

Definition of the Concept of “Humane Treatment” in Relation to Food and Laboratory Animals

Bernard E. Rollin*

Abstract

*The very title of this talk makes a suggestion which must be forestalled, namely the idea that laboratory and food animals enjoy some exceptional moral status by virtue of the fact that we use them. In fact, it is extremely difficult to find any morally relevant grounds for distinguishing between food and laboratory animals and other animals and, far more dramatically, between animals and humans. The same conditions which require that we apply moral categories to humans rationally require that we apply them to animals as well. While it is obviously pragmatically impossible in our current sociocultural setting to expect that animals should be so treated, this idea should be kept before us as a moral ideal toward which to strive. In this vein, it seems morally necessary that the use of animals in research be constrained by two principles, which ought to be codified as law: the **utilitarian principle** and the **rights principle**. It might be thought that such constraints would serve as an intolerable burden to researchers, but such a worry is primarily based upon a faulty understanding of the nature of science which can be refuted by an examination of the history of science.*

Imagine going to a conference on human pain and suffering and finding a session entitled: “Morality: Definition of the Term in Relation to Negroes.” This would not perhaps have sounded odd 125 years ago when it was widely taken for granted that blacks were a lower form of life. But today, it would jar and repel us, because it implies that whatever moral categories we have for people in general do not apply to black people.

Similarly, it is clear that the title of this session does not jar most of us. Morally, most of us today are, relative to animals, in the position of most people of years ago relative to the Negro. Let us recall the famous Dred Scott case of

* Dr. Rollin is Professor of Philosophy and Professor of Physiology and Biophysics at Colorado State University, Fort Collins, Colorado 80523. This paper was prepared for and presented at The Institute for the Study of Animal Problems Symposium on *Pain, Stress and Suffering: Definition, Quantitation and Application to Animal Welfare Issues*, Orlando, Florida, November 7, 1979.

1856, in which the Supreme Court denied citizenship to blacks on the grounds that they were “a subordinate and inferior class of beings, who had been subjugated by the dominant race.” The court reflected a widespread view. We owned Negroes, we bred them, raised them, took care of them; therefore they were ours, they were property, to do with as we saw fit.

A similar view is held by most of us with regard to animals in general, but most strongly with regard to laboratory and food animals, as the title of this address implies. The view is this: These animals have, after all, been brought into existence by us, their very existence depends on us. We have shaped their bodies and behavior genetically. We give them life and determine the course of their lives. They would have no lives at all were it not for us. Their *raison d'être*, their very nature, is to serve us. Surely then, we can treat them as we see fit.

Implicit in this way of seeing things are a number of interesting points. One is an assumption that any life is better than none, and that those who give life—the ultimate gift—to something may dispose of it as they see fit. Second is a distorted awareness that animals have natures; the natures of food and laboratory animals being to serve as means to human ends, as tools for humans, as “animal models,” etc. Often, those natures have been developed and shaped by us.

These assumptions must be looked at quite carefully, for implicit in them are a number of profound issues which need much unpacking, if we are to answer the question posed. Let us consider the idea that being responsible for the life of something gives one absolute right over that being. (Interestingly enough, the ancient idea was just the opposite—if a person saved another’s life, he or she was responsible for taking care of that life forever.) Suppose I discover a woman who is about to have an abortion. I pay her a large sum of money to have the child and turn it over to me. I raise the child, house it, feed it, cap its teeth, educate it. When it turns 16, I decide that I am going to cook and eat it, or use it to study the long term effects of asbestos on the lungs. After all, without me it would have had no life at all!

Or consider another scenario. After I buy the child, having decided to eat it, or use it for research, I care for it exclusively according to economic considerations, taking no account of its human nature except to keep it alive and reasonably healthy.

We obviously would not accept this approach to human beings. (In fact, we are directly responsible both for the existence and the traits of our children, yet we do not feel we can dispose of them as we see fit.) We do not accept such an approach regarding blacks even though we bred them for servitude for generations. Why, then, do we accept it vis à vis animals? The obvious answer is, “There is a difference between people and animals.” But the key question then becomes, “What is this difference, and why does it license different treatment?” Obviously, it is not enough to duck the issues by saying it is *illegal* to treat people that way. The reason that it is illegal is that we consider it absolutely *wrong morally*.

There are many differences between humans and other animals which are quite obvious. Humans are the only creatures that play golf, fry their food, wear lipstick, etc. Clearly, these differences do not seem to have any *moral relevance*. What does this mean? Let me illustrate: Suppose I walk up to you throughout my talk and punch you periodically. You ask me why. I say, “Because you have curly hair, that’s why. It’s okay to hit people with curly hair.” Obviously, this is unac-

ceptable. Clearly, curliness is not a morally relevant reason for striking someone. We don't excuse my hitting you because you are the only person with curly hair. On the other hand, if I hit you because I saw you molesting a child between sessions, that does seem to be *morally relevant*, i.e., to be a difference that makes a *moral* difference.

Most of the obvious differences between humans and other animals do not meet the test of moral relevance for justifying our differences in treatment of animals. Is it any more justifiable to subject a being to pain because it has fur than to subject a person to pain because he or she has curly hair? Is it justifiable because we are more powerful than animals? Then it must be permissible to torture children. Is it because animals are less intelligent than we are? Then morality ought to vary with I.Q. Few of us would accept the logical conclusion of this position, namely that if some extra-terrestrial creatures were as superior to us intellectually as we are to rats, then they would be perfectly entitled to exploit us as they saw fit.

As I have argued in a number of articles, papers, books, lectures, etc., I do not think that there are any morally relevant differences which license us to exclude animals in general from moral consideration in what we do while we include people. Furthermore, it does not seem to me that there are any morally relevant differences between food and laboratory animals and other animals, any more than there are morally relevant differences between slaves and other humans. This sounds very radical because we do not live that way. But as Plato long ago pointed out, just because we all do something does not make it *right*.

Human beings have developed their moral ideas on the basis of an awareness that certain things are harmful to other human beings while others are helpful and desirable. We have further realized that certain things are more crucial to human beings than others are. Obviously those needs related to survival are essential, as are those related to avoidance of pain. But just as significant are those needs and pursuits which grow out of our uniquely human natures—the ability to speak and reason. It is for this reason that we constitutionally protect freedom of speech and of thought and of assembly and of religion, because it is felt that in these pursuits lies what is essential to being human. We are inconsistent, however, when we fail to apply the same categories and notion to animals. Vertebrate animals feel pain, whatever some scientists may suggest. If these scientists really believe that animals do not feel pain, why do they do pain and analgesic research on animals? Even fish must suffer, since they can be trained using negative reinforcement, though textbooks in wildlife biology do not consider that fish feel pain. All behavioral, neurophysiological and evolutionary evidence militates in favor of this conclusion. Animals have basic needs. And most important for our purposes, animals have natures, have a *telos*, to use Aristotle's phrase, in just the same way that humans do.

This brings me back to the point made earlier, our hidden assumption that the nature of laboratory and food animals is to be used by man, since we created them. This is clearly absurd, as I suggested earlier. One can indeed imagine creating chickens who happily pluck, dismember and fry themselves, or rats who are happiest in tiny cages. (But can one imagine developing animals who *enjoy* the pain of psychological experiments—masochistic mice? If there were such creatures, they could not be used for negative reinforcement studies!) But the

animals that we *do* use for food production and research purposes *do* feel pain, *do* suffer, and *do* have natures which are almost invariably thwarted and frustrated by our uses. Behavioral studies indicate, for example, that all sorts of animals prefer open space to confinement. And, as indicated, if rats did not suffer pain, stress, and anxiety, they would not be used by psychologists and pain researchers. Despite the fact, then, that we have indeed brought these animals into being, they do have natures of their own, with genetically determined physical and behavioral aspects which we are morally obliged to respect, and which we usually fail to respect when we use these animals. It is the biologist's, ecologist's and ethologist's job to tell us what the nature of a given animal is, so that we may know where our obligations lie.

It may perhaps follow logically from what I have been saying that it is wrong to ever use animals for research or to ever raise animals for food if it is wrong to so use people. (Some philosophers have taken this tack.) I am not interested in pushing this conclusion, because it has no contact with reality. At best, like the idea of turning the other cheek, it is an ideal against which to measure our actual activities rather than a possible program to follow. Note, too, that what we are willing to call “suffering,” or “morally relevant suffering,” depends on our values; this is true regarding both people and animals. It does, however, seem to me inescapable that one should draw certain conclusions concerning the use of animals in research and food production. (I shall concentrate on research, because I am more familiar with the problems there.) It seems to me morally necessary that the use of animals in research ideally be constrained by two principles, which ought to be codified as law:

1) **The Utilitarian Principle** — It is usually argued that animal suffering is justified in research on the grounds that research produces great benefits to humans and animals. If this is the case, then we ought to legitimately demand of all uses of animals in research *that the benefits (or likely benefits) to humans (or to humans and animals) clearly outweigh the pain and suffering experienced by the experimental animals.* It will not do to object to this on the grounds that we never know what benefits will result from a piece of research. We make such predictions about likely benefits every day in all aspects of public policy (including the support of research). In any case, for the argument, let us ignore questionable cases and concentrate only on clear-cut ones.

2) **The Rights Principle** — In cases where research is deemed justifiable by the Utilitarian Principle *it should be conducted in such a way as to maximize the animal's potential for living its life according to its nature or telos, and certain rights should be protected regardless of considerations of cost.*

This means that we cannot do as we see fit to a research animal, even if we have determined that the animal's use is justified by the utilitarian principle. We must avoid encroaching as far as possible (consonant with the experiment) on the animal's fundamental interests and nature, and this in turn means that the animal has a right to freedom from pain, to be housed and fed in accordance with its

nature, to exercise, companionship, play, etc.; in short, to be treated as we would treat human beings used for such purposes—as ends in themselves, in Kant’s phrase, not merely as means. Both of these principles must be incorporated into a meaningful federal Animal Welfare Act, which covers *all* animals in all categories (with no exclusion of mice, rats, and domestic animals), which provides meaningful penalties for violation, and which requires that funding agencies apply these principles. Perhaps it should also require local peer review by large committees of scientists and nonscientists, such as is done with all use of animals in research in Uppsala, Sweden. Some scientists will argue that there is no place in peer review for nonscientists—that only scientists can judge the work of other scientists. This is clearly nonsense. The average scientist is a nonscientist outside of his or her own field. In my years in university I have seen this demonstrated on countless occasions. People are well versed in their own niche and are totally ignorant outside of it. The average biological scientist, for example, is totally incompetent to judge a research proposal in evolutionary theory, even though evolutionary theory is at the basis of all modern biology.

Your initial reactions to my proposals are doubtless that they would represent an intolerable constraint on good science. I do not believe this to be the case. In fact, they would actually serve to promote better science. For one thing they would force much closer attention to be paid to experimental design and execution. Sloppy research construction and execution results in wastage of funds, in worthless results, and in animal suffering (witness the recent National Cancer Institute scandals [See *Science* 204:1287-1292 and 205:746-748, 1979-Ed.]). I’m sure all of you are familiar with examples. One which epitomizes the problem for me occurred a few years ago. A researcher was interested in studying the effects of starvation on the rumen of mule deer, so he proceeded systematically to starve a group of mule deer by withholding food on a regular basis. Like a good researcher, he had a control group of deer which he was feeding for comparison. The two groups were separated only by a wire mesh, so that the deer being starved were subjected to the exquisite torture of watching and smelling the other deer being fed. Not only is this cruel, it is stupid, for the olfactory and visual stimuli could certainly skew the metabolisms of the starving deer, and leave significant changes in the rumen not to be found under natural conditions.

It seems to me that the only sort of research projects dramatically affected by our principles would be those activities which are essentially tinkering—trial and error, devoid of a theoretical base, done by the sort of researchers who really have no idea of why they do what they do or even of what they are doing. Robert Paul Wolff once characterized such researchers as people who throw pieces of dung into a dung heap and fully believe that eventually there will stand a cathedral. The most salient examples of this, of course, arise in the field of behavioral psychology. One of my colleagues in psychology was recently asked why he continues to do underwater maze trials on rats—of what possible value or interest is the resulting knowledge? “This is for future generations to decide,” he replied. Period.

Virtually the whole field of behavioral psychology is open to the sort of criticism we are advancing, and it is correlatively no accident that far and away the worst atrocities upon animals occur in this field. As my colleague Richard Kitchener has ably demonstrated, Skinnerian behavioral psychology is atheoretical,

devoid of a conceptual base. It is characterized by a totally empirical, “Let’s see what happens if...” approach to science. Hence the persistence of “experiments” like the blinding of hamsters to see if territorial aggression is increased, the study of the effect of footshock in rabbits on brain responses to tone stimuli, the inauguration of “learned helplessness” in dogs, etc.

Many lay-people believe that science is *simply* experimentation — that “Let’s see what happens” is the essence of science. But all good scientists realize that this is not the case. Science is thought and imagination, insight *tested* by experiment, not *arising* out of blind induction. Scientific theories do not emerge from random data collection. The importance of data is in the *verification* of hypotheses, not in their discovery. After all, when one considers any major scientific theory, be it the theory of gravitation, relativity, quantum mechanics, the gene, etc., one makes reference to entities and processes which are unobservable and whose discovery required imaginative leaps. Newton was certainly not the first man to be hit by a falling apple, yet it took Newton’s theoretical vision to postulate gravitation.

The most superficial look at the history of science reveals that no major advances were made simply by gathering data. The great scientists were guided by theory and vision, indeed, sometimes by erroneous vision, as in the case of Kepler, who sought to prove that the orbits of the planets could be related mathematically as the notes of the musical scale, thereby establishing the music of the spheres postulated by the Pythagoreans. Or let us recall Galileo, who is often said to have shown that the acceleration of falling bodies is independent of their mass and is uniform by dropping a heavy and a light object from the Leaning Tower of Pisa. In fact, as seen in his *Dialogues Concerning the Two Great Systems of the World*, Galileo was a good deal more ingenious than that, and employed reason to establish this point. Take two five-pound weights, said Galileo, and drop them from the same height. Surely they will hit the ground at the same time. Join them by a weightless rod — surely they will still hit the ground at the same time when dropped. Shrink the rod until the two weights are stuck together. Surely they will still hit the ground at the same time. But now we have a ten pound weight, showing that rate of fall is independent of mass.

As another example of where theory precedes data and predominates over it, consider Einstein. His world-shattering critique of Newton was not based on data or experiments unavailable to others, but rather on a conceptual analysis of the concept of simultaneity. Correlatively, when asked what he would have said if some astronomical predictions generated by the general theory of relativity had not been supported by the data gathered by Eddington, Einstein said, in essence, “So much the worse for the data — the theory is correct!”

A similar account can be given about the father of genetics, Gregor Mendel. Every schoolchild knows of Mendel’s famous experiments with the pea plants, which allegedly led him to the discovery of genetics. In fact, statistical analysis of Mendel’s studies indicate that the probability of Mendel actually obtaining the experimental results he claimed was only .00007, or one in 14,000! In short, Mendel *knew* that the theory was correct, and chose the data which met his expectations.

We know too from the history of science, that in the face of theoretical commitment, recalcitrant data is easily dismissed or explained away and that theory

determines what we see. Consider Galileo’s bishops, who refused to look through the telescope, because they knew the moon was perfect. Suppose they would have been forced to look—would they then have been forced to admit that it was not perfect? Not at all—they simply would have said that Galileo had created an instrument which made the perfect moon look flawed! An even more dramatic example is told of Franz Anton Mesmer, the discoverer of “animal magnetism,” or hypnotism. In order to illustrate the anaesthetic effects of hypnotism to skeptical physicians, Mesmer hypnotized a patient who was to undergo amputation, and the limb was removed with no visible discomfort. “Have I not proved my point?” asked Mesmer triumphantly. “Not at all,” replied the physicians. “The man felt pain; he just failed to show it.”

The point then, is this: Contrary to the way science is often taught and contrary to the way many researchers proceed, science is not merely fact-gathering. To paraphrase the great philosopher, Immanuel Kant, “Theories without data are empty, data without theories are blind.” Certainly we shall make no progress without accumulating data and facts. But these facts must not be gathered at random. They must be gathered in order to test hypotheses and theories arrived at via the creative power of thought, reason and imagination.

The point I am stressing relative to animal research is this: Research which proceeds simply by trial and error is likely to be both useless and cruel. In this sense, placing high value and emphasis on animal life and suffering and putting a certain burden of proof as to the utility and soundness of a piece of research is certain to force us to look more carefully at the logic of the research that we do or contemplate doing, and thus eliminate mere tinkering with no conceptual basis. In the final analysis, animals are not *models* for anything, except from the perspective of the theoretical mind, which carefully constructs hypotheses and justifies each use of an animal conceptually and morally. Models, like maps, do not exist in nature. Maps are the product of thought and artifice, so too are models. To speak of animal models is to speak of animals being *used* as models in accordance with a full set of hypotheses which give us reason to believe that the animal does serve to model something, and something worth knowing. Too often, talk of animal models entails that the animal is by nature a model, something simply *there* for us to tinker with. When the psychologists, for example, cannot answer the following dilemma, they demonstrate that they have no conceptual let alone moral right to use animals as “models”: “A good deal of your research is on mice and rats, studying behavior and learning, utilizing pain to condition the animals. Clearly, you are not interested in the mind of the rat for its own sake. You study these animals because they are relevantly analogous to human beings, because rat behavior is a good model for human behavior. The dilemma is this: Either the rats are relevantly analogous to human beings in terms of their ability to learn by positive and negative reinforcement (i.e., pleasure and pain) in which case it is difficult to see what right you have to do things to rats which you would not do to human beings, or the rats are not relevantly analogous to human beings in these morally relevant ways, in which case it is difficult to see the value in studying them.”

I conclude then, by answering the question I began by attacking. What is humane treatment of food and laboratory animals? First and foremost, it is recognizing their moral status, seeing that they are objects of moral concern and treat-

ing them as you would wish to be treated were you the “model” for some superior race which can dispose of humans as it sees fit. Equally important, we must study the nature of the animals we use for food and research in physiological and ethological terms to determine what needs they have, and how to meet them. Certainly we have bred food animals for food, and lab animals for research, but we have not bred out their ability to feel pain, to suffer under crowding conditions, to enjoy a life without constant stress, etc. If we do not choose to meet these needs, we are morally bound to develop animals which do not have them.

Incidentally, I might add that if everything I have been saying is true, there is another problem with the title of this talk, namely the use of the phrase “humane” treatment. “Humane” is a patronizing term; it implies to most people kindness which we can withhold or give freely (like “charity”). In philosophers’ jargon, it is an activity of benevolence, not of duty. But if animals do have genuine moral status, then we are morally *obliged* to treat them as moral objects; it is not simply a matter of choice and generosity on our part. True, we may choose not to do so since in our society we can get away with it, but then we are in the moral position of a person who chooses to do harm to other people when he is certain that he can “get away with it.” We must cease to think (and talk) of our proper treatment of animals as a favor we do them, and start to think of it instead as something we owe them, as something to which they have a *right* and claim.

Suggested Readings

- Dworkin, Ronald (1977) *Taking Rights Seriously*. Harvard University Press, Cambridge, MA.
- Griffin, Donald (1976) *The Question of Animal Awareness*. Rockefeller University Press, New York, NY.
- Hempel, Carl (1966) *Philosophy of Natural Science*. Prentice-Hall, Englewood Cliffs, NJ.
- Kitchener, Richard (1972) B.F. Skinner—The butcher, the baker, the behavior shaper. In *Boston Studies in the Philosophy of Science*, Volume XX, D. Reidel, Boston, MA.
- Kuhn, Thomas (1970) *The Structure of Scientific Revolutions*. University of Chicago Press, Chicago, IL.
- Regan, Thomas and Singer, Peter (1976) *Animal Rights and Human Obligations*. Prentice-Hall, Englewood Cliffs, NJ.
- Rollin, Bernard (Unpublished) *Animal Rights and Human Morality*.
- Rollin, Bernard (1978) Beasts and men: The scope of moral concern. In *The Modern Schoolman* (March).
- Singer, Peter (1975) *Animal Liberation*. Avon Books, New York, NY.
- Stone, Christopher (1974) *Should Trees Have Standing?* William Kaufmann, Los Altos, CA.