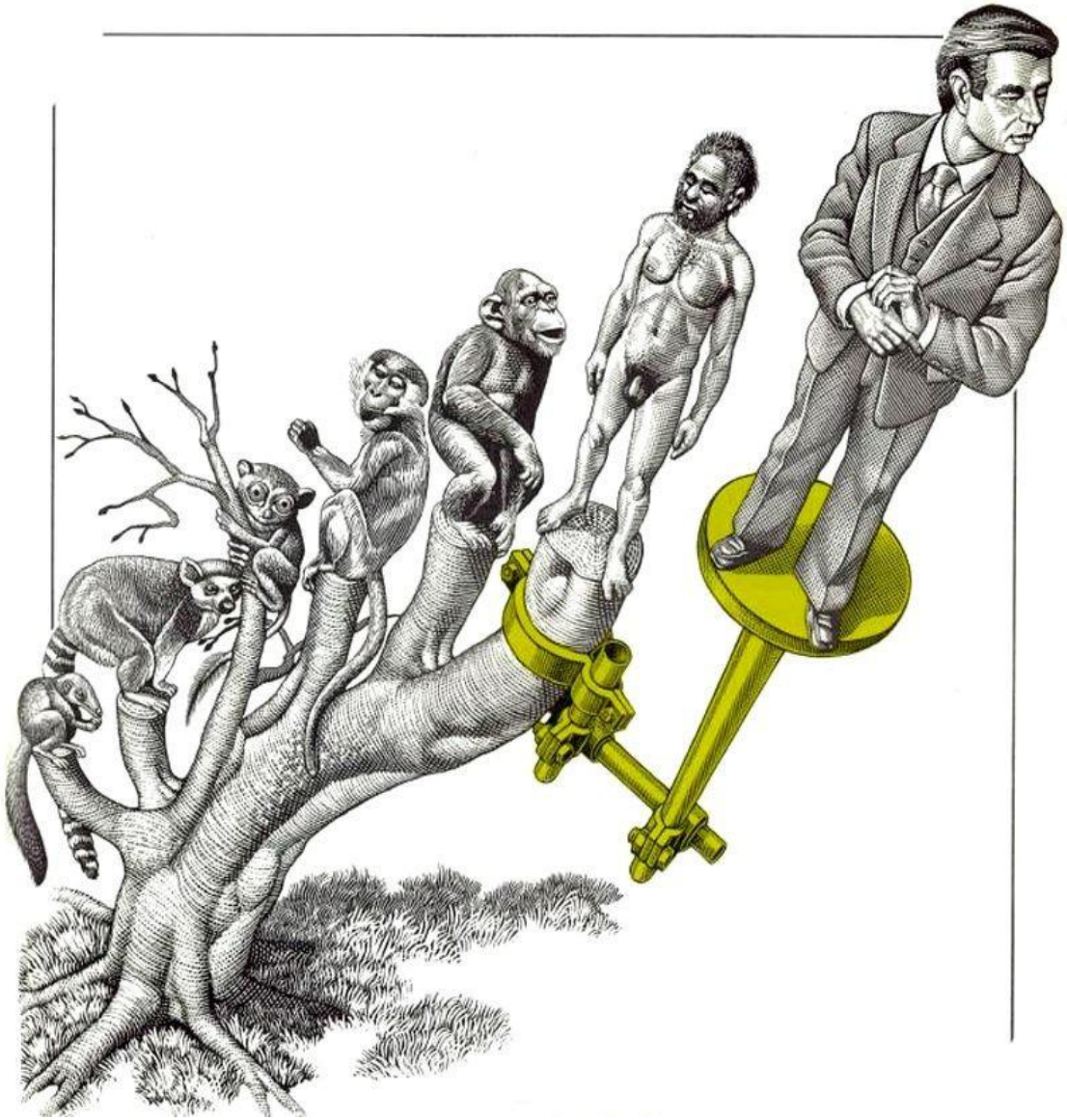
The Cumulative Argument for Animal Consciousness

Given

1) **Evolutionary continuity**
2) **Behavioral analogies**
3) **Similarities in neurological substrates**

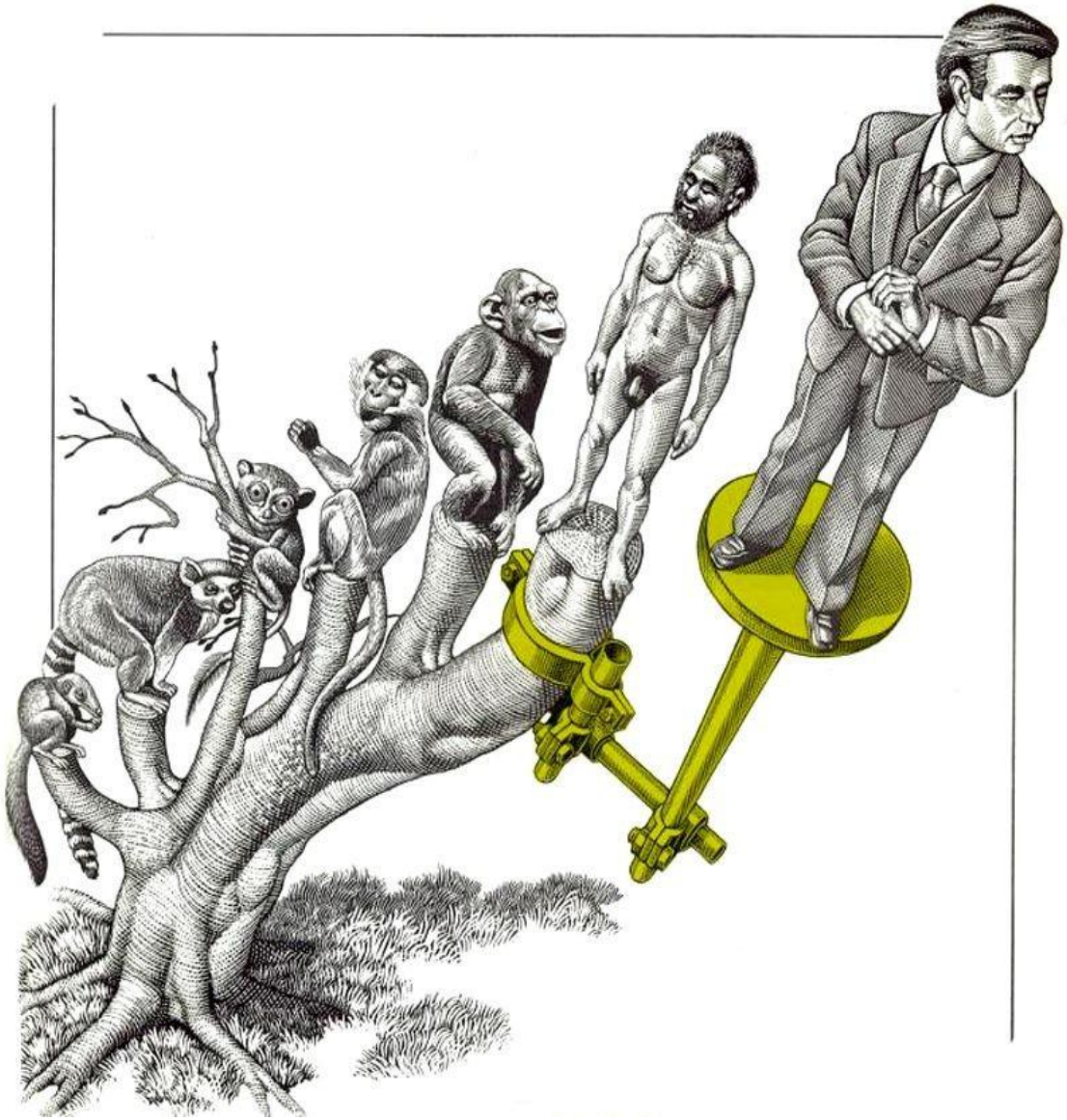
There is no scientifically respectable way to deny consciousness to, at least, mammals, birds and reptiles.

Human Exceptionalism and Supremacy



« Human Superiority », Illustration,
New Scientist, 13 May 1976

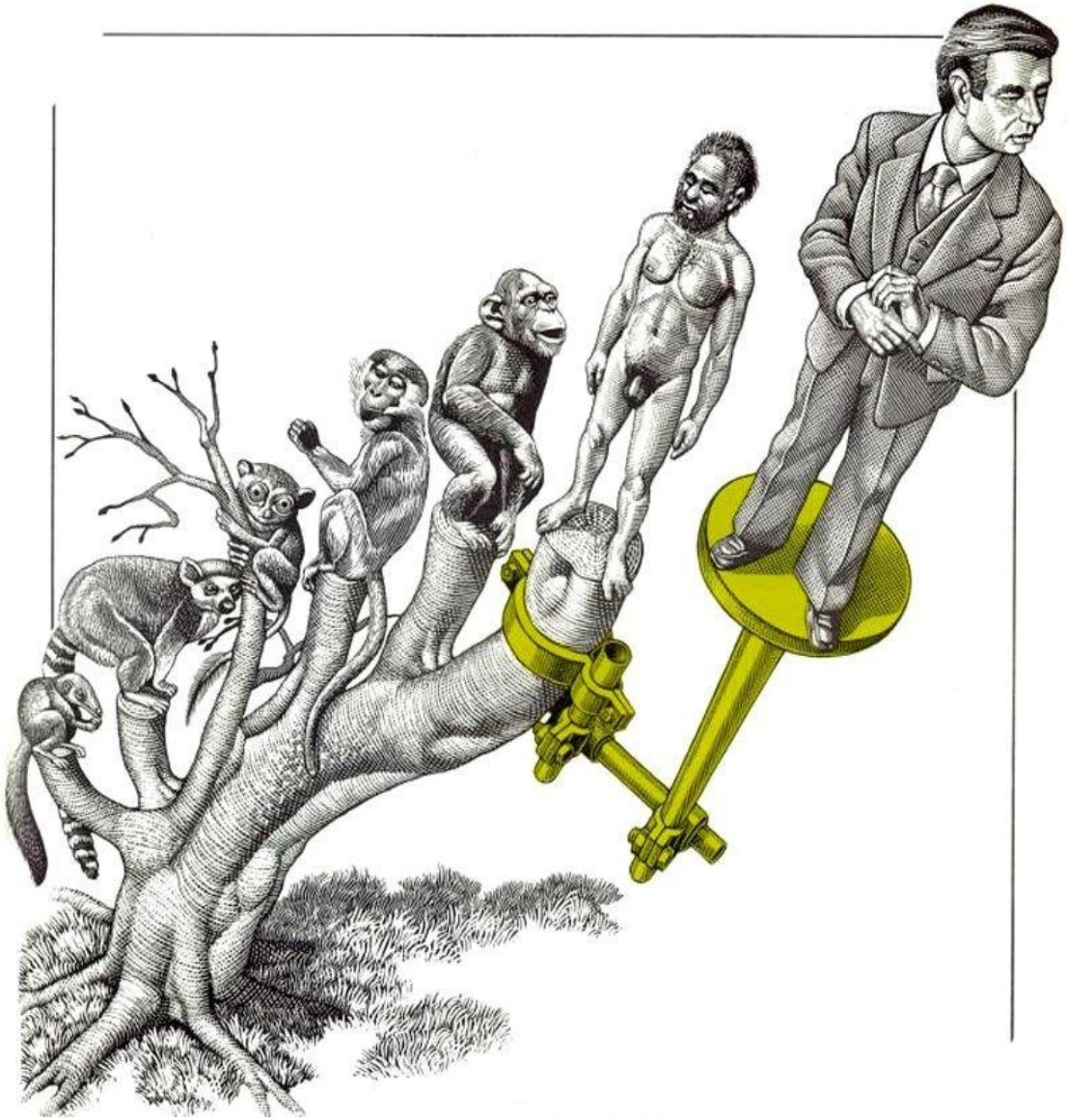
Human Exceptionalism and Supremacy



« Human Superiority », Illustration,
New Scientist, 13 May 1976

Arguments in favor of animal rights are not based on religion or bad science, but on **the best science available on animal minds**.

Human Exceptionalism and Supremacy

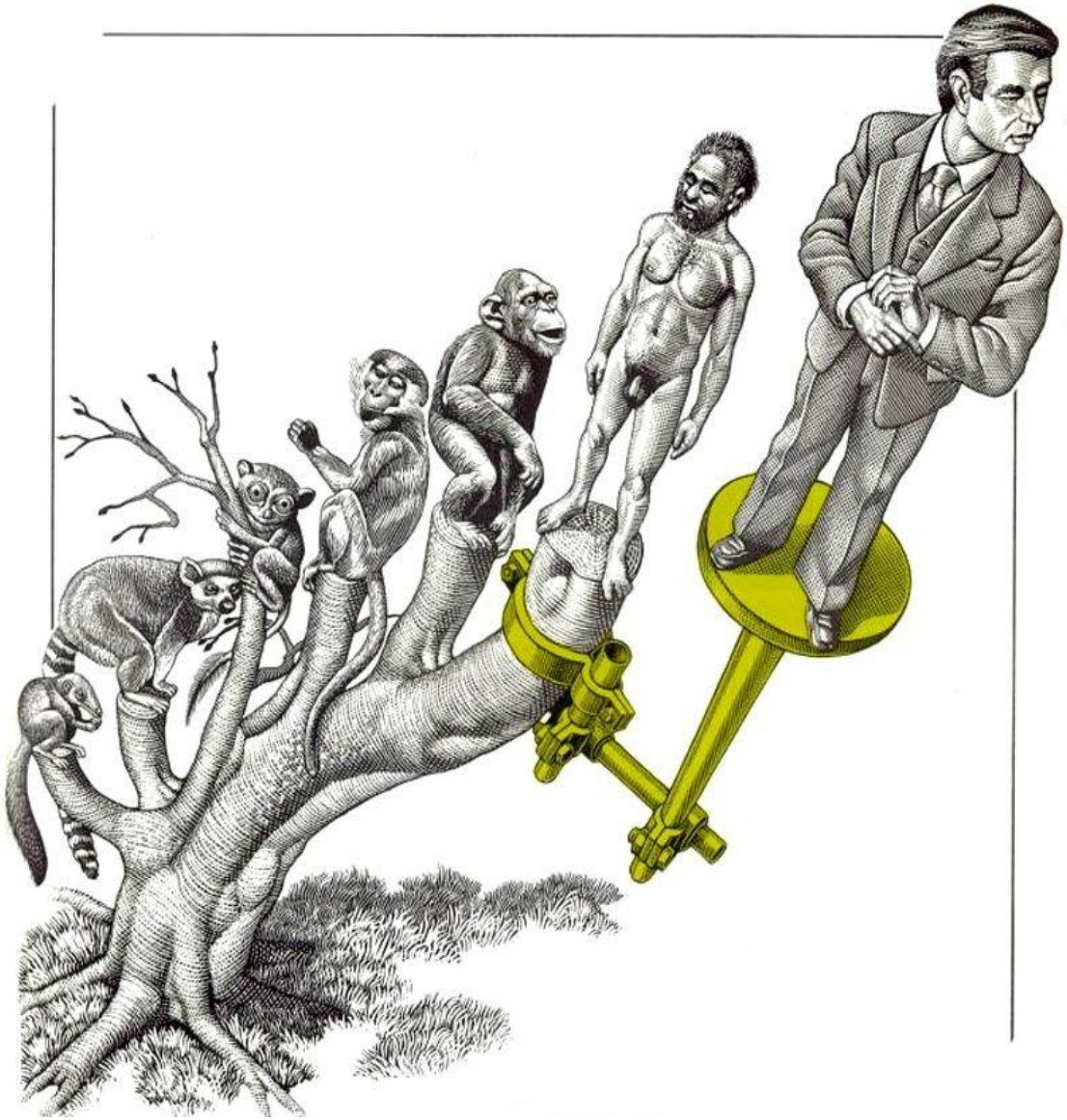


« Human Superiority », Illustration,
New Scientist, 13 May 1976

Arguments in favor of animal rights are not based on religion or bad science, but on **the best science available on animal minds**.

But ethical justications for **animal research rely on very old theological assumptions**; such as human exceptionalism and human supremacy.

Human Exceptionalism and Supremacy



« Human Superiority », Illustration,
New Scientist, 13 May 1976

Arguments in favor of animal rights are not based on religion or bad science, but on **the best science available on animal minds**.

But ethical justications 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** ?

The Ethical Way Forward

Research involving animal subjects should :

The Ethical Way Forward

Research involving animal subjects should :

- Follow the same **general guidelines** and **oversight requirements** as research involving vulnerable human subjects (eg. children).

The Ethical Way Forward

Research involving animal subjects should :

- Follow the same **general guidelines** and **oversight requirements** as research involving vulnerable human subjects (eg. children).
- Be for **therapeutic purposes only** (i.e. to help the individual himself, not his or her species).

The Ethical Way Forward

Research involving animal subjects should :

- Follow the same **general guidelines** and **oversight requirements** as research involving vulnerable human subjects (eg. children).
- Be for **therapeutic purposes only** (i.e. to help the individual himself, not his or her species).
- Be **transparent** and **publicly available** to make an open, honest and democratic debate possible.

The Ethical Way Forward

Research involving animal subjects should :

- Follow the same **general guidelines** and **oversight requirements** as research involving vulnerable human subjects (eg. children).
- Be for **therapeutic purposes only** (i.e. to help the individual himself, not his or her species).
- Be **transparent** and **publicly available** to make an open, honest and democratic debate possible.

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

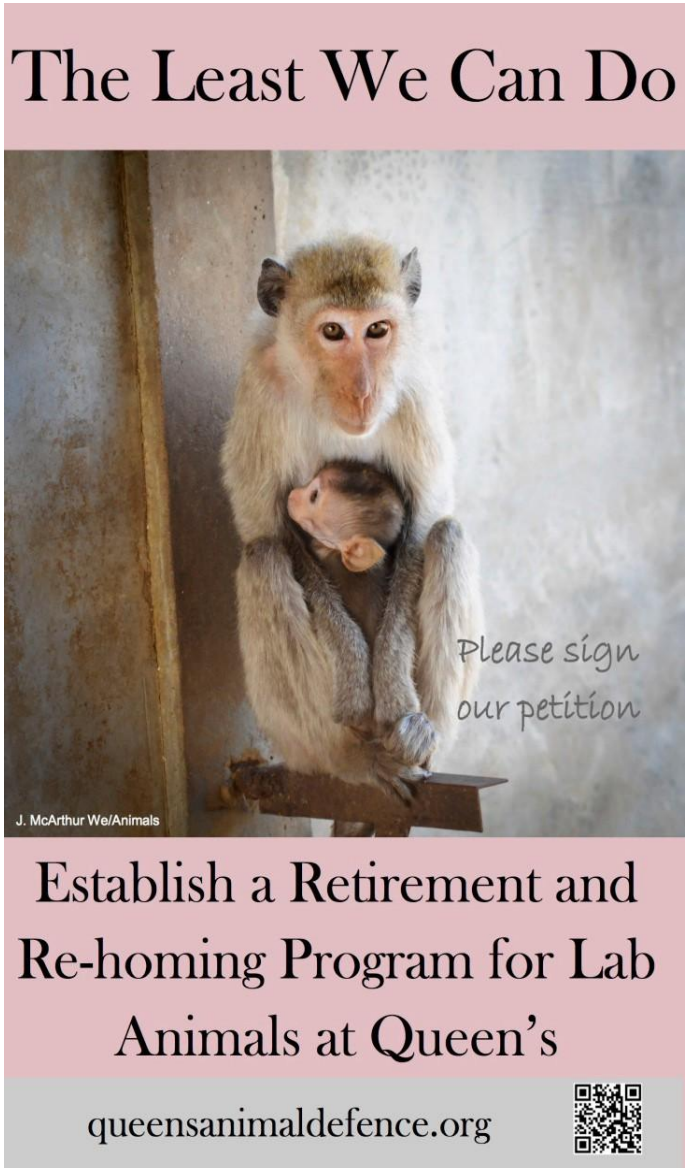
The Ethical Way Forward

Research involving animal subjects should :

- Follow the same **general guidelines** and **oversight requirements** as research involving vulnerable human subjects (eg. children).
- Be for **therapeutic purposes only** (i.e. to help the individual himself, not his or her species).
- Be **transparent** and **publicly available** to make an open, honest and democratic debate possible.

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

The public should be informed when **charities** and **goverments** are involved in financing harmful and deprivational research on vulnerable selves.



The Ethical Way Forward

Research involving animal subjects should :

- Follow the same **general guidelines** and **oversight requirements** as research involving vulnerable human subjects (eg. children).
- Be for **therapeutic purposes only** (i.e. to help the individual himself, not his or her species).
- Be **transparent** and **publicly available** to make an open, honest and democratic debate possible.

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

The public should be informed when **charities** and **goverments** are involved in financing harmful and deprivational research on vulnerable selves.

In the meantime, we must **create sanctuaries** for animals who outlive their lab usefulness.

Developing Alternatives

ALTEX
ALTERNATIVES TO ANIMAL EXPERIMENTATION

ANIMALS IN SCIENCE POLICY INSTITUTE

Johns Hopkins University
Center for Alternatives to Animal Testing

neavs™
Humane Science is Superior Science

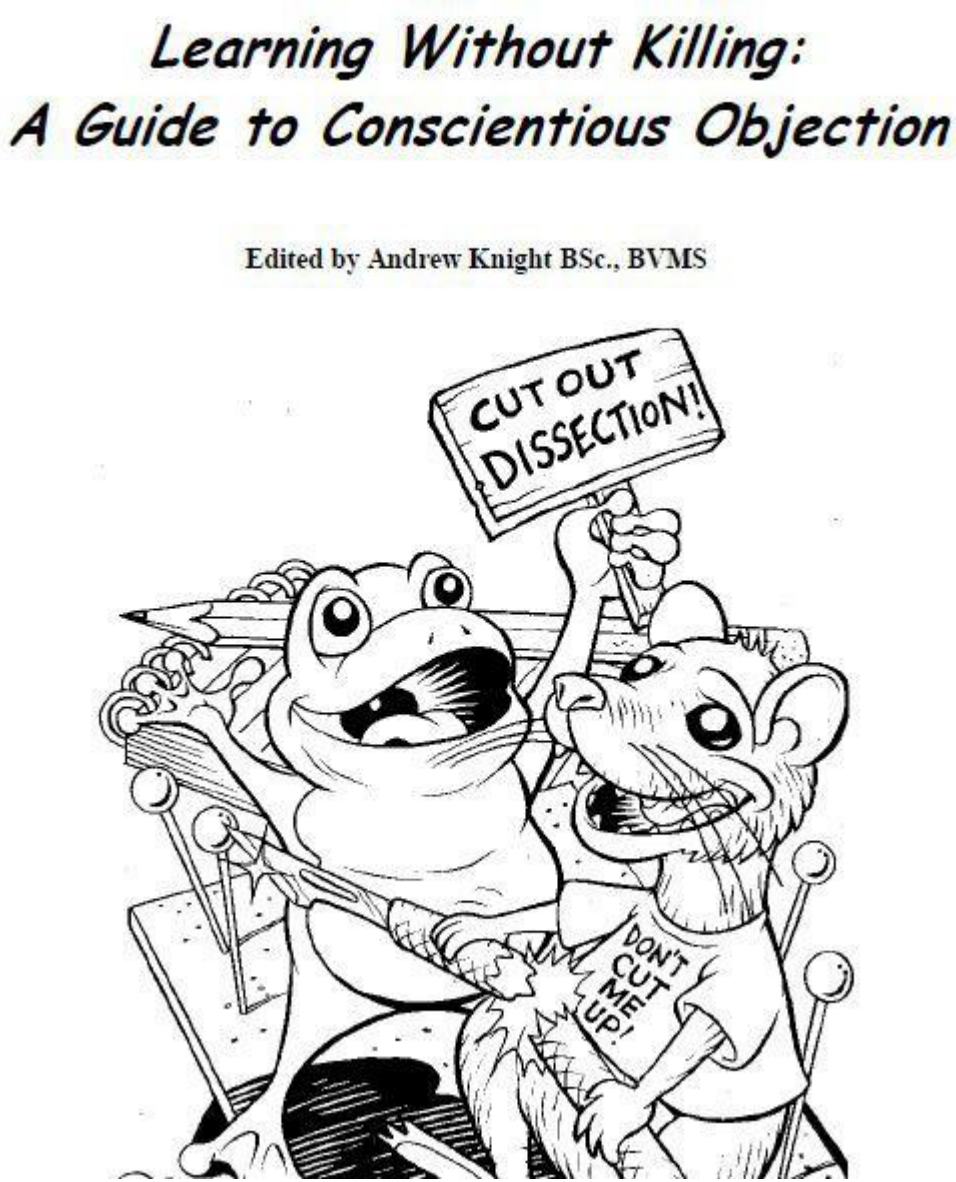
BUAV
campaigning to end animal experiments

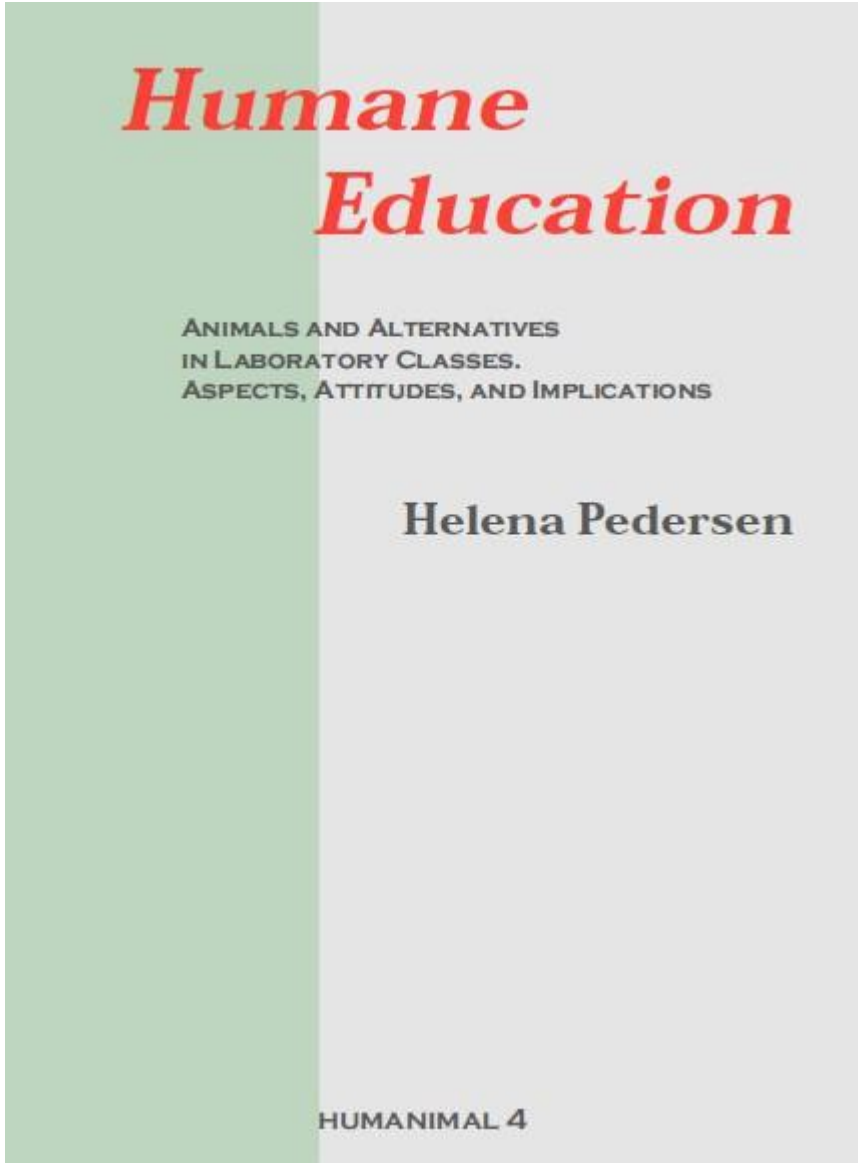
aavs American Anti-Vivisection Society
Ending the Use of Animals in Science

NAVS
ADVANCING SCIENCE WITHOUT HARMING ANIMALS

PhysiciansCommittee for Responsible Medicine

Finding other ways to advance knowledge





nature International weekly journal of science

US government takes animal-welfare data offline

The US Department of Agriculture will no longer make lab inspection results and violations publicly available, citing privacy concerns.

Sara Reardon

03 February 2017