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Testing, Testing 1,2,3

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Testing, Testing 1,2,3

Abstract

Overview: Since childhood, most human beings have been raised on the foundation of accepting and adhering to the “Golden Rule” in everyday aspects of life. We have grown to appreciate the idea that one should treat others as one would like others to treat oneself. The People for the Ethical Treatment of Animals (PETA) reports that more than 100 million animals every year suffer and die in cruel chemical, drug, food and cosmetic tests; lab experimentations and lessons in the sciences; medical training exercises; and curiosity-driven medical experiments. Why do human beings sit back and do nothing, knowing that these innocent creatures who so greatly benefit the world are locked up in cold cages? The animals ache with lonesomeness, suffer in agony, and so desperately yearn to be free and loved. Instead, all they are able to do is wait in terror of the next excruciatingly painful procedure that they must tolerate. The stress and boredom these animals are compelled to deal with everyday causes many of them to exhibit neurotic behaviors, including ceaselessly spinning in circles, pulling out their own hair, and biting their own skin. After enduring lonely lives filled with pain, many of them will be killed. At what point will human beings step up and act in these animals’ best interest; at what point will we treat them the way we know we would want to be treated?

Animal rights activist, Charles R. Magel detests the lack of logic behind animal testing. “Ask the experimenters why they experiment on animals, and the answer is: ‘Because the animals are like us.’ Ask the experimenters why it is morally okay to experiment on animals and the answer is: ‘Because the animals are not like us.’ Animal experimentation rests on a logical contradiction” (Magel). According to Robert Waterston, a prominent American geneticist, in his article, “Initial Sequence of the Chimpanzee Genome and Comparison with the Human Genome,” “There is only a slight difference, roughly 2%, between the genome of a human being and the genome of a chimpanzee” (Waterston 73). We should be promoting animals’ happiness and well-being and treating them as if they were our brothers and sisters, not promoting their demise.

Accordingly, in this paper I will argue that researchers who perform animal testing for medical advancements should understand that harming animals for the benefit of humanity violates basic bioethical principles and should therefore be stopped; further, animals cannot defend themselves and for this reason, humans should take on the responsibility of being the voice for the animals, promoting alternatives to animal testing, and acting in the animals best interest, promoting for these animals the same principles we insist on for humans, the principles of beneficence, nonmaleficence, and justice. Accordingly, this paper will examine (1) the reality of animal testing and what goes on behind closed doors, (2) the life-saving alternatives that are proven to be more cost effective and comprehensible, (3) the lifelong implications testing has on animals who survive, (4) the inefficiency of current laws regarding animal testing, and (5) why this destruction of lives is not justified based on the moral standing of animals as compared to humans.

Keywords

Writing

Eugenia Hogenkamp

Testing, Testing 1,2,3

Since childhood, most human beings have been raised on the foundation of accepting and adhering to the “Golden Rule” in everyday aspects of life. We have grown to appreciate the idea that one should treat others as one would like others to treat oneself. The People for the Ethical Treatment of Animals (PETA) reports that more than 100 million animals every year suffer and die in cruel chemical, drug, food and cosmetic tests; lab experimentations and lessons in the sciences; medical training exercises; and curiosity-driven medical experiments. Why do human beings sit back and do nothing, knowing that these innocent creatures who so greatly benefit the world are locked up in cold cages? The animals ache with lonesomeness, suffer in agony, and so desperately yearn to be free and loved. Instead, all they are able to do is wait in terror of the next excruciatingly painful procedure that they must tolerate. The stress and boredom these animals are compelled to deal with everyday causes many of them to exhibit neurotic behaviors, including ceaselessly spinning in circles, pulling out their own hair, and biting their own skin. After enduring lonely lives filled with pain, many of them will be killed. At what point will human beings step up and act in these animals’ best interest; at what point will we treat them the way we know we would want to be treated?

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these animals the same principles we insist on for humans, the principles of beneficence, nonmaleficence, and justice. Accordingly, this paper will examine (1) the reality of animal testing and what goes on behind closed doors, (2) the life-saving alternatives that are proven to be more cost effective and comprehensible, (3) the lifelong implications testing has on animals who survive, (4) the inefficiency of current laws regarding animal testing, and (5) why this destruction of lives is not justified based on the moral standing of animals as compared to humans. In a world so technologically advanced, there is no excuse for animals to lose their lives for human benefit. Through each of these topics, I will inform the reader about animal testing as well as advocate for change in the industry to treat animals with a greater respect, just as is granted to human beings.

The Reality: Bioethical Principles Ignored

Imagine having gasoline poured in your mouth, having liquid mascara painted directly on your eyeballs, having your spinal cord crushed, or having metal wires drilled into your head. These are everyday procedures that millions of innocent animals endure for hours on end in the name of animal testing for the benefit of humanity. They cry out for help, but the researchers do not listen because in their eyes, tests like these are absolutely crucial for society to be informed about drugs, cosmetics, household products, and their side effects. The sad truth is that many of these animals die and are simply disposed of as if they were garbage. There is not one human being out there who would want these things done to their body, let alone wish it upon another simply because it is understood how incredibly painful and traumatic these procedures and tests must be. So why is it acceptable to torture animals that do not have a voice of their own to fight back? According to Jeremy Bentham (1748-1832), an animal rights advocate and foundational thinker in the ethical theory of utilitarianism, “The question is not, ‘Can they reason?’ nor, ‘Can they talk?’ but rather, ‘Can they suffer?’” Suffering is a universal characteristic of all living creatures. The difference between animals and humans, however, is that animals are trustworthy enough to take on the pain a human being feels in order to minimize their suffering; human beings are too proud to reciprocate. Some might argue that it is impossible for human beings to determine when animals suffer; however, this is mistaken. A recent study at the University of British Columbia in Vancouver, Canada demonstrates that it is obvious and easy to detect when animals are in pain. According to an article in *Nature Methods*, “The international language of facial expressions, it turns out, isn’t exclusive to humans. Mice also express pain through facial expressions—and

those grimaces are remarkably similar to yours or mine” (Langford et al. 448). With these examples, we are able to see that there is something wrong with way human beings treat animals. We can see this is true with clarity if we look at the issue through the lens of commonly accepted bioethical concepts. By performing testing on animals of this nature and by just sitting back and watching living creatures suffer, human beings are violating some of the most basic bioethical principles.

First and foremost, researchers violate the principle of nonmaleficence when they cause suffering to animals for the benefit of human beings or scientific advancements. According to Ronald Munson, editor of *Foundations of Bioethics: Ethical Theories, Moral Principles, and Medical Decisions*, nonmaleficence is defined as acting in such a way that we “do not cause needless harm or injury to others.” Doctors take the Hippocratic Oath when graduating from Medical School, during which, they swear to never harm a patient, intentionally or unintentionally. Although many researchers are not medical doctors, they should be required to take the same oath before beginning their careers. If an animal is able to suffer, this alone should be enough a reason to require the medical field to lessen, or even eliminate, the animals’ pain as best we can. While this is not the current practice with animals, it is with humans, and there is no reason not to apply it to animals as well. True, some may argue that humans deserve special consideration because they are rational or perhaps because they have a sense of their own past and future, something most believe animals lack. However, to this we should note that we treat many humans who lack these qualities with respect and regard to their suffering; we should do the same for animals. Thus, researchers are disregarding the principle of nonmaleficence when they intentionally inject an animal with toxins that they know will harm it. Considering the fact that there are dozens of non-animal testing alternative methods, there is no excuse why animals should be dying unnecessary deaths.

In addition, researchers also violate the principle of beneficence when they deliberately choose to ignore alternative testing methods. The principle of beneficence requires medical professionals to “act in ways that promote the welfare of others” (Munson 894). While advocates of animal testing might argue that the deaths of animals do not matter if the lives of humans are saved, I would argue that there are many technological advancements that have been developed all over the world that do not require the use of animals for testing. I respect the argument that testing on organisms with similar body systems to humans yields the most accurate results; however, I

believe there are alternatives that are just as accurate, which I will soon explain in detail. Injuring animals the way we do in the modern world is not promoting their welfare. Essentially, readers should be aware that this boils down to the concept of murder; this should not be tolerated whatsoever.

Similarly, humans should treat animals as if we were in their situation. The animals deserve the same rights that we are so privileged to have. Animals are denied justice by researchers every day when they are taken advantage of because of their inability to communicate; the principle of justice ultimately comes down to advocating that “similar cases ought to be treated in similar ways” (Munson 897). Researchers would never pour bleach on a human being’s skin because we understand that it would cause them pain; we must regard animals in the same respect. Fairness is such an important aspect of life that many people take for granted. If we deny equality to animals, creatures so incredibly similar to us, who is to say that we should treat other human beings fairly? Consider, now, a human being that was born without the ability to speak. Of course they would have their own rights, nowadays, because other human beings would speak in his or her best interest. The same should be done for animals because every living creature is entitled to life! Human beings would not want to be denied the right to live, neither should animals simply because their vocal cords are not as complex. If society were to place no emphasis on impartiality, it would crumble and fall into chaos. In a perfect world, every living creature would be treated with equality- both human beings and animals alike. As will be discussed, we have a long way to go before humanity reaches a state of true justice because presently, humans are knowingly inflicting animals with life-changing, irreversible diseases that cause agonizing pain in human beings. Animals too suffer the pain and to cause them to do so on purpose is simply wrong.

Despite the fact that millions of laboratory animals are living in pain every day, there is a prevalent belief that the agony they are compelled to tolerate is insignificant because they have no one to care for their well-being. Tom Regan, philosopher and animal rights activist, describes the faults in the widespread judgment of contractarianism- the idea that an individual or their loved ones can ‘sign’ for their natural born rights to be acknowledged. “Since animals cannot sign, they have no rights. However, some animals are the object of others’ sentimental interests. So the animals that people care about are protected because of sentimental interests. As for laboratory animals, where no sentimental interest is present, our duties vanish...the pain they

endure is not wrong if no one cares about them” (Regan). Similarly, many people may argue that the welfare of animals is irrelevant because they contribute nothing to society. Regan continues to promote animals’ lifelong prosperity by claiming that “Animals can’t read or do mathematics. Neither can many human beings, however, and we don’t say they have less of an inherent value than do others...Dimensions of life including pleasure, pain, enjoyment and suffering, all make a difference to an individual’s quality of life. The same is true of animals that concern us; they too must be viewed as experiencing subjects of life, with inherent value of their own” (204). I agree with Regan and would further argue that every creature that has been blessed with life has a function and responsibilities to fulfill that contribute to the success of the world. Who are we to underestimate the importance of an animal? Many human beings contribute little to society, especially the uneducated and unintelligent; however, we would never argue that these individuals are to be denied their rights. Animals too deserve the protection.

The Negative Lifelong and Life-Changing Effects on Animals Who Survive Testing

Although a great majority of the animals being tested on in research laboratories ultimately die, the remaining animals that survive are extremely prone to suffer negative emotional and physiological consequences throughout the remainder of their lives. When these animals are released into the wild or put up for adoption, the conditions they are left in often cause other animals to isolate them and, at times, harm them. Lori Marino, a senior lecturer in neuroscience and behavioral biology at Emory University and an advocate of noninvasive research on dolphin and whale cognition describes how “invasive research involving marine mammals can result in confinement and social deprivation, stress and disease, mortality, and destruction of social cultures” (Marino). As can be inferred, an entire population of a specific species can be affected adversely if one member is harmed from testing. Due to the fact that many animals experience a loss of communication skills and problem solving abilities after being experimented on, they are unable to perform their specific and defined responsibilities in the wild; therefore, the population will, at worst, collapse as a whole or, at least, shun the arrival of the animal that was tested on.

Many of the destructive consequences instilled in animals during testing are ignored by researchers; therefore, these tests typically are not modified to lessen the stress and alleviate the pain animals experience. Marc Bekoff, a professor of ecology and evolutionary biology at the University of Colorado at Boulder, believes that, “Psychological suffering—chronic fear, anxiety, and distress—is another major issue, possibly the most neglected one in animal

research” (184). Learned helplessness, a form of depression that has been described in human patient populations such as victims of domestic violence, has also been identified in rodents, dogs, monkeys, and apes exposed to inescapable shocks. Based on these neuroanatomical and physiological similarities, researchers have depicted signs of depression in animals. Post-traumatic stress disorder has similarly been pronounced in chimpanzees.

Thus, thousands of animals are living in the world in fear of their every move because their brains have been wired to believe that they will be betrayed by human beings that they so desperately want to love. Depression and post-traumatic stress disorder are conditions that often cause human beings to live lonesome and progressively miserable lives. Our hearts ache for people who are afflicted with these illnesses because each and every one of us knows what it feels like to be trapped in sadness and not know how to escape it. Animals living in this agony differ because they do not have the ability to seek help as humans are blessed to be able to do. Just like us, all animals just want to live a long and happy life- and laboratory animals are constantly being denied this gift.

The Alternatives

Technology is advancing at a rapid pace throughout the modern world, and although there may be many cons associated with this fact, the pros greatly outnumber them. Technology has introduced society to numerous alternatives to animal testing that make it very possible to save millions of innocent lives, I am certain that, with time, many more will be introduced as well. Each of the many replacement methods have made the total elimination of animal experimentation a possibility. Perhaps one of the most promising alternatives is the Caco-2 cell system, which is currently predicted to eventually become the universal method of collecting toxic absorption data in the research fields. According to medical research scientists Hilgers, Conradi, and Burton’s article “Caco-2 Cell Monolayers as a Model for Drug Transport Across the Intestinal Mucosa,” “When Caco-2 cells are grown on semipermeable filters, they spontaneously differentiate in culture to form confluent monolayers which both structurally and functionally resemble the small intestinal epithelium. Because of this property, they show promise as a simple, in vitro model for the study of drug absorption and metabolism during absorption in the intestinal mucosa” (905). Presently, animals’ skin is typically used to determine what doses of drugs and other substances are toxic, including bleach and hydrochloric acid. Their skin burns and peels and they usually develop deadly infections. Given the properties of

synthetic organs and tissues, researchers should instead focus on testing chemicals on these synthetic materials.

Another hopeful alternative that could quite possibly take over animal testing as a whole is the use of computers. It is not any secret that computers can often provide answers that humanity cannot provide itself. Technology has come a long way and is allowing human beings to make progress every day in thousands of fields. For example, William Warren explains that his company, the Roger Williams Medical Center, has developed a surrogate in-vitro human immune system to help predict an individual's immune response to a particular drug or vaccine. Warren argues,

“The system essentially is a virtual human immune system that relies on human immune responses, which differ from those of other animals. The system includes a blood-donor base of hundreds of individuals from diverse populations...technologies like this system could help accelerate the process of developing an HIV vaccine and other immunizations” (Warren in Ferdowsian).

In essence, this computer system has the potential to yield much more accurate results than testing on animals because the data comes from human beings. Of course animals and humans share a majority of their DNA with each other, but obviously testing on human blood instead of animal blood is much more exact. This goes to show that there are alternatives that deliver much more accurate results than animal testing.

Computer technology can also reduce and possibly eliminate the dissection procedures often conducted in schools. This is good not only for the animals that are saved, but also because it would encourage students who dislike animal dissections to pursue science and medicine as a possible career. There has been a longstanding debate regarding the morality of dissecting animals in the classroom. Many argue that the educational value of observing an animal in such detail is unsurpassed to computers. Others argue that the scientific method can be taught without the use of dead animals; instead, researchers and medical students can make use of computers and 3D imaging in order to provide such an experience. Since dissections were first introduced decades ago, many students have been turned off from an interest in science because of their fear at having to dissect a dead animal. These are students that may have had the potential to be amazing doctors, even possibly discover the cure for a major disease, but these potential students never chose to follow medicine because they could not morally handle the sight of a dead

animal. While many may argue that medical school entails much more than a simple animal dissection, I would argue that medical schools typically focus on human dissections, and appropriately so. First, the focus for medical doctors should be on human beings; second, doing so is more ethical because these people voluntarily donate their bodies for this reason, animals do not.

While the elimination of animal testing is ethically the best option, a more practical compromise is the reduction of animal deaths. Along with methods that have the potential to eliminate animal testing completely, there are many alternatives that may allow for a dramatic decrease in the number of animal deaths and injuries due to animal experimentation. For one, less promising drugs are being eliminated before they are able to be tested on animals. This ensures that only a small fraction of drugs and substances will make it to the final stages before being produced and sold to the public (Ethics of Biotechnology). As Robert D. Combes, advocate for animal rights argues, by adhering to the “3-R’s” (Replacement, Reduction, and Refinement), less animals will lose their lives every day to animal testing. As Combes points out, “Replacement refers to the use of alternatives over tests that require the use of live animals... reduction refers to the idea that if possible, the same animal should be used for multiple tests instead of many animals being used for each individual test... refinement deals with utilizing procedures that minimize pain for the animals” (14). The infamous LD-50 (lethal-dose 50) test is one that must be refined in order to reduce the number of animals losing their lives. Erik Stokstad, a prominent journalist in the bioethical field, claims that “The median lethal dose is the amount of a substance necessary to kill half of the test population... many times it is abused by researchers” (1070). The author goes on to describe that once a median lethal dose is calculated, researchers will test over the limit. They do this for reasons that animal rights’ activists simply do not understand. While proponents of animal testing argue that this kind of information is crucial in promoting human health, I disagree. Instead, once a lethal dose is discovered, it serves medical companies no benefit to know that a dose over the lethal limit is deadly; this is clearly very obvious. There are some other very useless tests being conducted on animals around the world that yield researchers zero information. For example, Hope Ferdowsian, a director of research policy, explains that chimpanzees are often injected with breast cancer cells so that they may be studied; however, chimpanzees cannot even develop breast cancer in the first place. It is simply a disease they are not able to harbor in their body. This is not only a waste of resources, but a waste of innocent animal lives that are meant to be lived.

Each and every one of these alternatives are not only lifesaving, but much more cost effective than animal testing. According to animal rights activist Mac McDaniel,

“The scientific community has wasted twenty million taxpayer dollars on exposing animals to pointless tests. It would be hard to explain to the growing number of unemployed people...yet the government is giving money to find that cigarettes are still bad for you. Between feeding monkeys nicotine and cocaine, we’ve not only entered a morally reprehensible standard for research, but also wasted millions of dollars that could be going to social programs or paying down the national debt” (McDaniel).

In a decade where the United States currently faces trillions of dollars in deficit, it is inexcusable for the working class to be funding millions of dollars to meaningless research. For example, it is a known fact that smoking cigarettes and drinking excessive amounts of alcohol is unhealthy, so why spend money and throw away lives to prove it?

Researchers, of course, may want to question whether or not alternatives really do compare to authentic animal testing. Across the globe, there are thousands of researchers who will only test drugs and other substances on live animals and not bother to give alternatives a chance. This is due to the widespread belief that testing on model organisms of humans yields the most accurate results and tells scientists almost exactly how a human being will respond to a particular stimulus. Stanley Fields and Mark Johnston, prominent cell biologists, state that “A model organism is a non-human species that is extensively studied to understand particular biological phenomena, with the expectation that discoveries made in the organism model will provide insight into the workings of other organisms” (1185). The most common model organism used in research, the lab rat, shares practically identical tissues and organs with humans, so by comparing the model organism’s genome with the human genome, comparisons can be made. The reason why a decent amount of researchers in the field are hesitant to test chemicals using alternative methods is because, according to *The Ethics of Biotechnology*, “The complexity of an organism will never be replicated in a test tube” (2009).

I find it admirable that these researchers are working their hardest to promote human safety and prevent needless deaths from insufficient testing procedures; however, I would argue that there are better alternatives- ones that save the lives of animals as well as humans. Many of the alternatives utilize human tissues, leftover from simple medical procedures; it only makes sense that more accurate data could be collected from testing on human cells. All in all, although I

disagree with much that these researchers believe in, I fully endorse their final conclusion that human safety is of the utmost importance and that safety precautions are absolutely crucial in the process of developing and marketing a drug or substance. While I concede that point, even applaud it, I insist that this be done with the full intention of ending animal cruelty in all fields, specifically medical research. In order for the world to reach a point where animal cruelty is nonexistent and our medical research is ethical, researchers must not only develop a mindset that it is moral, but this notion must be encouraged by those in authority as well.

The Inefficient Laws and the Need to Revise

Today, the government is so focused on protecting human beings that it has lost sight on protecting the animals with which we share this world. The current laws that are effective in the United States are, without a doubt, practically hopeless in saving the lives of a substantial amount of animals. Many are extremely subjective; anyone can interpret the laws' meanings in a different way. For example, the Safe Cosmetics Act of 2011 was enacted simply to encourage companies to treat their animals ethically. I see two things inappropriate regarding this law, the first being that this is only an 'encouragement,' and second, that there is no set definition of what 'ethical' truly is. Many companies are solely driven by money and will not go out of their way to look at the situation in a more ethical light. If a business is successful, why would it have any incentive to change the way it accomplishes tasks? A simple encouragement to do something essentially is meaningless if the individual being encouraged is stubborn and stuck in his or her ways; maybe he or she has no interest in doing the ethical thing, but what exactly does 'ethical' mean? I would personally consider the 'ethical' treatment of animals to entail zero injuries or deaths to animals- ultimately no animal testing in general. Another individual, say, the chief executive officer of a major company that manufactures prescription drugs, may consider 'ethical' to be ending an animal's life quickly by overdosing it with drugs. As can be inferred, there is no description set in stone of what 'ethical' truly means; every person may consider it something different. This act is in crucial need of reformation because as of now, it serves no purpose. The government must define what it believes 'ethical' is so that more companies are not getting away with torturing animals for their own success or for medical advancements. If it were solely up to me, I would personally ban hunting, animal testing, and any other imaginable type of violence against animals. Also, I would argue that this act should become a law so that offenders are punished if they violate it. I am advocating for change in this system because I cannot justify

the fact that companies are only being 'encouraged' not to murder another living creature; this cannot be tolerated any longer.

The government should not be selective when determining which animals should be protected under the law; animals are all the same and therefore, they should be treated equally. A huge issue in the selling of laboratory animals to research companies is that many of the animal species most commonly tested on are not protected under the law. The Animal Welfare Act of 1966 was enacted in order to prevent the buying and selling of pet dogs and cats for animal testing; however, 90% of animals used in research are not covered by the law. The law excludes birds, rats, mice, and farm animals. Thus, the Animal Welfare Act must be expanded to protect more, and eventually all, animals from experimentation; this would compel companies to utilize alternatives to perform their testing. The government has the power to end animal testing; this is something that would not only save animal lives, but would greatly improve society. Humans should not be given the power to kill animals as they please; this is not something the government should promote. I believe that humanity will be able to appreciate life in a more pure light if we are denied the right to harm animals.

Conclusion

Animal testing is wrong on every level, in every way. It is simply inexcusable to torture another living creature in order to benefit ourselves. Animal testing not only promotes the selfish and immoral behavior of human beings, but encourages the idea that the "Golden Rule," essentially, is meaningless. If it is permissible for an individual to harm another without repercussions, why should anyone bother to treat anyone with respect and kindness? There is a serious flaw in the world in the notion that the murder of animals is acceptable. Animals are fundamentally exactly like us, with minute differences in anatomy. If the murder of a human being is punishable by law, the murder of an animal should be too. Animals are not able to defend themselves against the pain that is forced upon them; however, humanity is blessed to be able to do so. Humans must look at the situation in a different light and consider how the tens of millions of animals must feel, everyday sitting in cold cages with staples in their heads and chemicals seeping through their skin. The fact that there are countless cheaper and life-saving alternatives to animal testing only makes these deaths even more intolerable. The truth is that humans should treat animals like family; we should have an unconditional respect for them and for the fact that they are not as privileged as we are. Humans must step in when the government fails to do so.

Further, because current laws regarding animal testing are much too generic and as such they do not protect a majority of the species of animals experimented on every day, the laws and acts must be revised to defend the wellbeing of all animals. We simply must picture ourselves in these animals' places and realize how we might feel if our lives were constantly being threatened. Scared is not a fun state to be in, so imagine feeling this way twenty-four hours a day. I would never wish this on my worst enemy; therefore, I would never wish this on a defenseless, sinless animal. Neither should the institution of medical research and neither should you.

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