Using Practical Ethics to Examine the Case of 'Cats on Speed'

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Introduction. In 2001, controversy arose over animal experiments performed by a veterinarian at The Ohio State University. These experiments involved infecting cats with feline AIDS virus in order to study why methamphetamine users are more affected by the symptoms of AIDS than non-users (Gavrilin, Mathes, & Podell, 2002). By July 2002, the primary investigator of these experiments, Dr. Michael Podell, sent shockwaves through the scientific community by announcing his decision to abandon his National Institutes of Health (NIH)-funded research due to prolonged harassment and death threats from animal rights activists. According to biomedical scientists polled by *Nature* magazine, over 60% say that animal-rights activists present a real threat to essential biomedical research (Gewin, 2002).

In order to address this controversy, the following general consensus formed: if it is possible to use other methods that do not involve animals, do it. In fact, the first federal law regulating animal research was passed by Congress in 1966 and is now known as the Animal Welfare Act (AWA). The AWA provides that whenever animals are being used the protocol must include: "(1) a justification for using animals, the number of animals to be used, and the species chosen, (2) the procedures or drugs to be used to eliminate or minimize pain and discomfort, (3) a description of the methods and sources used to search for alternatives to painful procedures, and (4) a description of the search used to ensure that the experiment does no unnecessarily duplicate previous research" (Institute of Medicine, 1991).

Due to the third requirement of the AWA, many alternative models have been created to be used in lieu of animal models in order to collect the same data. These alternatives include computational modeling, *in vitro* methods like organ-on-a-chip, and biomaterials that can better model the complexities of the human body (Barré-Sinoussi & Montagutelli, 2015). These models offer very sophisticated ways to mimic the 3D structure of tissues. However, often times as studies

become more complex, investigating physiological functions and systematic interactions between organs requires a whole organism. Currently, no *in vitro* model is available to fully recapitulate these interactions, thus making experiments on animals still necessary (Barré-Sinoussi & Montagutelli, 2015). At Harvard University, Dr. Donald Ingber states that he doesn't know a single scientist who is not trying to reduce, refine, or replace animal use whenever possible, but that animal models "are absolutely essential for what's going on in medical research now. If animals stop being used, progress in medical research would slow dramatically and possibly screech to a halt in some cases. Many of the advances that we take for granted now have happened through the use of animal models" (Burnell, 2013). Without the use of animals in research, patients with lethal diseases, such as type 1 diabetes that affects 1.25 million Americans, would be left with little hope for a cure. Since animals cannot yet be eliminated in medical research, the use of animal models is heavily regulated to protect the animals and ensure no mistreatment of animals occurs in research laboratories.

I will study Podell's use of a feline model to study the AIDS virus through the lens of Peter Singer's ethical framework, known as practical ethics, to show that Podell cannot be held morally responsible for the use of animals in experimentation. Specifically, I will illustrate this claim by examining the basis of equality, specifically speciesism, under the assumptions that ethics are universal and based in reason, focusing on how Podell had a moral responsibility to the animals being used for his experiments but this responsibility was outweighed due to his ability to provide equal consideration of interests, both human and animal.

Background. Dr. Michael Podell's research involved exploring links between human drug use and susceptibility to HIV. Around this time period, the global HIV/AIDS pandemic had claimed the lives of an estimated 35 million people. *In vitro* studies had begun to suggest that there may be

a relationship between methamphetamine (meth) abuse and HIV/AIDS. Meth was the second-most-popular illicit drug and, in the US, had a 1.5 million regular users and ~11 million reported having used it at least once in their lifetime (Passaro *et al.,* 2015). This high prevalence can be attributed to its low cost, ease of use, and longer duration of psychoactive effects. Podell's previous research demonstrated how the feline disease, FIV, closely mirrors the neurodegenerative effects of HIV infection, making cats a great surrogate for studying HIV neuropathology. As a result, Podell received a $1.7 million grant from NIH.

Podell's research garnered the attention of a Columbus advocacy group, Protect Our Earth's Treasures (POET), and underwent an investigation to ensure using cats was the best course of action. Eventually, officials at NIH agreed with Podell's plan, but by then POET had given the research the catchy name, "Cats on Speed," and PETA put the experiment on its action alert list; thus, the experiment was doomed from the start (Stolberg, 2002). As a result, Podell began receiving the occasional threats, including a photograph of a British scientist whose car had been bombed, with the words "You're next" written on it (Stolberg, 2002). Less than one year after the experiments started, Podell announced his resignation and stepped away from research entirely.

Literature Review. There is currently a vast variety of information available to contribute to the animal-rights debate. While the public remains split on this topic with both sides raising valid points, most people agree that animals do count in the moral framework. The controversial question, especially in the case of animal research, is how much do they count? "Should the needs and interests of other animals weigh as heavily in the balance as those of humans?" (Singer, 2011). Also, who is responsible for answering these questions? The majority of the analyses focuses on the cost-benefit of animal's lives versus human lives; scholars have yet to consider the weight of these lives.

In *Animal Rights Pressure on Scientists,* Steven Teitelbaum states that "Podell's research represents good science, based on sound hypotheses, developed with appropriate methods, and addressing a societal need" (Teitelbaum, 2002). He goes on to argue that Podell had previously shown that the feline disease, FIV, closely mirrors the neurodegenerative effects of HIV infection, making cats the best available option to model and answer questions about HIV neuropathy. This research was just beginning to find important information on how the viral load of FIV/HIV in the brain leads to dementia until Podell's abrupt retirement when, in Teitelbaum's option, the pressure from animal-rights activists prevented important questions about AIDS and drug abuse from being answered. Here, Teitelbaum considers that because Podell never broke any laws and practiced good science, how he behaved was not morally incorrect.

To further discuss the debate of using animals in research, Simon Festing and Robin Wilkinson go on to explain the reasons scientist must use animals and what is currently being done today to draw a truce between activists and developmental research in *The ethics of animal research.* In 1998, the United Kingdom introduced local controls that add an addition review process by providing independent ethical advice, providing support to licensees regarding animal welfare and ethical issues, and promoting ethical analysis to increase awareness of animal welfare issues. These controls encouraged the application of the 3Rs—replacement, reduction, and refinement of the use of animals. Since the enactment of these controls, extensive polling shows that in 2005, 89% of people were ready to accept the use of animal in medical research if the research is for serious medical purposes, suffering is minimized, and alternatives were fully considered. However, this was not enough for animal-rights groups, since these principles still allowed the use of animals in research. Due to the release of misleading and inaccurate information about the use of animals in research by seemingly respectful mainstream groups, society was

pushing authorities to quickly adopt alternative methods without releasing that pushing for adoption so quickly could endanger human health. Festing and Wilkinson go on to argue that "the benefits of animal research have been enormous and it would have severe consequences for public health and medical research if it were abandoned," but it is important that researchers maximize refinement and reduction of animal experiments until it can be replaced (Festing & Wilkinson, 2007).

These scholars agree that the use of animal experimentation for studying human health is morally acceptable as long as the law is obeyed with the practice of "good science" and the upholding of the 3Rs. However, despite their agreement, they fail to consider the weight that the lives and suffering of the cats used for Podell's experiments has on the moral scale. While it is important to consider Podell's actions in regard to what was considered acceptable by the government, I will focus my analysis on his experiments, specifically the use of a feline model, which was previously found morally ambiguous by society. With this, I will elucidate the moral obligations that scientists have to both animals and people.

Conceptual Framework. A famous philosopher, Peter Singer, wrote that we should show "equal respect for interests" regardless of who has the interest (Singer, 1993). He advocated for a certain kind of equality between all sentient beings that caused a shift in moral areas that used to be reserved only for humans to include all beings that can experience and feel pain and pleasure (Welin, 2008). Using this belief, since humans have a larger number of interests than, say, a mouse, more is lost if a human dies than a mouse. However, Singer's argument states that if enough mice die it may outweigh a single human's life, as demonstrated in Figure 1. This new mindset, called

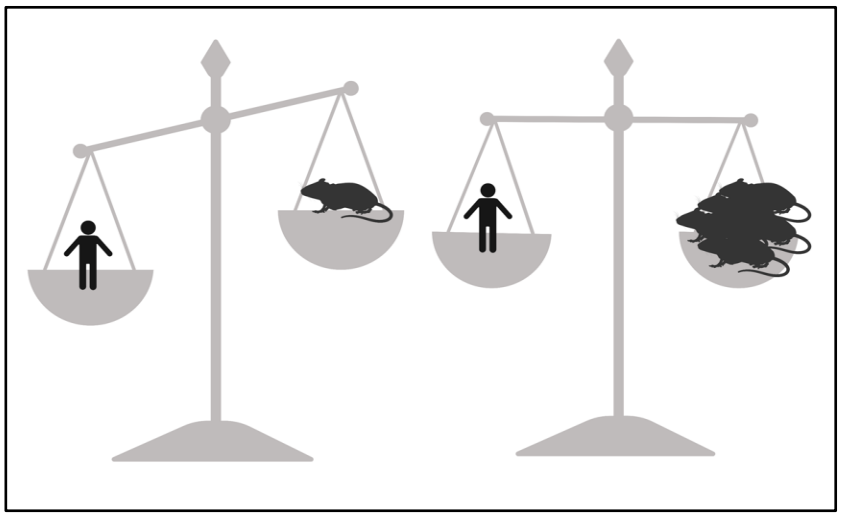

Figure 1: Singer's Moral Scale.

practical ethics, split the public and caused an uproar over using animals in scientific experiments, which is a practice that can be traced as far back as the fifth century B.C. (Barré-Sincoussi & Montagutelli, 2015).

Practical ethics can be used to determine both equality and the morality in taking life. Because Singer considers equality to be measured in both interests and suffering, this allows for the careful consideration of an animal's value without speciesism biasing our opinions. Often times scientific experiments using animals can be justified if they provide a great benefit to humans since the humans have more interests than animals, thus tipping the theoretical scale in humans' favor. However, this idea can be severely challenged when pointed out that some intellectually disabled humans lack the same traits that animals lack, yet we do not feel that it is permissible to subject them to experimentation. Nonetheless, animals are replaceable so if the animals are not self-conscious and are killed painlessly and without side effects, such as distress to family members, then through practical ethics it is not considered morally wrong to kill some animals (Singer, 1993).

In what follows, I will draw on practical ethics in my analysis of Podell's use of a feline model for research that allows me to determine whether the weight of the cats' interests was more than the potential benefit to those infected with the AIDS virus.

Analysis. Despite the public outcry, Podell was not morally wrong in using a feline model for research because the interests of the animals used were outweighed by the interests of the 1.2 million humans infected with HIV on Singer's moral scale. However, no one was surprised when his work touched a nerve due to his proposed experiments involving the infection with FIV, a close cousin of the AIDS virus, in as many as 120 cats. The animals would then be injected with methamphetamine, otherwise known as speed or crystal meth, to determine whether the drug accelerated the virus's spread throughout the body. Podell, a trained veterinarian, would then put the cats under anesthesia to study changes in their brains and afterwards would put them to death (Stolberg, 2002).

Robin Russell, president of Protect Our Earth's Treasures (POET), a Columbus advocacy group that led the local protests stated three reasons for the protests: experimenting with cats, that Podell was a veterinarian, and the bases of the research (Stolberg, 2002). First, as mentioned, Podell was experimenting with cats, a common, beloved household pet. He was also a veterinarian, whom society expected to heal animals, not experiment on them. Finally, the research topic involved drug-abusing AIDS patients which does not garner nearly as much sympathy as other research topics.

When Russell confronted Podell about the study, Podell stated that the study could not be done in people and that he did not take the idea of sacrificing cats lightly. In fact, he states that he did an ethical calculation and said, "It's a small number of animals to get information to potentially help millions of people" (Stolberg, 2002). Through the lens of practical ethics, the interests of the humans who would benefit from this research outweigh the interests of the cats used in the experiment, thus proving that Podell did not behave morally wrong throughout his studies. The following paragraphs evaluate the ethical considerations necessary, namely speciesism, animal

suffering, and alternative approaches during experimentation, and explain how Podell did not violate any moral obligations to the felines used.

Speciesism. In order to ensure speciesism didn't bias any experiments, Podell worked closely with NIH officials to weigh the interests of the animals used and refine his experiments to minimize the number of animals used. In practical ethics, Singer defines equality as the "principle of equal consideration of interest," which essentially means that all who are affected by our actions should have their interests weighed evenly (Singer, 1993). This means that animals should be a part of this consideration, since suffering can be considered an interest; however, different species will differ in the level of suffering that they can experience. For example, cats are self-conscious and rational to a degree. This includes demonstrations of forward planning, cooperation, deception, and puzzle solving. Thus, cats have more interests and, as a result, more weight on the moral scale than, say, rodents. This is why, traditionally, cats only make-up 3% of the animals used in research as shown in Figure 2. Podell understood the ethical weight of these cats and, because he could replace the animals as a model to conduct research, he reduced the number of cats experimented on to only 120 cats. This may seem like a lot, but over 1000 million animals—including mice, rats, frogs, dogs, cats, hamsters, guinea pigs, monkeys, fish, and birds—

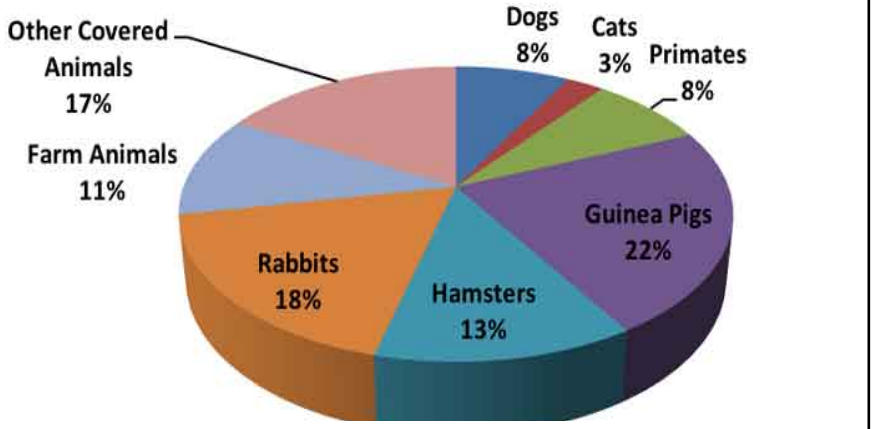

Figure 2: Breakdown of Animals Used in Research and Teaching in the United States in 2015. Reprinted from National Anti-Vivisection Society, 2016.

are killed in U.S. laboratories alone and multiple repeated trials are necessary for any significant conclusions to be drawn (Wanetik, 2000). This reduction and consideration by both Podell and the NIH officials ensured that no animals were being exploited due to human superiority.

Animal Suffering. Podell used Singer's moral scale to minimize the felines' suffering, thus allowing the interests of humans infected with HIV to more heavily outweigh those of the animals used. Practical ethics states that the same principles that apply for humans should also apply for animals, but to a lesser degree. Therefore, when it comes to harming animals, practical ethics ensures that it should be avoided absent strong reasons. However, animal death can be morally correct if under the correct conditions. First, there must be an extremely strong benefit to human's interests and to society as a whole. In the experiments on cats, this benefit involved the approximately 1.2 million people infected with HIV since the results of these experiments could lead to better treatment of the disease. Therefore, on Singer's "moral scale," the interests of the few cats used is heavily outweighed by the interests of patients (and patients' families) interests, as shown in Figure 3. POET and other animal-rights activists were unable to see the long-term interests from this research and, as a result, could not justify Podell's research as morally correct. Therefore, to further tip the scale towards being morally just, Podell went before an ethics committee to show that he had considered alternatives and would not subject the animals to any unrelieved pain (Gewin,

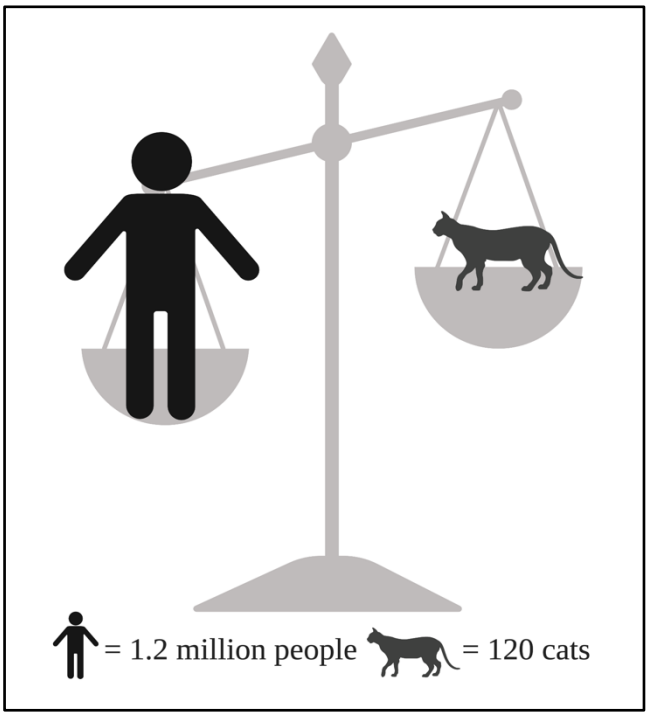

Figure 3: Weight of moral interests in Dr. Michael Podell's experiment.

2002). Because the felines would not suffer at all, they no longer had many large interests to even out the scale. This again proves that Podell behaved in a morally correct manor.

Alternative approaches. Before receiving the NIH funding to perform experiments on felines, Podell had shown extensive research explaining why the feline model is non-negotiable for conducting this research, thus satisfying the moral obligation of looking for alternative approaches. FIV in cats has the unique ability to rapidly and persistently infect the cat's central nervous system (CNS) thus offering an excellent experimental model to investigate the course of neuropathogenesis over time. Also, FIV-induced brain disease is viral strain dependent, thus resulting in progressive immunodeficiency, increasing early peripheral-but stable-brain viral load allowing preferential effects on the developing nervous system. This benefit allows scientists to gather quantifiable behavioral and neurophysiologic impairment that is not directly linked to neuronal infectivity (Podell *et al.,* 2000). Podell wrote that "the cat can serve as an animal model to study the effects of lentiviral infection on the [central nervous system] prior to closure of the blood-brain barrier without the need for fetal manipulation" that could not be studied in humans and non-human primates which have closure of the blood-brain barrier during the early stages of gestation (Podell *et al.*, 2000). None of this data could have been replicated with the technology then available to Podell; however, he attempted to perform many studies on feline astrocytes beforehand to gather as much preliminary data as possible. Because there was no alternative to the use of the feline model for Podell's studies, the deaths of the felines were unavoidable, but not morally incorrect.

Points of contention. I have argued that Podell's use of 120 cats for research was morally right; however, animal-rights activists specifically targeted Podell's work because it involved researching a condition that would help humans who voluntarily took methamphetamine. They

were angered that, because of the choices of these humans, cats were being involuntarily sacrificed for research (Stolberg, 2002). This idea touches on care ethics with the central idea being that we owe less to drug users than we do to non-users because people can voluntarily choose to use drugs. However, most of the people protesting have never been explicitly involved in research and called for the use of voluntary human subjects. Yet this argument falls flat against practical ethics because this would actually be more morally incorrect because humans have equal weight in interests despite their drug use, assuming that they are still sentient and self-conscious, and treatment on them before validation could result in their death.

Conclusion. Practical ethics can be used to shine light on the morality of Podell's experiments on cats in 2000 to conclude that Dr. Michael Podell was not morally wrong in his experimental plan, despite the public outcries saying otherwise. Practical ethics, which allows for Peter Singer's ideas of equality, can be used to measure the weight of different subject's interests and compare them. Specifically, the interests of 1.2 million people outweighed the interests of 120 humanely euthanized cats. Podell's actions showed that he was continuously checking his procedures to ensure that he was maintaining the 3Rs, replacement, reduction, and refinement, whenever possible and was willing to work with the protestors to find a better method if there was one available. Despite Podell doing nothing morally incorrect, he was publicly shunned and had to completely give up research due to numerous death threats aimed towards him and his family. Practical ethics offers a framework to define the weight of using animals in experiments and determine whether those experiments are morally just. This case points to an ambiguous area of moral duty in which scientists and the public disagree on animal testing and for which elucidation is necessary in order for the advancement of human health.

Word count: 3897

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