

CHAPTER 2

Cutting Life: Cruelty in the Name of Science

“There will come a time when the world will look back on vivisection in the name of science as they do now to burning at the stake in the name of religion.”

—Dr. Henry J. Bigelow
Professor of Surgery
Harvard University

One day, not too many years ago, a man came to our Peace Plantation refuge for animals, carrying a cat he obviously cherished.

This was not an unusual occurrence then, nor is it now. Animal lovers come to Peace Plantation [and Briggs Animal Adoption Center] every day, bearing precious creatures who need our help.

But this time, the story was a little different. The man carrying the cat worked at a research laboratory where animals were used in deadly experiments. He was retiring and he wanted to make sure this particular cat, who he had named “Sputnik,” would have a good retirement, too.

Cradling the cat, the man told me that Sputnik had put in years of extraordinary service at the lab as a blood donor to the other cats. When experiments made the cats sick, Sputnik’s blood would be drawn and given to them to keep them going.

Sometimes Sputnik’s blood was given in vain. In fact, I’m sure that most of those poor animals got well temporarily, only to die from the experiments or to be euthanized when they were no longer needed.

Despite his years in the lab, Sputnik was one of the lucky ones—a very rare survivor indeed when you consider this sickening fact: Three animals are killed every second in laboratories in the United States, according to experts’ estimates. [In 2005, the U. S. Department of Agriculture estimated that approximately 1.18 million animals were killed in research laboratories. This number does not include the most prevalent animals used in research—mice and rats, who make up 85-90 percent of all research animals, birds, or fish.]

That means 15 innocent creatures died in the time it took you to read that sentence!

And that appalling figure does not reflect the intense suffering and the prolonged agony most of these animals must undergo...the unnatural, loveless lives they lead until, finally, they are put out of their misery.

Any sensitive person would surely want to stop this tide of torture. But believe me, once you’ve seen an animal who is a “refugee” from a research lab, you feel you *must* do something about this government-sanctioned, socially acceptable slaughter, a national disgrace that is often paid for *with your tax dollars!*

They call it “vivisection.” Appropriately, it’s a mean-sounding word that immediately conjures up in my mind all kinds of images of cruel treatment. The word vivisection comes from two Latin roots: “vivus,” meaning life, and “sectus,” meaning to cut. Vivisection is the cutting up of life, of living, conscious, feeling creatures. Today,

vivisection cuts at the heart of all life, its enormous cruelty just one more symbol of the sickness of a society that does not value animals.

Every year tens of millions of living animals are legally tortured in the name of science. Is knowledge at any price really worth it? Is it necessary? Just what does it accomplish?

How Vivisection Began

I first learned about vivisection many years ago, when my husband, an early crusader against experimentation on living beings, brought a leaflet to my attention. It showed what happened when children in an orphanage had been subjected to experimental use of an early tuberculosis vaccine. The children suffered terrible afflictions. For many, their vision would never be normal again, and some were blind.

That was *human* torture. We don't hear a lot about that any more, and fortunately society is not likely to condone it. But what I can't understand is why our supposedly advanced society does condone animal torture on a massive scale.

Let's look at how vivisection began. As with many of our western world's practices and traditions, vivisection started with the ancient Greeks and Romans, who used animals as substitutes for humans to learn more about the structure and function of the human body and to gain more knowledge of medical problems.

The Greek philosopher, Aristotle, observed general similarities between apes and humans. In Rome, Galen conducted vivisection experiments and dissected dead monkeys, perhaps even some apes, too. He took the information he had gathered from these experiments on animals and applied it to the treatment of humans—often with disastrous results. Many of his theories for treating diseases and injuries in humans were wrong and frequently very harmful.

Because of early vivisection, knowledge of the anatomy of human beings and many medical practices used on humans were incorrect for almost 1,400 years. Imagine the pain and suffering caused by the faulty assumptions based on vivisection. The observations made from using animals were inappropriately applied to humans and actually prevented medical science from moving forward in many areas.

It was Leonardo da Vinci, the founder of the modern science of anatomy, who discovered that Galen's anatomical descriptions were incorrect. However, it took several hundred more years of documentation and effort to correct the damage that had been done. Even from the very beginning, using animals as models in place of humans did not work.

The great French mathematician and philosopher, Rene Descartes, added to the rationalization of using animal models for experimentation by promoting the theory that non-human animals don't feel pain. Their screams and groans were dismissed as not more than squeaks from a machine.

Can you imagine this unbelievable insensitivity? Have you ever heard a dog whimper in pain when his paw is accidentally stepped on? A cat's meow sounds almost like a scream as her tail is caught in a door. It's hard to believe that these learned European surgeons and scientists could use this as a justification for horrible experiments carried out on animals in biomedical research during the latter part of the 19th century.

Tragically, though, this horrifying practice has not diminished in modern times, but has grown into a multi-million dollar research industry.

The Use of Vivisection Increases

The geographic focus of vivisection shifted from Europe to the United States by 1900. A rapid increase in animal experimentation occurred towards the end of World War II and right afterwards. During the war, scientists used animals to study the effects of explosives, rapid decompression, and the treatment of wounds, as well as in their search for cures for diseases killing soldiers. To give just one example, dogs' stomachs were laid open for study. Some would survive for years until death rescued them from their miseries. An elaborate device was used to hold a dog while metal coils were inserted into his abdomen to study its reaction to various liquids.

You would think that by the 1940s our society would have enacted laws restricting animal experiments. To our shame, that is not true. There was not one piece of legislation, state or national, that prevented or mitigated the practice of vivisection. Although the battle against vivisection was old, it had not been successful. Henry Bergh, the organizer of the first Society for the Prevention of Cruelty to Animals, introduced the first American measure against vivisection in the New York legislature in January 1889. Bill after bill was introduced in Congress but none passed.

My late husband, James P. Briggs, worked long and hard to have legislation passed to outlaw all vivisection practices. As president of the National Society for the Humane Regulation of Vivisection, he called for public committee hearings to bring out evidence "that the vivisection of dogs is needlessly cruel, and serves no possible useful purpose." He started with the rescuing of dogs first because, he said, "if for no other reason than dogs are the most deserving of our love and help."

At that time, dog pounds throughout the country were turning over unclaimed dogs for a small sum to be used in animal experiments. There was also a black market in stolen dogs. More than one pet owner lost the dog she loved and cared for to the dissecting table. Why were dogs so very valuable to the researchers? Scientists using vivisection believed that only the monkey had reactions more like humans than the dog. By reactions, they meant the way animals responded to sheer torture.

Unfortunately, sale and seizure of animals in dog pounds for use in laboratories are practices that continue today. For years, The National Humane Education Society (NHES) has joined in the public outcry against this unspeakable—yet frequently legal—procedure.

After World War II, government research institutions and foundations were established and expanded to promote and support clinical and animal-based biomedical research. More people were attending universities, receiving doctorates, becoming involved in research, and publishing more scientific papers and journals. Public charities were founded to support research to find cures for diseases, injuries, and birth defects. College professors involved in research were pressured to "publish or perish" as colleges received government grants and funding for research.

The shocking result? Eighty-five percent of *all* experiments on animals have been done since 1950. What a tragic commentary on the *true* state of our supposedly enlightened society.

As experiments increased, animals were bred for laboratory use and supply companies were started. The exploitation of laboratory animals has now become big business—eight to ten billion dollars and almost 60 million animals a year. [That figure continues to grow yearly.]

Animals are used in several different general categories: biomedical research, development of new pharmaceuticals, toxicity testing, testing of biological compounds, educational demonstrations, and diagnosis of diseases.

Although legislation has been passed to establish humane standards for treatment of certain animals by laboratories and animal dealers, including the landmark Laboratory Animal Welfare Act of 1966, abuse and neglect are still common in laboratories. Medical schools in the United States have routinely used animals as part of the basic curriculum in teaching physiology, pharmacology, biochemistry, and surgery. In teaching labs, cruel treatment often occurs due to a lack of knowledge (the wrong nerve severed) or insensitivity (not caring for the animals properly so that they die or suffer for lack of proper food and water). Also, improperly trained students may not use the correct amount of anesthesia. Too little anesthesia allows animals to feel pain or wake up during surgery. Too much can cause death.

Another area of cruelty in education is science fair projects. Often, these are done with little supervision and no training in the proper techniques for the care and use of laboratory animals. Innocent students may not know that they are inflicting cruelty upon animals, but it is not uncommon to find school projects involving poisoning, extremely deficient diets, surgical mutilations, and deliberate torture of animals.

Surely we can educate our promising young people without tormenting helpless animals.

Animal Experiments—All in the Name of Science

I shudder even to think about the experiments done on animals in the name of science and progress, but I must make myself write about it, in the hopes that others will share my outrage, and that together we will be able to put an end to vivisection in all its forms.

One of the best-known experiments is the LD50 (lethal dose 50 percent) short-term acute toxicity test. With this test, animals are injected with or forced to swallow toxic fluids such as floor polish or other cleaning products to see what amount it takes to kill them or make them ill. Or, they might be forced to breathe toxic fumes to see how long they can live while inhaling measured amounts of the poisonous material. At no time during these tests are animals given any anesthesia or pain relievers. It might interfere with the results.

Read the warning labels of your household cleaners: “eye irritant,” “harmful if swallowed,” “keep away from children,” etc. Think of the monkeys, rabbits, or mice who were blinded, burned, or killed so that warning could be placed on your container. These tests are routine for new products *and* for any change in a product’s formula. That means every time you purchase a “new, improved” version of an old favorite, the LD50 test has most likely been done all over again, even if the change in the product was minor.

Companies commission this testing to protect themselves against legal liability should the product cause harm to humans. But is this really necessary? Don’t we know by now that most cleaning agents strong enough to clean our houses may damage a part of the body as sensitive as the eye? Burn or irritate our skin? And certainly, we should have learned by now that only food products should be ingested. How many times must

these experiments be repeated? How many innocent animals must suffer and die before we stop this kind of activity?

Cosmetics are also rigorously—and redundantly—tested. The LD50 test is standard in the cosmetics industry, too. For example, to see how toxic a cosmetic such as lipstick is, a cosmetic company would order a study in which large quantities of it are force-fed to animals, usually mice or rats, until 50 percent of them die. Only when half the animals are dead can the experiment be considered complete.

Another horrible experiment, the Draize Eye Test, is the most commonly used eye irritant test for cosmetic purposes. Rabbits are used for this test because the structure of their tear ducts does not allow them to rid themselves of substances placed in their eyes. Products such as hairsprays, shampoos, and conditioners are sprayed or dripped into the eyes of conscious rabbits. Of course, the rabbits have to be restrained in stocks. To measure the amount of damage done to the eyes, the tests can continue for up to seven days.

Skin irritation tests are used to test such cosmetics as deodorant, face cream, or lotion. The substance is applied directly on the shaved skin of guinea pigs or rabbits. It's left for a period of time to see what kind of reaction occurs, such as a burn or rash.

Is our vanity worth that pain? I don't think so. And apparently many women agree with me: Several new, humane-thinking companies who do not test their products on animals are doing a brisk business with sensitive, informed consumers. But these companies are still by far in the minority.

The 21st-Century Chamber of Horrors

Environmental psychology is one area of vivisection that many researchers, veterinarians, and doctors consider to be the worst. Torture is the word that comes to mind. Animals are starved, mutilated, dehydrated, and exposed to heat, cold, electric shock, and forced aggression. Imagine a baby monkey harnessed to his surrogate mother with eyelids sewn shut and bandaged so he couldn't see.

Or, envision a dog, once a family pet, placed in a metal chamber. A severe electric shock is administered. The dog jumps to the other side to avoid it, but receives an equally severe shock there. The dog goes back and forth until he gives up and collapses.

And that is how “learned helplessness” is demonstrated.

Then there are the terrible “living heads” experiments. In just one instance of this inconceivably barbaric exercise, two monkeys are decapitated. The head of each is grafted onto the other's body. They had no control over the bodies onto which their heads were grafted. The researchers didn't have the knowledge or didn't care enough to connect the nerves and other parts necessary to provide control. The monkeys salivated and their eyes moved, tracking the researchers. For four days, these monkeys, God's creatures just like you and me, were kept alive without anesthetic. Mercifully, they were then allowed to die.

Animals are also studied for drug/alcohol addiction. They are given drugs or alcohol, tested for the level at which they become tolerant, and turned into addicts. They are then taken off the drugs or alcohol “cold turkey” and left to suffer through the agony of withdrawal.

For years, a cigarette-smoking experiment using dogs showed researchers that the breathing rate after inhaling cigarette smoke is controlled by the vagus nerve. This nerve was surgically removed from the dogs' bodies and repositioned. That way researchers could study it better. It was found that many of the dogs would then vomit when they were forced to smoke.

Remember, many of these experiments are being paid for with your tax dollars. The grants for the dog smoking experiments came to a sum total of \$387,271, but because one of the grants was renewed 26 times, it ended up costing taxpayers over \$4,729,114. [Since 2002, the National Institutes of Health has spent \$16.5 million on cigarette smoke related animal research.]

And just when we think we've heard it all, the field of genetic engineering gives us something right out of a science fiction movie to ponder. These products of science offer the world a potentially endless variety of mutant creatures, unnatural beings whose lives may be a living hell. One product of engineering is a "geep" who is half sheep and half goat. "Super cows," who produce leaner meat and more milk, are being developed; and "super pigs" are being implanted with human growth hormones. A pig that was implanted with cow genes has successfully reproduced. However, the offspring has trouble walking on short legs swollen by arthritis and has trouble seeing because the face is severely wrinkled and the eyes crossed.

There are many troubling questions about the ethics of genetic engineering. Will it pave the way for more potentially cruel animal experiments? Is this an opening for ecological imbalance if mutant animals are released into the environment? What will happen to small farmers who can't afford this new technology? Can veterinarians keep pace with the new health problems that are likely to develop with these new mutations? What restrictions can be applied to prevent big businesses from monopolizing genetic stock?

The invention of a sterile oyster whose inventors applied for a patent has caused an uproar. The patent was granted and the doors are opened for new forms of nonhuman animals to be developed. Heaven only knows when genetic engineering will turn its attention to human subjects, and where this perversion of science will ultimately lead.

Are Animal Experiments Really Useful and Necessary?

A common belief among scientists, the media, and many in the public is that no medical breakthrough is possible without experimenting on animals.

But is it possible that the necessity and usefulness of experimentation on animals for medical research is exaggerated? The unqualified answer is "yes." In looking back over the history of modern medical advances, most of these breakthroughs were made from clinical observations of human patients. The experiments using animals were often done to convince clinicians that the tests should be allowed in man.

Biochemical differences between human and animal tissues are great, and often render animal-based experimental results meaningless. For example, prior to 1963, dozens of human studies had shown that cigarette smoking caused cancer. But, because of outdated government policy, warnings to the public were delayed. Researchers had been trying, for years, to induce cancer in laboratory mice. Only recently has the medical research community recognized that while cancer induced in rodents may, in some ways, be fundamentally the same as that in humans, because of the differences between mice

and humans, cancer may act very differently in human cells. The National Cancer Institute now tests the potential of anti-cancer agents on human cells.

The artificial heart provided another example of limitations of animal testing. In extensive studies, the device was implanted in calves. It worked reasonably well in animals, but when the plastic heart was placed in humans, infections, bleeding, and other complications occurred.

As with many other diseases, the greatest advances in heart research were made through studies of human patients. The same is true of efforts to control diabetes. The discovery of insulin is credited to experiments on dogs, but the hard scientific facts actually came from autopsy studies of humans.

Insufficient, unreliable, and expensive animal research continues to dominate the medical field. History shows that animal experiments are not an important part of the scientific research process but are really a sales tool to dramatize the theories arrived at from clinical research on humans.

Human diseases can't be duplicated in animals just by transmitting toxins or cells from one species to another or by exposing the animals to irritating or stressful stimuli. Animals are different from humans biomechanically, biochemically, and emotionally. Consider these dramatic differences between species:

- Penicillin can be life-saving to humans but kills guinea pigs.
- Aspirin relieves pain and discomfort in humans but is fatal to cats.
- Humans have gall bladders; rats do not.
- Rats can synthesize their own vitamin D; humans cannot.

Cause and effect can be easily confused in clinical observations of animals and humans. Most scientists working in laboratories work with animal models only, not humans. They are trying to recreate a disease or medical problem in an animal which they have not studied in a human.

How Do People Respond to Vivisection?

As with any great instance of cruelty, people react differently to the horror that is vivisection. Some turn their heads. Others purport to believe that nonhuman animals can't feel pain like humans do. Many just shrug their shoulders sadly. Others take a firm stand that medical research on animals is absolutely necessary, that it is the only way to find cures for human diseases and to improve the quality of life—*human* life, that is.

At the opposite end of the spectrum are those who believe that animal experimentation is morally and ethically wrong. Certainly, most would agree that animals should be used in experiments only when it is essential, and that these few should be treated kindly and humanely.

As for me, I believe that *no* animal should be subjected to painful, usually fatal, experiments—under *any* circumstances, for any reason. I respect life in all its forms, and I hope someday a majority of caring people will rise up with me to end the scourge of vivisection.

Many courageous people have already put their careers on the line to take this stand.

Those Who've Said, "Enough Is Enough!"

Many in our society believe that animal experimentation is critical to the medical research necessary to fight disease and save the human race. Researchers using animals must feel this way; however, more and more of these scientists are beginning to question the necessity and validity of surgery and induced diseases and conditions on live animals. They're beginning to protest against some of the experiments and treatment of the animals. Some are actually leaving the research field altogether, claiming that the medical and scientific information gathered from those experiments does not benefit human life—and does not justify maiming and killing millions of innocent, defenseless animals.

The story of one caring person exemplifies this trend. A physiological psychologist with the U.S. Air Force who left behind the medical research field, Donald Barnes spoke out in the June 1989 issue of *The Animals' Voice Magazine*. He told of spending 18 years “vivisecting nonhuman animals for the United States Air Force.” His experiments required “the pulse gamma neutron radiation (nuclear explosions) of rhesus and other monkeys,” to observe the effects, and to project what would happen to humans under the same conditions.

The animals were forced to fast as long as 24 hours before the irradiation procedure. They were then placed in restraint chairs. A technician administered enough radiation at the mid-brain level to kill some immediately. Others died from radiation poisoning, wasting away with bloody diarrhea and vomiting. When one monkey died, another would be ordered from the supplier. If the monkeys survived, they were to be taught to perform complex tasks while receiving shock reinforcement.

Donald Barnes did his job, continuing these types of experiments until he reached his limit. One day, he refused to take part in an experiment which he considered to be scientifically invalid. He was fired. Later, he was reinstated. He promised himself that he would do only those experiments on animals which could be proven to be beneficial to humans. When this couldn't be done, he quit.

Looking back over his years of research, he concluded that all research using live animals should be halted immediately. He is now actively involved with animal rights organizations trying to stop the pain, suffering, and death he had once had a part in causing—all in the name of science.

John McArdle was a graduate student at a major research university who eventually left academia and became involved with the animal protection movement. His story is also shared in *The Animals' Voice Magazine*. One of his first assignments was assisting another graduate student in performing brain surgery on rhesus monkeys. Neither one had any formal surgical training or had received instructions or standards on animal welfare. His concern grew for the animals' well-being.

It became morally troubling. He couldn't become an outspoken critic and still receive his Ph.D. Once he did complain about a fellow student who allowed his animals to die from sheer neglect. But the professor in charge of the project told him not to worry, that the student would learn his lesson after he had to repeat the experiments several times—because he let the animals die. This shocking lack of concern for the animals dying from neglect was evidenced on another occasion, when a department member decided to suspend an experiment using guinea pigs. He had the guinea pigs killed. Later, the experiment was rescheduled and more guinea pigs had to be ordered.

Dr. McArdle tried incorporating animal protection ethics in his teaching. Feeling threatened by the overwhelmingly inhumane research establishment, he left the teaching

profession. Since then, he has been working with several animal rights organizations. Today, he is learning of more and more scientific professionals who disagree with the animal exploitation in the laboratories.

Alternatives

Alternatives to vivisection are more accurate and less costly. Also, results are achieved faster—not to mention immeasurably more humanely. Let's look at some of them.

Computers can be used to predict the course of a disease, or how effective a drug may be. Computer, mechanical, and mathematical models can simulate many physiological systems. For example, the analysis of body fluids and gas chromatography have proved to be cheaper and more accurate than animal testing.

Another proven alternative to vivisection is *in vitro* testing. *In vitro* research methods use tissue, cell, and organ cultures, as well as bacteria and other microorganisms which can be taken from animals and humans harmlessly. Many scientists believe *in vitro* tests are more sensitive and accurate than animal tests. Enzymes, artificial membranes, and robots can also be effective alternatives.

Modern research techniques such as CAT scans, PET scans, and magnetic imaging provide safe, ethical studies of human medical problems, while computer banks and networks can make research data instantly available to researchers, thus preventing much unnecessary duplication of experiments sharing the same methodologies and aims.

Animal rights activists also stress that the key to better human health is preventive health care. The number of people saved through prevention is much greater than those saved through medical research. In analyzing the data on the ten leading causes of death in the United States, the Centers for Disease Control found that the major factors in determining one's state of health were lifestyle, environment, heredity, and medical intervention. Another study concluded that, since the turn of the century, medical intervention has contributed to less than a four percent increase in the life span of the average American.

In the classroom, modern methods of teaching and demonstration should be adopted that do not involve the abuse of animals. Medical and veterinary students opposed to dissection, surgery, or demonstration techniques that involve abuses or neglect to animals have spoken out on behalf of the innocent creatures penned in laboratory cages. Many find vivisection to be in direct opposition to the doctors' Hippocratic Oath. Teaching methods that require hurting or killing animals in order to learn how to heal them are profoundly absurd—and unspeakably cruel.

Haven't enough animals been drowned, shocked, burned, starved, deprived, blinded, deafened, maimed, cut, and poisoned—all in the name of science? Here at The National Humane Education Society, we believe the dark age of vivisection should be ended. And with the help of kind-hearted supporters across the country, we hope to bring about the dawning of a new age of kindness to all of God's creatures.

I've been trying to bring about that new age since I was 14 years old. It's a dream I'll never stop striving for.