

Influence of the Animal Welfare Movement on Teaching and Research

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Animal welfare, what is it? According to the American Medical Association it is the more conservative aspect of the animal protection movement with the other end represented by animal rights. To the animal activist, animal welfare is part of a moral and ethical conviction to prevent exploitation of animals, the most severe of which would be classified as "speciesism." This term refers to a clear cut discrimination between humans and all other species in the animal world. This philosophy serves as the basis for the animal rightist in attempting to ban any use of animals that does not benefit the individual animal itself. For those individuals in between these two poles, the phrase animal welfare can refer to anything from proper veterinary care to vegetarianism. The general public, whose eventual support directs the course of action towards this issue, interprets animal welfare as a litany of articles presented through the media, special interest groups, and our educational system. It is probably this diverse exposure to the issue that causes confusion and creates such an emotionally charged atmosphere of moral convictions versus scientific facts. Since there is no one definition accepted by all, this paper shall look at animal welfare in its broadest possible spectrum.

Neither animal research nor animal welfare are new issues. To understand their scope and effect, it is imperative to comprehend their development. References to animal research have been documented back to the third century B.C., in Alexandria, Egypt (American Medical Association, 1989). In 1628, William Harvey demonstrated the movement of blood in animals (National Research Council, 1988, p. 13). Animals are important to research because they are complex body systems which in many cases react similarly to humans. Their lifespans are considerably shorter than humans and permit a window into long term effects that can occur with the introduction of specific substances or altered genetic material. Today, animals are an integral part of biomedical

research, consumer product testing, and education. It is estimated that some 22 million animals, primarily rats and mice, are used per year for research, testing and education. (National Research Council, 1988). The consequences from a total ban on animal use in these areas is in fact considered dangerous both economically and in the interest of public health (U.S. Congress, 1986, p. 29).

The concerns for animal welfare first became apparent in the early 19th century with the formation in England of the Royal Society for the Prevention of Cruelty to Animals (RSPCA) in 1824 (Grollman, 1990). This in turn led to the formation of more radical groups such as the National Anti-Vivisection Society, the British Union for the Abolition of Vivisection and in 1924 the formation of the League Against Country Sports. Paralleling the trend in England came the incorporation in 1866 of the American Society for the Prevention of Cruelty to Animals by a special act of the New York State legislature (Welsh, 1990, p. 143). It was not, however, until the late 1970's and early 1980's that the majority of animal welfare/rights organizations came into being (Welsh, 1990, p. 141). While no specific data are available, some estimates claim a total of 7,000 animal welfare/rights groups in the United States with a total estimated annual budget of over 50 million dollars (Harness, 1990).

Today, the animal welfare movement must be viewed in similar fashion to that of environmental and consumer groups. Unfortunately, the polarity which has developed between researchers and animal rights extremists has created a warlike attitude which looks not at the possible benefits of this movement but simply the problems at both ends. It is important, therefore, to examine both the targets and effects of the animal welfare movement on an issue by issue basis to determine whether benefits, drawbacks or both have been realized. Two equations exist today. One is that animal experimentation equals an improved and healthier life

for both people and animals. Mathematic principles then tell us that animals must suffer to benefit man and animal kind as well as advance scientific understanding. While the concept is true, the reality is far more complex.

The impact of the animal welfare movement on the research, teaching and agricultural community has been profound. Its influence in the 1950s and 1960s led to federal regulation of animal experimentation (National Research Council, 1988 p. 14). This was clearly demonstrated with the passing of the Animal Welfare Act in 1966 and subsequent amendments in 1970, 1976, and 1985. In 1979, Henry Spira, an animal rights advocate, organized the Coalition to Abolish the Draize after a successful effort to halt experiments on cats at the American Museum of Natural History. This effort led to the eventual donation of \$750,000 to develop alternatives to the Draize Test at Rockefeller University (Welsh, 1990, p.7). This movement can also take credit for the Cosmetic, Toiletry and Fragrance Association's establishment of the Center for Alternatives to Animal Testing, with a million dollar grant, at John's Hopkins University. One must ask oneself if industry would have responded in this fashion if no one had raised concern?

The Congress, also responds to concerns of animal use and consideration of animal pain. This was evidenced by the withholding of funds for the use of Greyhounds in bone trauma research at the Letterman Army Institute of Research. Researchers were required to present documentation to both the House and Senate Committees on Appropriations validating the benefits of the project as well as the care and treatment of the dogs (Congressional Record, 1989).

Education at all levels has and will be affected by the animal welfare movement. In 1971, the Westinghouse Science Talent Search changed its regulations so that no live vertebrate animal experimentation was permitted with the exception of behavioral studies of animals in their natural environment (Grafton, 1979). In the early 1980's both the National Association of Biology Teachers and the National Science Teachers Association adopted guidelines for the use of vertebrate animals in pre-university classrooms (National Research Council, 1988, p. 200). Most recently the Institute of Laboratory Animal Resources, Commission of Life Sciences of the National Research Council using the resources of the scientific, technical and animal

welfare communities published the *Principles and Guidelines for the Use of Animals in Precollege Education*. The State of California enacted legislation in January, 1989, that permits students in grades K through 12 to refuse dissection and opt for alternative methods of education. Similar legislation was introduced but defeated in the State of Maine (HP 253, 1989).

Effects on teaching methods have also reached the university and post graduate levels. Courses are now offered at colleges and universities covering the ethics of animal use. Tuft's University School of Veterinary Medicine recently introduced an alternative surgical program for third year students which utilizes pets which have died or been euthanized after informed consent has been obtained. Such a program, initiated by the students, raises the question of the overuse of animals for teaching purposes and the possibility for development of more effective and efficient methods. This program will be evaluated by faculty over a three year period to decide its eventual outcome (Loew, 1989). These changes can be viewed as a positive benefit of the animal welfare movement only if accompanied by studies to evaluate their effect in maintaining the quality of education and determining the long term impact on both animal and human welfare.

Agriculture, too, has been a major focus of the animal protection movement. Concerns about factory farming and animal rearing, as well as the use of animals for the production of luxury items such as mink coats have initiated legislation to outlaw certain production practices, boycotts of veal and fur, and major public relations campaigns to discredit the associated industries and embarrass those individuals who support them. Efforts to regulate the farming industry are clearly evident by the 1988 Massachusetts referendum, known as Question 3. This could have enacted regulations and controls over the way in which farmers raise and care for their livestock. It was eventually defeated by a margin of 71 to 29 percent (Japenga, 1989). In February 1989, residents of Aspen, Colorado were asked to vote on a city-council resolution which would have banned the sale of all fur products (except those from cattle, sheep, and goats). This could have had major negative economic impact on this city had it not been defeated (Kasindorf, 1990). The USDA's Animal and Plant Health Inspection Service has announced its intent to regulate horses and other farm animals under the Animal Welfare Act (Federal Register,

1990). At present this would be limited to farm animals in biomedical and other non-agricultural research, but could represent a foot in the door. These actions, encouraged by the animal welfare movement, are fair warning to the agricultural community to become proactive and reevaluate present practices, encourage studies of alternatives, and develop responses through the use of scientific data that show a progressive attitude towards the care, rearing and production of their livestock and associated products. It seems only natural that a lack of response by the agricultural community in focusing its research towards these areas will result in greater influence from animal activists and those who claim interest in the concern for animal suffering.

While a basic tenet of the animal welfare movement is the reduction in the usage of animals for research and testing, a major conflict of interest seems to arise in respect to pound animals. Approximately 10 million dogs and cats are euthanized at pounds and shelters each year (National Research Council, 1988, p. 64). This creates a potential source of random source animals for research. However, the animal welfare movement has been effective in encouraging twelve states to prohibit by statute the release of pound animals for use in research. Eleven of these do permit the importation of random source animals from other states. Massachusetts, the twelfth state, mandated, in 1986, the prohibition of use of any animals from any pounds by researchers. Similar legislation on a local level has recently been attempted in Sacramento County, California by a referendum entitled Measure L.. This would have prohibited the sale of county pound animals to the University of California-Davis School of Veterinary Medicine. Due to the combined efforts of the research community this was defeated (McBride, 1989). While there is always concern for the possibility of the run away pet ending up in a research project, it appears that here the animal welfare movement has worked in a negative way and only serves to increase the number of animals euthanized as well as unnecessarily increasing costs for research animals used.

The tremendous public support of the animal welfare movement can be attributed, in part, to the shift in the way the general public views their pets. Pet ownership in the United States exceeds 100 million animals and that does not include birds and other exotic pets (National Research Council, 1988, p. 18). Social scientists have documented the positive value of pets to people and coined the phrase

human-companion animal bond. Today, more than ever, we see animals being incorporated into therapies designed to improve the quality of life. Children are exposed to animated animal characters in entertainment and education. These animals can be perceived as human-like and raise the question of their rights. Could "Miss Piggy" be a pork chop? The move from an agrarian culture to that of an urban one has brought animals into our home. The dog house may soon become a thing of the past. Companion animal veterinarians are being encouraged by their clients to offer a variety of services from dental care to grief counseling. Laws have been written in Pennsylvania, Colorado, Utah, and California to change the status of Pot Bellied Pigs from farm animals to pets (American Veterinary Medical Association, 1990). All of these events have fostered our tendency to anthropomorphize, give our pets human qualities, and shape the public's view on the use of animals in research and testing.

Today's public is constantly bombarded by media alerts about the foods they eat, residues, toxic chemicals, and the way their non-essential products are made. Our society has become both socially and environmentally aware. As our nation along with other industrialized nations grapple with these problems, the issues related to animal welfare will be ever more present. As modern technologies advance and become more sophisticated they will become more difficult for the average person to comprehend. Science and its associated research techniques will be questioned and those individuals capable of explaining the why's and how's of science in the simplest of terms will gain the majority of the public's support and sympathy. Animal welfare can "no longer be looked at as irrational and sentimental ravings of a bunch of urban wimps and bunny huggers," states animal ethics professor Bernie Rollin (Schuff, 1990).

A major concern today with the growth in size and strength of the animal welfare movement has been the apparent increase in attacks and threats on animal research facilities, both biomedical and agricultural. The Public Health Service has verified at least 71 incidents within the past 8 years and the Department of Justice has stated over 100 illegal acts have been committed against these facilities. Break-ins and thefts were the most common crimes, however, 10% of these involved actual cases of arson, bombing and firebombing. The monetary loss has varied from several hundred dollars to 4.5 million dollars at the University of California-Davis campus in April of 1987.

The FBI has prioritized this issue by classifying the Animal Liberation Front, more commonly referred to as the "ALF", as a domestic terrorist group. What distinguishes this group from traditional terrorist groups is "that they employ violence and criminal acts to bring about social change rather than political change." (U.S. Department of Justice, 1988, p. 31)

The "ALF" has its origin in the United Kingdom. It was formed by a group of 30 people in June of 1976. The "ALF" staged its first known U.S. raid in March 1982 when 10 animals were stolen from a lab at the University of Maryland. Since then it has taken credit for at least 24 research facility break-ins and the theft of over 3,000 animals (Rosenberger, 1990). The "ALF" operates from a mini-manual known as "Action for Animals" which defines the group as "a loosely knit organization of people who bypass traditional symbolic methods of protest to help alleviate the suffering of animals, immediately through the use of direct action tactics" (Grollman, 1990).

Besides the actual dollar loss due to damage, there is the ever increasing concern that if these acts continue to escalate that innocent people will be put at risk. This could be directly by violence or indirectly by the release of animals carrying zoonotic diseases.

The more moderate humane groups have encouraged a stricter enforcement of the Animals Welfare Act as a solution. However, based on the "ALF" and its supporting organizations goal of liberating all animals from human exploitation it would appear this idea would hold little resolution.

The Congress, in response to major lobbying efforts by the biomedical research community over these blatantly illegal acts, has introduced several bills to elevate the problem to that of a federal crime. The research community hopes that this will accomplish several goals. It would raise the public's consciousness of the issue. It would signal the importance of animal models for both human and animal health. It would act as a support to the presently demoralized research community and dissolve the climate of fear that presently exists within community.

Recent Congressional hearings have revealed inadequacies in certain local and state law enforcement agencies in their ability to apprehend suspects. There is a need for centralization of crime data in order to track these acts and develop patterns. In addition, requests were made for greater FBI

commitment in monitoring this type of terrorist activity. There is concern that the cost for protection of research facilities will eventually halt science using animal models. A "Scientific Brain Drain" will occur as future scientists avoid research involving animal models in an effort to eliminate personal harassments and threats to themselves and their families.

It is very apparent that action is needed. Whether a federal statute is the answer is still a question that must be wrestled with in the Congress. Experts from the Department of Justice state there are sufficient laws already in place and that an animal facility break-in law will only raise false hopes within the research community. This issue is one of priority and public awareness. The Department of Justice points a variety of federal laws which were enacted but rarely if ever enforced on a national level. This is in part due to the less egregious nature of these crimes and the U.S. attorney's right of prosecutorial discretion. While they sympathize with the concerns, the incidents will get no greater attention with a new law than with existing ones. Because there is no all-encompassing federal law, the FBI bases its investigative and prosecutive efforts on several different federal statutes, including conspiracy, assault, extortion and threat. Limited resources and priorities given to loss of life and monetary loss due to the crime, force many federal statute violations to be referred back to local prosecutors. To raise priority, the issue must be kept alive and passing a federal statute would only serve to give the issue a moment of glory, soon to be forgotten.

The answers are not easy and the solutions must be long term. It is clear, however, that major efforts must be directed towards the public in gaining both their understanding and support. Modern technologies have permitted the tremendous growth and sophistication presently seen in all aspects of communication today. This enables rapid dispersement of information and ideas to large segments of the population in very short time spans. The use of these technologies coupled with highly sophisticated public relations skills is one of the major factors giving the animal welfare movement its force and momentum. The biomedical community, along with others, have begun to respond but more in a reactive than proactive position. The Foundation for Biomedical research has developed several excellent materials describing the benefits of research to both humans and animals. Presently, they are organizing a scrap book of personal family stories documenting the benefits of animal research. This

will be presented to President Bush.

Bill Rempel from the University of Minnesota's Animal Science Department, in addressing these issues, suggests adopting many of the techniques used by animal rightists. "They are organized, have able spokespersons, have access to funds, and are out to get legislative support for their views" (Rempel, 1989). Indeed, there is a tremendous need to develop a grassroots network which is able to respond on an issue by issue basis to information sent out by their supporting organizations. All concerned individuals should know their legislators - local, state, and national, and be willing and able to voice their concerns as well as provide verifiable data to support their positions whenever issues arise. Researchers, teachers, and practitioners must make it their business to speak on the issues of animal care and research whenever the opportunity occurs. Recent advances in limiting animal use such as with tier testing must be stressed in a responsible way. Statements of progress must be framed in the light of a statement made by Assistant Secretary for Health, Dr. James O. Mason, "that other models are at best adjuncts to, rather than alternatives to use of animals. This is particularly true with studies involving the central nervous system and complex behaviors. Studies involving non-animal models of human processes complement those involving animal models, but rarely replace them" (Mason, 1989). With specific reference to toxicological alternatives, the need for validation of these tests by federal regulatory authorities must be advanced. EPA and FDA must respond to the needs of the research testing community through the acceptance of alternatives in evaluating safety concerns of products for commercial use. This can only be accomplished by explaining the needs of the scientific community to the public and their legislators, requesting oversight hearings, changes in priorities and sources for funding.

While animal welfare advocates continue to barrage the research, teaching, and testing communities with the thoughts of reduction, refinement, and replacement, their single most powerful tool to affect the public's perception of this issue is the thought of animal pain and suffering. It is here that the major emphasis must be placed if public acceptance of animal based research and testing is to be achieved. This concern for animals is both legitimate and consistent with good research.

The development of proof of concern about

the animals which research and testing utilizes will be the major challenge for the research scientist in the 1990's. This can be accomplished by strengthening the power of animal care and use committees to affect the design or performance of actual research and testing and determine whether experimental procedures satisfy concerns about animal welfare. Social scientists must be brought in to consider the public's response to individual research proposals. Assessments must be made to determine the risk/benefit ratio for society as a whole. This will present problems especially with basic science where outcomes are often serendipitous. Public impact statements with justifications should be part of all grant proposals where animals will be used. This would include public oriented responses if this work were to come under scrutiny. Institutions, private companies and organizations must redirect thoughts and budgets to foster considerations for alternative methods of research. While the American Medical Association argues that such notions will take away monies for presently needed research (American Medical Association, 1989), the development of alternatives to whole animal testing could create more future monies through elimination of the time and labor intensive costs of animal usage.

Again, the public must be assured of science's outlook on their research models. The attitude with which these concepts are portrayed must be of compassion, caring, and competence. While the restraints, threats, and defamations imposed on the scientific community do invoke anger, this feeling must be redirected when addressing an audience. Perceptions of scientists maintaining distance from their subjects and blocking their emotions and sentiments in order to collect accurate data (Grafton, 1979) must be changed.

The role of the veterinarian will take on a heightened importance as he or she is considered the mediator between man and animal. As part of the Veterinarian's Oath it states that the veterinarian will use "scientific knowledge and skills for the benefit of society through the protection of animal health, the relief of animal suffering, the conservation of livestock resources, the promotion of public health, and the advancement of medical knowledge." This will create tensions when their commitment to their profession does not coincide with either agriculture or medicine. Dr. Frank Loew, Dean of The School of Veterinary Medicine at Tufts University has stated that the "changing moral status of animals will be the most visible issue confronting the profession in the

1990s" (Loew, 1990). In conclusion, it is important to remember that "the future of animal experimentation in biomedical research depends on how the public regards it. Research will continue only so long as society believes that research is valuable and humane, regardless of its contribution to the quality of human life: (Mansbach, and Simmonds, 1986).

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